A believer’s approach to the sciences

Is *Left Behind* biblical?

Intelligent design

The friendship factor

Using animals in medical research

Out of Mongolia, a transforming experience
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Jesus leads His church

The Seventh-day Adventist Church is a prophetic church! It fulfills the vision and mission of what the risen Jesus revealed to the Apostle John, as recorded in Revelation chapter 12. In that passage we find the church depicted as a virtuous woman and our Saviour Jesus Christ as her son involved in a cosmic conflict (see verses 1-5, 17).

The relationship between Jesus and the true church teaches us several lessons that are significant to our redemption and our faith experience.

First, God sent His Son Jesus to this Earth to fulfill the supreme purpose of redeeming us from our sins. God need not have sent His Son. No force in the universe could compel Him to do so. But God’s love to humanity is so great that He sent Jesus (John 3:16). This unselfish act was neither easy nor without risk. How could the Father bear to see an empty seat next to Him in heaven? How could the Father watch in agony Satan’s attack on the Son and the eventual horror of the cross? But God’s love took the risk, and through His Son, He has redeemed us to form His church. The seat next to the Father was emptied in order that the emptiness in the human heart can be filled with God’s redeeming love.

Second, Jesus fulfilled the divine plan. Paul details the steps Christ had to undertake—from leaving the throne to yielding His life on the humiliating cross (Philippians 2:5-11). Upon that cross, Jesus defeated Satan and his disruptive and destructive plans. The same cross opened a highway to God, so that the redeemed can come together to form God’s special people.

Third, this remnant people accept fully the divine leadership in their lives. This is revealed by John’s statement that they are the ones who “keep the commandments of God, and have the testimony of Jesus Christ” (Revelation 12:17). Jesus is our leader. Once we accept that position, can we ever abandon God’s Word? Can we ever be indifferent to a life of prayer and communion? Can we ignore the demands of discipleship and witness? Can we be lured by the pleasures and the pretensions of this world? Divine leadership requires total commitment.

Fourth, Jesus affirms His church and leads her into glorious victory. Like He led Israel to the promised land, Joshua to cross the Jordan, Elijah to confront Baal’s prophets on Mount Carmel, Elisha to establish the school of the prophets, Daniel and his friends through life-threatening trials, Esther to risk her life to save her people, and Paul to establish the primitive Christian Church.

In my 33 years of work at the General Conference, I can testify that Jesus is still leading His church as a global movement. And He leads through people—dedicated students and young professional people like you, our readers. Remember: You are part of His plan. “God would work mightily for His people today if they would place themselves wholly under His guidance” (Ellen G. White, Testimonies for the Church, vol. 8, p. 238).

—Leo Ranzolin
Vice President, General Conference

After serving the church for 40 years, Leo Ranzolin retired from active service as of June 30, 2003. Pastor Ranzolin has been a beloved friend of Adventist youth and has chaired the AMiCUS Committee, responsible for the publication of Dialogue. —Editors
A global fraternity
At present I am just one of two Adventists attending the Federal University of Agriculture in Nigeria, where I am pursuing a degree in food science and technology. Our isolation makes each issue of Dialogue that occasionally reaches us very precious! The various features of the journal, including “Interchange,” remind us that we belong to a global fraternity of Adventist young adults who are seeking to use their God-given talents to help others. I especially appreciated Pastor Matthew Bediako’s editorial, “Never forget who you are” (Dialogue 12:3), that challenged us to maintain our Christian identity regardless of the temptations and obstacles we may find on our way. As zonal vice-president for the Nigeria Association of Adventist Students (NAAS), I plan to stress that important concept as I carry out my responsibilities.

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Balanced, varied, and very interesting
I recently came in contact with Dialogue for the first time and found its content balanced, varied, and very interesting. Congratulations to the editors! As a university student specializing in geography, I was particularly interested in “Interchange” that has allowed me to establish communication with Christian readers of the journal residing in many countries of the world. I have not only shared my faith experiences with them, but also have been able to expand my stamp collection. Thank you!

Sydney Alves Moreira
Areia, Pernambuco
BRAZIL

A pleasant surprise
I am nearing the end of my studies in dentistry and recently discovered Dialogue. What a pleasant surprise! It is full of stimulating ideas that I plan to share with my friends in church and also with some of my colleagues at the university. How can I get the next issues of the journal, before I graduate and begin my professional career?

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The editors respond:
Thank you, Valeria, for your letter. We’re glad that you discovered us! The leaders of the Seventh-day Adventist Church are providing funds so that Adventist students attending public colleges or universities may receive Dialogue free. You should contact the director of the Education Department or of the Youth Department in your Union and ask them to place you in the distribution network of the journal. Include your full name, mailing address, college or university you are attending, the degree you are pursuing, and the name of the local church of which you are a member. They may be able to connect you with a local or regional association of Adventist students. You may also write to our regional representatives at the address provided on page 2, with a copy of your letter sent to the Union directors listed above. At times several students pool their funds and pay for a subscription to Dialogue, using the coupon that is printed in each issue. This allows them to receive fresh copies via airmail. As a last resort, log on to the Dialogue website (http://dialogue.adventist.org/) and read some of the best articles published in earlier issues of the journal. We wish you success in your professional career and in your daily walk with God.

Ideas for health lectures
As a medical student about to complete my program, I want to thank the editors of Dialogue for including in the journal articles dealing with health issues. These and other sources provide me with ideas that I can use in my lectures on drug abuse prevention, sexuality, proper nutrition, and similar topics. I thank God for giving me the opportunity to take up medicine as a career. I am eager to share my knowledge and experience for the glory of our God and the benefit of humanity.

Joseph Lee
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Write to us!
We welcome your comments, reactions and questions, but limit your letters to 200 words. Write to Dialogue Letters: 12501 Old Columbia Pike; Silver Spring, MD 20904; U.S.A. You can also use fax: (301) 622-9627, or e-mail: 102555.2215@compuserve.com. Letters selected for publication may be edited for clarity or space.
A believer’s approach to the sciences

by Earl Aagaard

We are all believers. Christians, Hindus, Buddhists, Muslims, atheists, agnostics, ecologists, terrorists—everyone believes in someone or something. A religious person believes in the existence of God; an atheist believes that nothing exists but matter and energy; and both may argue to the nth degree that one view is right and the other is wrong. To believe does not mean that our belief is true and verifiable. In fact, everyone approaches the study of nature with a certain amount of faith. It is essential to study with an open mind, admitting that we could be wrong, always searching for the truth.

Science prides itself on its objectivity. But, is genuine objectivity even possible? Let’s be clear: “Science” involves interpreting the data found in the natural world. Once interpretation begins, we are introducing a subjective element, the basic set of beliefs every human holds about the way things are in this universe. No one studies the stars or the human body or the molecular genetics of the cell with a mind that is a “clean slate.” Everyone, including scientists, brings basic assumptions to the table, and interprets data in light of those assumptions. Understanding this makes a powerful difference in how we view the scientific enterprise, and how we must see our own religious commitments.

It is generally accepted that what is in our mind powerfully affects what we perceive and how we interpret our observations. Indeed, this psychological concept helps us understand why one person gets angry at something while others may not be bothered by it at all; or why certain people keep on entering into destructive relationships; or why some are miserable even though they have a loving family and live in relative luxury. In each case, it has to do with how the individual perceives the given circumstances; that is, with what mindset, or belief system he or she approaches the situation.

Philosophers often use the word worldview to describe the set of conceptions or basic assumptions with which human beings approach data—scientific, religious, political or whatever—, interpret it, and arrive at a conclusion. A worldview is a mental map of how the universe works. Many of our choices about how to interpret scientific evidence flow from an initial, all-important decision—whether to believe in a Higher Power. Consider two examples: Naturalists believe that there is no “Higher Power,” that everything we see is the product of matter and energy, guided by law and chance. Christians believe that a Higher Power exists; some cosmic intelligence outside of what we perceive as the “natural” world. The choice is well summarized in two statements:

Statement 1: “In the beginning was the Word….all things were made by him and without him was not any thing made that was made.”

Statement 2: “In the beginning were the particles, and the particles became man, and man imagined God.”

The Apostle John wrote the first statement, which summarizes the biblical worldview. The second statement is how Philip Johnson describes Darwinism and it represents the secular worldview. In both cases, one begins with a
Science is not monolithic

When we speak of science, we often think of chemistry, physics, computers, etc.; or about the scientific method, facts, measurements, and so on. Many of us are not aware that the word science is used as an umbrella term to cover some very diverse activities. Consider this quote from Popular Science: "The consequences of [the] education gap in science and math are devastatingly apparent. Only 45 percent of adult Americans know that Earth goes around the sun once each year. A third believe that boiling radioactive milk makes it safe to drink. Some 40 percent firmly believe that aliens from space have visited Earth, and a stunning 54 percent reject the idea that humans evolved from earlier species."1

Here, the umbrella of “science” is used to cover two very different categories of knowledge! Recognizing these categories is the key to good science education, as well as to understanding much of the conflict between science and religion in today’s world. How do we do this?

Different kinds of science

The passage quoted does not recognize the difference between empirical science and historical science. Empirical science is what most of us think of when we see the word science. It’s what we’re taught in school as physics and chemistry, where the scientific method is employed. This method of learning involves (1) making observations and asking a question; (2) formulating the hypothesis or “trial answer” that helps explain the observations; and (3) devising and carrying out an experiment that will test the hypothesis, to help determine whether our trial answer is correct. Note that we can never “prove” the hypothesis—proofs are found only in certain branches of mathematics.

Let’s apply this test to the issue raised in the Popular Science quote above. The question of the radioactive milk is empirical science. Does boiling the milk remove the radioactivity? We can test it out in a laboratory. This question, and thousands like it, are not the subject of debate in the scientific community because they are empirical questions, and the answers come from the data generated by repeatable experiments in the laboratory.

The second type of science—historical science—is different in a fundamental and important way. Unlike physics, chemistry, and much of biology, historical scientists cannot go into the laboratory to test their hypotheses. Historical scientists collect data in the field, and use those data to reconstruct the past in ways that are as true as possible to the available evidence. In everyday language, scientists in historical fields look at the evidence and then “tell a story” that fits the data. No story can explain every single piece of evidence, and, equally important, there may be more than one story that explains the data satisfactorily. Since there is no way to apply a laboratory test to this type of story, it is often difficult to know if one story is correct and another is wrong. Even more importantly, our decision about which story is correct is powerfully influenced by our worldview.

Some may object that historical science isn’t science at all, since it doesn’t provide answers we can verify by experiment. However, archaeology is recognized as science, despite the fact that even using many repeatable laboratory procedures, this discipline has no empirical method to test archaeologists’ hypotheses. Did David and Solomon’s kingdoms exist as described in the Bible? Many archaeologists do not believe that they did, while others disagree. There are vigorous arguments about this story, due to lack of a definitive test for the historical hypotheses.

The same is true of paleoanthropology, the study of ancient humans and their alleged fossil ancestry. Because of numerous possible hypotheses, there are constant arguments within the field: arguments about which fossil is the “missing link,” or about whether this or that fossil is part of human ancestral line or simply an extinct dead end, etc.

Historical science appears not only in archaeology and paleoanthropology, but also in the laboratory sciences; for instance, when astrophysicists argue about what happened during the first few seconds after the Big Bang. No one has a videotape of that event, so scientists must examine the “missing evidence,” and then use mathematical equations to explain a story of what may have happened as the universe was being born. Next, they compare their position to the observations being made, and finally, argue with those who see it differently.

Likewise, in chemistry, there is an
ongoing attempt to model the atmosphere of the early Earth, in order to figure out how life got started through strictly physical processes. By examining the oldest rocks to be found, by gathering whatever clues they can find on early atmospheric conditions, and then, by combining these findings with current knowledge of chemical reactions, scientists have tried to simulate the early Earth’s atmosphere. Obviously, there is no way to know how accurate these simulations may be. Origin-of-life research uses many scientific techniques, and is carried out in the science laboratory, but it is squarely in the category of historical science because the conclusions researchers come up can neither be confirmed nor refuted.

**Darwinism: Historical science?**

Perhaps the most controversial example of historical science is found in biology. The currently accepted scientific explanation for the origin of life and its phenomenal diversity is known as Darwinism, which tells us that life emerged as a result of chemical evolution, and that the first living cell eventually gave rise to every variety of life on Earth. According to this view, the origin of life, and the development of all its subsequent forms, was accomplished by the random interaction of chemicals. First, they formed the molecules necessary for a living cell (DNA), and thousands of proteins, including many enzymes essential to the cellular operations. Once this cell came into being, it gradually evolved into other types of cells, then into multi-cellular creatures, and finally into the millions of different species that have existed, including those reading this essay. This miraculous transformation was allegedly accomplished solely through mutations in the DNA molecules making up the genetic code—random changes in the arrangement of the four “letters” from which our DNA code words are formed. These were then acted on by the environment in a process that Darwin called “natural selection.”

While a great deal of evidence can be rationally interpreted to support the Darwinian view (mainly in the area of the adaptation of existing organisms to better fit their environments), the story of the origin of life, of the genetic code, and of the different body plans in the living world, exists in the realm of historical science. This is because whatever the preferred scenario for explaining these things, none of them can be tested in the laboratory in such a way as to provide definitive proof or disproof. Darwinism, despite its current status as “scientific fact,” is really no more than a story that is told to explain how we got here, incorporating as much of the evidence as possible. It does a good job in some areas, but there is significant difficulty in other areas. There is no way to test Darwin’s hypothesis by experiment, and other stories can be told to explain much of the same evidence. In fact, some of the alternative stories are more robustly supported by the newest evidence available.

Although the Darwinist story about origins is in a different category from the empirical science practiced in the laboratory, textbooks and popular media (such as the earlier quote) present it as a fact, in the same sense as the effects of gravity. Furthermore, any rival to the preferred story is resisted energetically. Often those representing the Darwinist position ignore the scientific issues involved, resorting to name-calling, an appeal to authority, and/or to constructing a straw man, which is then demolished.

In fact, prominent Darwinists in England recently attacked certain Christian schools (including one operated by Seventh-day Adventists) because their curriculum includes both Darwinian evolution and biblical creation. They argue that schools should present only Darwinism, and should not include any of the empirical evidence that supports other hypotheses about origins. The Darwinian worldview assumes that there was no design and no designer, and this vision of the naturalistic origin of life is accepted as a given by the mainstream scientific community, regardless of the evidence being gathered in the field and in laboratories. It is this fact that makes the scientific naturalists “believers” in much the same sense as creationists, although the object of belief is not the same for both.

**Conclusion**

Everyone believes in someone or something. Even scientists have a belief system. In view of this, Christian believers need not be apologetic about their faith system. Instead, when they approach sciences, they should do so with (1) thoughtful respect for the scientific enterprise when it deals with the strictly empirical; and (2) humility and tolerance for other views with evidentiary support in various areas of historical science. Meanwhile, Christian believers should develop a thorough understanding of the Intelligent Design perspective, so as not to be intimidated or silenced by those who insist that belief in the supernatural is unscientific. As we do this, we’ll find that much of the current research in molecular biology and genetics undermines the Darwinist position, while robustly supporting the idea of a designer. A lot of the data is pointing in our direction.

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**Notes and references**


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Is *Left Behind* biblical?

by Steve Wohlberg

Nothing has captured the Christian imagination in recent times as much as *Left Behind*. It's a best-selling novel, a blockbuster series, and the motivation for a sequence of multi-million dollar movies. *Left Behind* claims to be based on biblical end-time prophecies—the secret return of Jesus, the instant disappearance of Christians, and an evil Antichrist who takes over the world.

*Left Behind* first appeared in 1995. Co-authored by Tim LaHaye and Jerry B. Jenkins, the book became such an instant best-seller that the authors and the publisher—Tyndale Publishing—decided to make it into a series of 12 installments. Of the 11 volumes printed so far, most have hit the best-seller lists of the *New York Times*, the *Wall Street Journal*, and *USA Today*. Barnes & Noble even gave the accolade, “The best-selling series of all time.”

In February 2001, *Left Behind: The Movie* hit theaters across the United States. A second movie, *Tribulation Force*, based on book No. 2 in the series, which has the same title, was released in 2002. With one more book ahead, and at least one more movie planned, *Left Behind* fervor continues to escalate around the world. It's not unusual to see full displays of the entire *Left Behind* series in airport book shops and department stores. And this is not just an American phenomenon. The novels have been translated into many languages worldwide.

**Basic theology**

The basic theology of the series is this: First, a “secret rapture” causes the instant disappearance of all true Christians, who are suddenly caught up from Earth to heaven. This is followed by a seven-year period of tribulation that overtakes all who are “left behind.” An inwardly evil man—who looks like Mr. Nice Guy, but who is really Mr. Sin, that is, the Antichrist—quickly rises to bring order out of chaos. As the saga continues, a group of new believers who accept Jesus Christ after the Rapture see through Antichrist’s disguise and thus become the Tribulation Force against the Man From Hell. The sinister Antichrist—called Nicolae Carpathia in the novels and movies—then turns his weapons of warfare against the Jews, who are still considered to be God’s chosen people. At the end of the tribulation, as the climax of the drama, Jesus Christ returns visibly to conquer Carpathia and his global network of supporters, save the Tribulation Force, and deliver the Jews at Armageddon.

Although the *Left Behind* series is clearly fiction, its core ideas are now embraced by many Christians the world over, having been exposed to them through the media, in magazines, books, seminars, and on the Internet.

The “core ideas” may be summarized as follows:

1. A secret rapture, which removes God’s church from Earth to heaven.
2. A seven-year tribulation for all who are left behind.
3. The rise of Antichrist, who takes over the world.
4. A final battle between Antichrist and the Jews, who are delivered at Armageddon.
Are these teachings biblical?

**The secret rapture**

Secret rapture is the cornerstone of a theological school known as Dispensational Futurism. Its basic tenet is that all of God’s Old Testament promises made to the nation of Israel are still intact, but can only be literally fulfilled after the “present dispensation of the Church” comes to an end. This “Church age” that began at Pentecost will continue until the Rapture, when Christ returns secretly to take His church to heaven. Once that is over, God can then fulfill His promises to the Jews.

While secret rapture advocates use several passages to support their views, such as Matthew 24:40, 41, we will concentrate on 1 Thessalonians 4:17, as it is this that is emphasized frequently by the Left Behind authors. In this passage, Paul states that when Christ returns all living believers will be “caught up.” According to Left Behind and Dispensational Futurists, “caught up” here means to vanish without a trace. This event is interpreted as one that will be obviously noticed, but not understood, by the majority of the world. Jesus will supposedly return silently, secretly, invisibly, unnoticed by the world, to snatch His Church from Earth to heaven. After all the Christians disappear, the world will enter the cataclysmic seven years of tribulation.

But here’s the problem: the context of 1 Thessalonians 4:17 reveals a return of Christ that is anything but secret! In verse 16, Paul clearly says that Christ will “descend from heaven with a shout, with the voice of the archangel, and with the trump of God.” (NRSV). Surely this description cannot denote secrecy and silence, but openness and loudness.

**Seven-year tribulation**

Dispensationalists also teach a seven-year tribulation after the secret rapture. They get this seven-year period from a speculative interpretation of Daniel 9:27: “And he shall confirm the covenant with many for one week: and in the midst of the week he shall cause the sacrifice to cease” (KJV).

There are two problems with the dispensationalist interpretation of this prophecy. First, they take the last week of the 70-week prophecy of Daniel 9:24-27, and place it in some distant future, at which time the Rapture is to occur and the Antichrist will emerge. But a study of Daniel 8 and 9 clearly reveals that the 70 weeks are a continual period to be fulfilled from the first to the 70th week in one historic time line. Sounds exegesis and prophetic interpretation do not permit projecting the 70th week to some future period.

The second problem is a more serious one. In harmony with the day-year principle in prophecy (Ezequiel 4:6), “one week” means seven years. During this period, Daniel says: “Then he shall confirm a covenant with many for one week; but in the middle of the week he shall bring an end to sacrifice and offering” (Daniel 9:27, NKJV).

To whom does this “he” refer to? Dispensationalists interpret the “he” as the Antichrist who will appear in the future—Nicolae Carpathia of Left Behind authors—a future seven-year period that begins with the Rapture and continues with tribulation.

But here’s another problem: Bible scholars of the past have consistently interpreted the “he” as Jesus Christ, and the “covenant” confirmed as the new covenant ratified by the death of our Savior 2,000 years ago (see Matthew 26:28), not as a seven-year peace treaty made by the Antichrist with the Jews after the Rapture.

Look closely again: Daniel 9:27 cannot refer to a peace treaty, but to the new covenant the Messiah will establish. In the Bible, the Antichrist never confirms any covenant. This is the exclusive role of the Messiah. In addition, Daniel 9:27 says, “in the midst of the week he shall cause the sacrifice to cease” (KJV). The “midst” would be 3 1/2 years into the seven, which is the exact duration of Christ’s ministry. After 3 1/2 years, by His death on the cross, Jesus did cause “the sacrifice to cease.” He is the final sacrifice, and His death perfectly fulfills Daniel 9:27.

Seeing Christ as the “he” in Daniel 9:27, who confirmed the covenant and caused the Jewish sacrifices “to cease” by His death on the cross, is the only consistent position in biblical interpretation and eschatology.

**The rise of the Antichrist**

Dispensationalists also teach that the Antichrist is one evil person who will appear after the Rapture. But look at what the Bible says. The word antichrist is used only five times in the Bible, in 1 John 2:18, 22; 4:3; and in 2 John 7. All of these verses show that there is not just “one man” called Antichrist, but “many antichrists” (1 John 2:18, KJV).
John also says, “They went out from us” (vs. 19), indicating that these antichrists arose from within the church, rather than from outside, and the apostle indicated that they were already at work in his time (1 John 2:18). Thus, in a general way, Antichrist represents those forces that take the name “Christian,” but teach and practice doctrines that are unbiblical and contradictory to the position and role of Christ, and would not hesitate to persecute those who stand true and loyal to Christ and His teachings.

Bible prophecy also predicts the rise of a mysterious “little horn” (Daniel 7:8), the one identified by Paul as “that man of sin” (2 Thessalonians 2:3), and by John as “the beast” (Revelation 13:1). Most scholars apply these phrases to one and the same entity. Moreover Daniel 7:23 clearly defines a beast as a kingdom, not as one man.

Daniel’s “little horn” would also make war with the saints, and prevail against them in Christian history (see Daniel 7:21). While this short article cannot give exhaustive proof as to why our Protestant forefathers were correct in their interpretation of this prophecy, it is a fact of history that for more than 400 years—up to the late 1800s—the majority of Baptist, Methodist, Presbyterian, Lutheran, and Mennonite scholars applied the Bible’s Antichrist prophecies, not to one future Mr. Sin who shows up after believers are raptured, but rather to the saint-persecuting organization of the Church of Rome.

“The beast of the Apocalypse is not a tragic flaw in biblical teaching in the traditions of the early church. It is a logical and consistent application of biblical teaching to the situation at hand” (History of the Reformation of the Sixteenth Century, by Merle D’Aubigné).

The final battle between Antichrist and Jews

Dispensational Futurism sees the primary earthly contestants at Armageddon being Antichrist and the nation of Israel, not the church. In fact, a clear separation between Israel and God’s church is absolutely essential to the rapture-Antichrist-Israel scenario. If we can prove from the New Testament that in the Christian era God’s Israel is the same as God’s church, then we can show how wrong and unbiblical dispensationalism is.

First of all, the New Testament speaks about the reality of two Israels—an “Israel after the flesh” (1 Corinthians 10:18), and “the Israel of God” centered in Jesus Christ (see Galatians 6:14-16). Paul wrote, “They are not all Israel which are of Israel!” (Romans 9:6, KJV). What he meant was that all who are of the nation of Israel are not God’s Israel in the post-Cross era. In other words, a person can be a Jew, a literal descendent of Abraham, but through unbelief and living after the flesh, he or she may not be part of the Israel of God. Those who are part of God’s Israel know God through personal faith in Jesus Christ (see Galatians 3:7, 14; 6:14-16).

In the Old Testament, Israel was clearly referred to as “the seed of Abraham” (Isaiah 41:8). In the New Testament, Paul told his Gentile converts, “And if you are Christ’s, then are you Abraham’s seed, and heirs according to the promise” (Galatians 3:29, NKJV). Thus believing Gentiles became part of God’s Israel. Ephesians 2 is very clear: Jesus Christ on the cross broke down the wall of partition between believing Jews and believing Gentiles, and has mysteriously united them both into “one new man,” or “one body” (Ephesians 2:14-17). Therefore this whole dispensational position of separating God’s true Israel from His true church is contrary to the mission of the cross.

Further, Revelation 16:12-16 where Armageddon is mentioned does not speak of a battle between the Antichrist and the Jews; nor does the passage say that Christ comes in secrecy preceding this battle to rapture the saints. Instead, the passage describes the battle as the “battle of that great day of God Almighty”—one between the spirits of devils (including the Antichrist) and the forces of good. God’s victory in the battle is ensured in the promise, “Behold, I come as a thief,” referring to the Second Coming of Christ (Revelation 16:15, KJV; cf. 1 Thessalonians 5:2).

The message of the Bible is clear. The way of salvation is now open to all, including the Jews. But at the second coming of Jesus, both the resurrected and living saints, will meet “the Lord in the air” (1 Thessalonians 4:17, KJV) in history’s most glorious, public display of God’s triumph over sin and death, over Satan and his evil agents. After the Second Coming, there is no second chance for salvation.

The Left Behind saga may be popular; its ideas going around the world. Yet solid biblical teaching is against every one of the four core positions upon which the phenomena of Left Behind is built. The Left Behind indeed leaves behind biblical truth and relies on human speculation and theological fantasy.

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Intelligent design: The biochemical challenge to Darwinian evolution?

by Ewan Ward and Marty Hancock

“For since the creation of the world God’s invisible qualities–his eternal power and divine nature–have been clearly seen, being understood from what has been made, so that men are without excuse” (Romans 1:20, NIV).

The question of the origin of life on this planet is a fascinating one. Did life begin on the surface of a cooling planet amidst the havoc of a restless environment racked by violent lightning flashes and volcanic activity? Did life flourish on Earth after being transported here as bacteria-like organisms deep within the crevices of a meteor? Or is life the product of an intelligence, orchestrating life by design and careful planning? Is there evidence of that design in nature and can such evidence be used to infer the existence of a Creator, as the Bible teaches?

Design in nature

Theologians and scientists have argued for centuries that certain natural features of our world are difficult to explain purely in naturalistic terms. The most famous of the design arguments is that of Paley’s watchmaker. If you were to find a watch while crossing a field, what would you suppose about the origins of that watch? Would you think that the parts had all come together by chance, or would you suspect that the watch was the product of a watchmaker and that someone had dropped the watch as he or she passed by? Paley argues that because of the intricate design and function of the timepiece, there must have been a designer, “who formed it for a purpose which we find it actually to answer, who comprehended its construction and designed its use.”

Darwin’s “black box”

A new era in design arguments dawned in 1996 with the publication of Darwin’s Black Box: The Biochemical Challenge to Evolution by Michael Behe, professor of biochemistry at Lehigh University in Pennsylvania. In Darwin’s day, biologists knew very little of the complex biochemistry of living organisms. What we have learned since then about the highly elaborate biochemical systems suggests a level of sophistication that defies an explanation for their existence by evolutionary mechanisms.

Up until now, design theories have not fared well in academic circles, partly because creationists have not developed theories that could be empirically tested and examined by the scientific community. For a scientific paradigm to shift, there has to be a new paradigm available to take its place. New paradigms are now being developed, and design arguments are increasingly being supported by conventional scientific arguments.

Behe begins his examination of biochemical systems with an unusual illustration—a mousetrap. It consists of five parts: a wooden base, a spring, a hammer (to break the mouse’s back), a sensitive catch (which releases when slight pressure is applied) and a metal bar (which connects to the catch and holds the hammer back when the trap is charged). This simple mechanical system is an example of what Behe calls an irreducibly complex system since all the components must be present for it to operate as designed.
Evidence of design in biochemical and molecular systems

Molecular biology focuses on the universe within—the make-up of the cell. In recent times extraordinary advances have been made in the understanding of cell structure and function at the molecular level. The cells of an organism depend on their biochemistry for function. Metabolism (the sequence of chemical reactions upon which life depends) is highly organized and purposeful; often biochemical events are organized in a stepwise or sequential series of reactions. A specialized class of protein molecules called enzymes mediates the conversion of one target molecule (chemical substrate) into another, which is in turn worked on by the next enzyme in the sequence. These sequences resemble the assembly line of a factory; each worker along the line uniquely modifies the product being assembled. Thus each enzyme, or assembly line worker, depends on the previous one for its activity. Removing or disabling one enzyme in a biochemical pathway effectively shuts down that pathway, as there will be no more molecules produced for the next enzyme in the sequence. Such pathways are irreducibly complex, much like Behe’s mouse-trap. It is difficult to envisage how such pathways could have evolved, especially if the final product of a pathway is the energy required by the cell to function. As Behe states, irreducibly complex systems “would be a powerful challenge to Darwinian evolution. Since natural selection can only choose systems that are already working, then if a biological system cannot be produced gradually it would have to arise as an integrated unit, in one fell swoop, for natural selection to have anything to act on.”

Deoxyribonucleic acid or DNA, the genetic material, is like the hard disk of a computer, containing all the programs and information needed at various times during the life of a cell. One type of enzyme, RNA polymerase reads the chemical code of a section of DNA (a gene) and sets in motion an exceedingly complex chain of events culminating in the formation of a protein molecule derived from that information. The code read by RNA polymerase in DNA determines the order of amino acids in the protein molecule to be manufactured, which in turn determines its three-dimensional shape and hence function. In terms of the flow of genetic information, one can consider this relationship between the DNA code, the order of amino acids in protein, and the shape and function of the protein itself, to be irreducibly complex. Thus, information in DNA determines the structure, shape, and function of enzyme molecules, which in turn determine which chemical substrate it may interact with in a biochemical pathway. Interference with the transmission of this information at any point will dramatically alter the final enzyme product and can mean that the enzyme produced cannot take its place in the biochemical assembly line for which it is intended, or, dare we say, designed. The resulting failure of a biochemical pathway can be fatal to the cell.

DNA can also be completely replicated so that genetic information can be passed on to daughter cells at cell replication and on a grander scale to an organism’s offspring. DNA stores the information needed to synthesize the enzymes needed to replicate itself, a perfect example of irreducible complexity. Thus DNA codes for the DNA replicating enzyme, DNA polymerase. DNA polymerase reads the chemical code of DNA and faithfully creates another exact duplicate molecule. So for its existence, DNA is dependent on DNA polymerase, the existence of which is dependent on DNA itself. (See Figure 3.)

There are seemingly endless examples of design in molecular systems. Behe discusses a number of these complex systems at length, including blood clotting systems, bacterial flagella, and a variety of other biochemical systems.

Origin of the primordial cell

But how did biochemical systems come to exist, in the first place? How

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![Figure 2](image2.png)

**Figure 2.** Relationship between DNA information and protein function. The information in DNA determines the amino acid sequence of a protein which in turn determines protein function.

![Figure 3](image3.png)

**Figure 3.** Diagram illustrating the relationship between DNA and its replicating enzyme. Information in DNA is used to synthesize DNA polymerase. In turn, DNA polymerase uses the original DNA molecule as a template to make another new DNA molecule.
did life arise on this planet? The work of Stanley Miller and Harold Urey at the University of Chicago during the early 1950s set the groundwork for the concept of chemical evolution.4 Their experiments replicated what was postulated to be the atmosphere of primitive Earth. They subjected a mixture of gases to high voltage discharges simulating lightning. Any organic molecules produced were trapped and removed from the reaction system for analysis. A small variety of simple organic compounds were detected, and it was postulated that they were the precursors of biological macromolecules forming the structure of the first primordial cell. The validity and meaning of such experiments are now under scrutiny.5 The concept of forming biological building blocks from inorganic chemicals by naturalistic processes poses enormous problems. Klaus Dose comments: “More than 30 years of experimentation on the origin of life in the fields of chemical and molecular evolution have led to a better perception of the immensity of the problem of the origin of life on earth rather than to its solution. At present all discussions on principal theories and experiments in the field either end in stalemate or in a confession of ignorance. New lines of thinking and experimentation must be tried.”9

Leaving aside the technical problems of such chemistry, what would a primordial cell need to survive, replicate, and to get the evolutionary ball rolling? First, a method for capturing energy (e.g.: photosynthetic organisms that make their own food) or a mechanism for utilizing energy derived from preformed organic molecules. Both methods involve very complex biochemistry even in the simplest of organisms. Second, a membrane to keep the outside environment separate from the metabolic reactions within the cell. Third, a system by which genetic information can be stored and accessed (DNA). Fourth, a mechanism to convert this information into the molecular tools the cell requires to function. Finally, the all-important requirement for cellular division and self-replication. The stored genetic information must be replicated and passed onto daughter cells in order to produce descendant life forms. (See Figure 4.)

These processes are of staggering complexity despite the apparent “simplicity” of the first theorized primordial cells. For such cells to exist, metabolic systems must function and coordinate with the other systems. The primordial cell, like any other, would depend on its energy-generating biochemistry in order to operate crucial metabolic processes and synthesize essential molecules. As mentioned, information for molecular synthesis is stored in DNA. Energy generated by the cell is required for DNA synthesis and cellular replication. DNA synthesis depends upon enzymes whose blueprint is contained in DNA. None of these systems could function if it were not for the cell membrane separating the cell’s biochemical reactions from the external environment. Indeed, enzymes encoded by information in DNA direct synthesis of the membrane itself—irreducible complexity at its best.

Few suggested mechanisms satisfactorily explain the molecular evolution of individual biochemical systems, let alone explain how such interdependent systems would develop in a coordinated fashion with a common goal in mind: the development of a functional cell. In his book, Behe analyzes published scientific literature on mechanisms of molecular and biochemical evolution. He also examines papers published in the Journal of Molecular Evolution (JME) since its founding in 1971. His conclusion: None of the papers published in JME over the entire course of its life as a journal has ever proposed a detailed model by which a complex biochemical system might have been produced in a gradual, step-by-step Darwinian fashion.8

**Detecting intelligent design**

Behe’s biochemical challenge to Darwinian evolution has made a significant impact on the scientific community. His book was reviewed in prestigious scientific journals such as Nature. Here was a credible, well-informed biochemist with an argument that could not be easily dismissed. Darwin had admitted that “if it could be demonstrated that any complex organ existed which could not possibly have been formed by numerous successive, slight modifications, my theory would absolutely break down.”99

Behe’s renewal of the intelligent design argument has been strengthened by another design theorist, William Dembski. One of the major criticisms of Behe’s book was that even though living

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**Figure 4. Diagram showing the basic requirements of a cell to sustain life.**

Cells must be separate from their environment to allow biochemical reactions to generate energy, synthesize proteins, and allow for DNA replication and cell division.
things may look like they are designed, there is no scientific way of determining whether they are. Evolutionists who have serious objections to the design movement accept that nature appears to be designed. Richard Dawkins states in his book The Blind Watchmaker: “Biology is the study of complicated things that give the appearance of having been designed for a purpose”; and “Natural selection is the blind watchmaker, blind because it does not see ahead, does not plan consequences, has no purpose in view. Yet the living results of natural selection overwhelmingly impress us with the illusion of design and planning.”  

Dembski, however, has proposed a scientific method for detecting intelligent design. He claims that this is not new to science, since forensic scientists use such an approach to distinguish chance events from criminal activity. Scientists, in their search for extraterrestrial life, must distinguish between random signals and those that might carry encoded messages from outer space. Dembski claims that intelligent design is empirically detectable. His method of detecting intelligent design takes the form of a three-stage explanatory filter. The filter asks three ordered questions in relation to an observed event. Is it best explained by natural law, chance, or design? If there is a high probability of the event occurring, it is likely to be the result of a scientific law (e.g.: an object falls under the influence of gravity). If there is only an intermediate probability of the event occurring, it may be better explained by chance. If, however, there is a small probability of the event occurring, we move to the next level of the explanatory filter: design. Not all such events require intelligent design, and extremely unlikely events may occur naturally. But complex situations, such as the development of a self-replicating primordial cell that require many, many remote chance events to occur, are better explained by design rather than chance.

**Criticsims of the design argument**

While Behe’s idea of irreducible complexity has appeal at the molecular level of life, problems arise when we consider life at the level of entire functional organisms. Irreducibly complex biochemical systems are also the basis of a functioning predator or parasite. Much of nature is built on a system of predation, death, and decay, so we are tempted to ask, “What sort of God would create that?” According to Romans 1:20, God’s character is revealed in nature, but what does a predator like a lion teach us about God? Darwin asked the same questions and concluded that there was just “too much misery in the world” to accept design: “I cannot persuade myself that a beneficent and omnipotent God would have designedly created the Ichneumonidae [wasps that capture caterpillars and paralyse them for their larvae to parasitize and eventually kill] with the express intention of their feeding within the living bodies of caterpillars, or that a cat should play with mice.”

Dembski’s response to this criticism is that design does not have to be perfect. We recognize computer software or operating systems such as Windows as being designed, but most people find them to be less than perfect. From a scientific perspective, Dembski argues that just because nature doesn’t appear to us to be perfect, it doesn’t mean that design cannot be detected. Theology tells us that evil has entered this world and what we see now is not what God initially intended, so we should expect to see a creation that shows evidence of a good designer but also evidence of it having been perverted by evil.

**Conclusion**

So what do recent developments in the design argument teach us? For many observers, a beautiful sunset, a rocky mountain stream, or the flight of a bird will be evidence enough that God exists. Speaking for ourselves, our study of biology continues to inspire awe at the amazing complexity and beauty of life. We concur with the writer of Romans that God is adequately revealed in nature. But while Christians may be convinced that design in nature points to a Creator-God, the general scientific community has not been persuaded. Perhaps more scientifically respectable work on intelligent design of the kind done by Behe and Dembski will encourage evolutionary scientists to look beyond purely naturalistic mechanisms to explain the complexity and meaning of life. If evolutionary scientists are convinced that naturalism is limited in its explanatory power and that there is evidence for an intelligence behind the universe, then perhaps they will be open to consider that this intelligence is the God of the universe who wants a deep and personal relationship with His crowning creative masterpiece—human beings.

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**Notes and references**

3. Ibid., p. 39.
4. Ibid., chapters 4-7.

**Notes and references**

3. Ibid., p. 39.
4. Ibid., chapters 4-7.

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Continued on page 17.
Stress is the definer of modern life. With or without reason, real or imagined, everyone—from children to elderly persons—seems to feel the impact of stress. How can one live a stress-free life? Is there a single factor that can lessen stress and increase the joy in living?

Not long ago, Andrews University Academy conducted a study involving 179 students. One question was put to them: “If you were stranded on a desert island, what would you wish for?” The students were to choose only one from several possible answers given. One percent of the respondents wished for clothes and accessories. Four percent wanted some sports or music equipment to keep them company. Eighteen percent wanted food. Sixteen percent wanted a Bible. Two percent wanted radio and TV—to keep in touch with the outside world. Three percent chose the opportunity of being with another person whom they had never met before. But—this is important—an overwhelming fifty-four percent wanted a friend—somebody they knew, somebody who had flesh and blood, somebody they could talk to and share their experiences.

Is friendship so crucial in life, in overcoming loneliness, in leading a normal life? Skip MacCarty, associate pastor at Pioneer Memorial Church at Andrews University, has developed a course called, “Stress: Beyond Coping.” One part of the course is entitled, “The Amigo Factor.” It shows the power of relationships to deal with stress and to keep us well.

A national stress survey conducted by Prevention magazine, involving 11,000 respondents, showed that the element of modern life said to cause the most stress, was “disagreements and conflicts with loved ones” (58 percent). Money problems came second (55 percent), and the pace of modern life a distant third. Close and loyal friendships and relationships are the most important components of a happy, healthy, fulfilled life.

Another study, reported in the American Journal of Psychiatry, showed that men going through a separation or divorce have increased risk of outpatient or inpatient psychiatric care by 1000 percent. For women it was 500 percent. Loneliness and estranged relationships seem to affect men more than women. Single, separated, and divorced men as well as widowers don’t live as long as married men. It seems that women can do better without men than men can do without women! Women, when they get together, talk more intimately. Men talk about sports, cars, politics, and other things. Elderly men with two or more close friends or relatives had half the death rate following a heart attack than those who had no friends.

A study of medical records of 1,337 students at Johns Hopkins University reported that the psychological factors that most strongly correlated with illnesses were: (1) lack of closeness to parents, and (2) negative attitudes towards one’s family. These findings and others led James Lynch of the University of Maryland Medical School to write: “In a surprising number of cases of premature coronary heart disease and premature death, interpersonal unhappiness, the lack of love, and human loneliness seem...
to appear as root causes of physical problems."

Barbara Powell, a clinical psychologist, adds: “In my own profession, as a clinical psychologist, whatever a patient’s initial complaint—insomnia, phobia, depression, generalized anxiety, or a lack of life direction—the discussion usually gets around to a stressful relationship or the stress of not having a relationship.”

Loving relationships

An announcement in a church bulletin read, “Irving Benson and Jessie Carter were married on October 24 in the church. So ends a friendship that began in school days.” Sounds whimsical? Not, when you realize that today, in the United States, 50 percent of marriages end up in divorce: People who have been friendly before, somehow loose the bonds of that friendship, and their marriage breaks up.

Loving relationships and loyal friendships help provide needed social support in times of severe stress, and promote happiness, better health, and longevity. A research team, headed by Dorbert Nerum, at the University of Houston, set out to see if diet alone would raise the cholesterol level and produce a heart attack. They developed a high cholesterol diet and fed it to their test rabbits. Sure enough, the diet worked. The rabbits started getting high cholesterol and heart disease. As they re-examined the data they noticed that there was one group of rabbits that didn’t seem to develop high cholesterol and heart disease. They were all being fed the same diet, so they went back to the data. After further study, the baffled team discovered that the lab assistant who fed the rabbits often brought his little daughter with him. The little girl, not knowing that she was interfering with a controlled experiment, would feed the rabbits and then open the cage and take the rabbits out and pet them.

The rabbits that were regularly petted, held, talk to, and played with, had reduced cardiovascular disease by 60 percent.

The difference in the results was so significant that they did the experiment over again. This time, as a part of the intentional design of the experiment, a group of rabbits was petted and played with for 5 to 10 minutes each time they were fed. The results came back the same as in the previous experiment. The researchers found it hard to believe that merely touching and petting could make such a difference in the cardiovascular health of these rabbits so they did the experiment again for the third time. They got the same results: there was a 60 percent reduction in cardiovascular disease just by petting the rabbits!

There must be some truth in what someone has said: You need at least four hugs a day for survival, eight hugs for maintenance, and twelve hugs for growth. Have you had your hug today?

A hug can make a difference

A friend sent me pictures of twin babies that were born prematurely. The nurses looked at these tiny babies and didn’t think they were going to survive. The larger one might have a slim chance, but the smaller one didn’t have much of a chance. So on the night that they thought the smaller baby would die, one of the nurses put her in the incubator with her sister. Almost as soon as the larger twin felt her sister next to her, she reached out and put her arm around her. Lying in bed, she cuddled up to her all night and that arm was wrapped tightly around her. Tubes were in their arms and noses, but they were close to each other. And that’s all that mattered. The nurses said that from that moment on the little baby thrived. When they came in the next day, they were surprised to see how alert and responsive the little girl had become. From then on, she grew and gained weight. They both lived and thrived.

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big hug and intimate closeness made the difference.

Dr. Lester Breslow, dean of the school of Public Health at the University of California, Los Angeles, studied 7,000 people over a nine-year period. At the beginning of the study, he asked them how many close friends they had. At the end of the nine years, he found out how many of the people had died and compared that to the number of close friends they had. In all age groups those who had the least connections had about three times as many deaths as those who had the most friendly connections.

**Five levels of relationships**

Relationships exist at five levels. At the bottom of the ladder is the stranger level. These are people we meet everyday, nod at, but we really don’t know. The next level up is the acquaintance level: people we may speak to and exchange the time of day or discuss the weather. Then, there is the casual level. We have fewer of these people who may be in the same building with us at work or in the same class with us. We may from time to time exchange some opinions or an idea while waiting at the elevator. On the next level is a smaller, but closer group of 10-15 people to whom we might reveal some of our feelings and emotions. At the highest level are the few intimate friends that know us very well. These are the loyal friends that will stick with us through thick and thin. This level of relationship is characterized by complete openness, a sense of acceptance and affirmation, and mutual loyalty.

**The Jesus way**

What research is finding as a cure for stress and as a way of joyful living, the Bible has revealed to us long ago. It is the Jesus way. Jesus had a large circle of acquaintances. First there were 12. Then there were 70. Then, wherever He went, there was always a crowd. Each one felt that being close to Jesus, being close to each other, was a source of blessing. Peter, James, John, Lazarus, Mary and Martha, and many more. The Jesus way affected each one, and as they learned and practiced the art of friendship and togetherness, they grew in happiness, and in the success of what they did. Four days after their brother’s death, Mary and Martha found freedom from stress in the very fact that Jesus finally arrived in Bethany.

Why was Peter so successful at Pentecost? The man who was so frightened and stressed out that he denied his Lord was able to turn around and make such a powerful witness. Peter was successful because of the Holy Spirit, yes, but before the Spirit fell upon him, he was with his friends in the upper room. The bond that bound them together gave them the courage to face every stress in their later life. In addition, Jesus had personally granted Peter forgiveness and the assurance of His friendship.

Studies show that it’s not how many people we are acquainted with that makes a difference. Health benefits come from how intimate and how genuine our relationship is. You’ll find a difference in your living if you can count on four or five really good friends with whom you can share your feeling, and from whom you can get the hugs you need. If you have even one close friend, consider yourself wealthy—rich in the *amigo* factor.

Treasure and cultivate unselfish and close friendships wherever and whenever you can. If you move to a new place, do make new friends, but don’t forget the old ones. Give them a call or write a letter, and they will appreciate it and reciprocate. Friends bring us great joy and happiness, and also lower our stress. As William Temple once said, “The greatest medicine is a true friend.”

But the truest and greatest friend one can have is the One who said, “Do not let your hearts be troubled. Trust in God; trust also in me;” “Come to me, all you who are weary and burdened, and I will give you rest” (John 14:1; Matthew 11:28, NIV). Whatever your age, your occupation, your gender, and your problem—you can be joyful and stress free, if Jesus remains your friend. No one who has Jesus for a friend will have to be weary or burdened.

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**Intelligent...**

Continued from page 14.


Phil MacKay
Dialogue with an Adventist painter of wildlife in Australia

Australia’s native rainbow lorikeet, a living rainbow of colors, leaps off the page. A sugar-glider is rendered in such lifelike detail you half-expect it to start moving. Painting after painting of wildlife and flora produced with meticulous accuracy and slavish attention to detail.

Welcome to Phil MacKay’s world of art.

Phil was born in Barellan, a small rural settlement some 400 miles southwest of Sydney, Australia, but grew up in Port Macquarie, a tourist destination on the mid-north coast of New South Wales—an idyllic region with sandy white beaches and waterways, rainforests, and a pleasant climate. A perfect place for a nature-lover to live.

After leaving school, Phil tried different jobs but kept going back to the call of his skills—sign writing and screen printing. Although some of his family members were Adventists, he himself made no commitment to Christianity. Then, at age 20, he visited the Solomon Islands as part of a Fly-n-Build team* to help build a school at Kuzi Village. The experience changed his life. On the third day in the village, Phil met a young Adventist islander, Lily, and he decided to stay in the Solomons. After a few years he and Lily were married, and he ended up living in the Solomons for nine years. During that time, he ran his own business and worked for a graphic-arts company.

Three years ago, Phil, Lily, and their two-year old daughter, Nikhaule, returned to Australia and set up their home in Port Macquarie. Phil decided to be baptized. He began pursuing his art in a more professional way, and his work soon achieved widespread respect and admiration. Last year, during an Australian Geographic Magazine function at Taronga Park Zoo in Sydney, he received the prestigious Australian Geographic Society’s award for best illustrator for 2001 (from a field of 30 artists).

* Fly-n-Build is a short-term mission program where Australians and New Zealanders, usually Seventh-day Adventist lay people, help build or help with the maintenance of church properties in the Pacific islands.

Phil, as an artist, what is your typical day like?

My daily routine is pretty much the same. I have my normal meal times and paint an average of 10 hours a day, usually six days a week. I often find the night hours the most beneficial, as there aren’t too many distractions.

Can you tell us something about the process of your art? Take our readers into your studio, if you please, and let them see you at work.

Before the first stroke of the brush on the canvas, I have to do a lot of research. First I find photographic references of a particular bird or animal. Then I have to track down the photographer and seek permission to use that particular photograph, to avoid breaching copyright laws. It’s important to be ethical in everything.

I then sketch the image I will paint and get it into proportion. Normally, it takes about four to five weeks to complete a painting.

When and how did you start painting?

Early in life I began entering a lot of coloring-in competitions, and similar events. Although I never received any formal training, I always dabbled with some form of art throughout my working life. It was only a few years ago that I decided to paint professionally and had the opportunity to do that. Basically, I’m self-taught.

How would you describe your painting style?

I call it photorealism. The painting is
usually mistaken for a photograph. This style works well for me as I paint wildlife, and I think the subject should look as lifelike as possible.

■ Of the many pieces you’ve painted, do you have a favorite?

My favorite painting would have to be the wedge-tail eagle titled, “The Regal.” The eagle is a unique creature and has a place in Scripture.

■ How can one purchase your paintings?

Most of my paintings sell through the Hart Gallery on the Sunshine Coast. The Australian Geographic Society also sells my prints through their stores. Most picture framers in Australia stock my prints. And those with access to internet can get them by going to my website: http://www.globalprintgallery.com.au

■ Do your paintings have a purpose?

For me, the purpose of my paintings is to share the glorious beauty of animals and nature that our Lord has created. Before I became a Christian, I painted very dark-themed paintings, and I seemed to be able to do them blindfolded. It all seemed too easy! After becoming a Christian, I wanted to use the talent God gave me to serve Him somehow.

■ How important do you think art is for human beings?

Very important. Art, of course, is an expression of one’s God-given ability, skills, and talents. That aside, for a Christian, themed art provides a visual understanding of the past and the future.

■ Can you explore a little further how your art interfaces with your Christian beliefs?

It happens through the nature/creation aspect. I used to paint a lot of satanic things without realizing the beauty in our Lord’s creation. The things I painted reflected my lifestyle. Now that I’m a Christian, I see things in a totally different way. For example, when I look at the animals now, I see God’s handiwork.

I believe the Lord gives us unique talents, and we should make use of them for His bidding. I can really see the Lord working in my family’s life and my own. The Lord has opened a lot of doors for me with my artwork and answered a lot of prayers, and continues to do so.

■ Your wife is a Solomon Islander, and you lived there for nine years. What have you learned from being part of another culture?

The years I spent in the Solomons have been very valuable. The first thing I noted about the Solomon Islanders was their simple Christianity and love of God. The Lord has such an impact on their daily lives, and everything ties in with their faith. Because of their witness, when I returned to Australia, I became an Adventist. We in Western countries need missionaries from the islands to evangelize us!

The cultural difference was sometimes difficult, but it was a fantastic experience. Lily and I lived in her family’s village for two years, and then settled in our own village two kilometres away and developed the land. We were planning to build a small house for holidaying purposes and return to Australia. However, our village called Minana (meaning blessing) turned out so beautiful we couldn’t leave and ended up staying for six years. It was a pristine paradise, with turquoise water and white sand beaches fringed with coconut trees for our front yard. You can see why it was hard to leave.

■ When you’re not painting, are you involved in any hobbies or interests?

My favorite hobbies are spear fishing, gardening, and fast cars.

■ Gardening and fast cars. Those two don’t seem to go together too well!

Gardening is good therapy—relaxing and very enjoyable. I suppose it’s something I picked up in the Solomons, where the islanders live off the land, and we had our own crops. On the other hand, at the other end of the spectrum, fast cars are good therapy. I must admit the “petrol head” of my youth is raising its head again. There were no V-8 engines on the islands, so maybe I am catching up for those years.

On a serious note, I am like most people with a love for nature in some form or another. As a child, I wanted to visit zoos and animal sanctuaries, and was fascinated with the vast variety and magnificence of all the creatures there. I gasp at people who seriously believe that animals have evolved from slime!

The intelligence of animals amazes me at times, and I sometimes wonder just how smart they must have been in the Garden of Eden, and how beautiful without their faults and fierceness. Nature to me is certain evidence of the love of God to His created human family.

Interview by Gary Krause

Gary Krause is the communication director for the Office of Global Mission at the General Conference of Seventh-day Adventists, Silver Spring, Maryland. His e-mail 102555.325@compuserve.com.
Dr. Siriporn (or Dr. Tan, as she is known by her friends outside Thailand) is not a tall person. But that has not prevented her from reaching high into circles of influence and leadership in ways that are rarely heard of for an Adventist in a non-Christian society in Asia. A woman of grace, Dr. Siriporn mixes comfortably with royalty and is easily approachable by ordinary parents who have sought her assistance over the years for their children's college education. She is on first-name basis with other educational administrators as well as with ministers and government officials at the highest levels in Thailand. And she has accomplished all this while working for the Seventh-day Adventist Church.

Dr. Siriporn became an Adventist just before her graduation from nursing at the Bangkok Adventist Hospital in 1965. After serving among tribal peoples in Northeastern Thailand, she moved to Phuket Adventist Hospital, where her leadership abilities were quickly recognized, and she became director of nursing. Following periods of advanced study abroad, she was appointed as vice-president of nursing services at Bangkok Adventist Hospital. In 1996 she was called to be president of Mission College, which comprised the Bangkok Hospital School of Nursing and a small rural campus, two hours north of the city. In 1997 church administrators in Singapore decided to relocate Southeast Asia Union College to Thailand. Since 1998, Dr. Siriporn has had the task of merging three older, quite different, institutions into one new entity, Mission College. The college has rapidly developed into a highly respected international institution of higher education, serving six countries of the Southeast Asia region and the world beyond.

In April 2002, Dr. Siriporn was honored by the Thai Foundation as an Outstanding Citizen of the Year for her contributions to Thai higher education. And in 2003, the General Conference Education Department bestowed on her the Award of Excellence for her leadership in Adventist education.

Dr. Siriporn, tell us a little about your “roots.”

I was born into a Buddhist-Confucian Chinese family in Phuket, in southern Thailand. I was the youngest—a late, unexpected arrival. My family came from China just before the turn of the 20th century.

What kind of impact did this have on you?

I grew up largely with older people. They taught me with many pictures and many stories from old China about the philosophy and values of the old time. I was constantly reminded about where we came from. So I grew up with a strong sense of family history. This helped me have not only a confident understanding of myself but also an ability to understand other people.

What kind of school experience did you have?

In our family tradition, young girls were not allowed to leave home to study. So my parents hired a tutor to teach us. Later, I told my parents that I wanted to go out and study. I attended elementary school for four years. My father died as I was finishing. If he had been living when I finished elementary school, I would not have been able to go on to high school. He wanted us all to go back to China.

How did you become a Christian?

One of my uncles, who had studied medicine in Hong Kong, married a lovely, refined Christian woman who came from mainland China. When war broke out, they moved to Phuket. I was influenced a lot by my aunty. She told me stories from the Bible and about our family background. She was a good mother to me, and I was baptized into her church.

Phuket is a tropical paradise destination for many travelers. Why did you move away from there to Bangkok, and why did you study nursing?

I actually wanted to be a teacher, but the doors did not, at first, open in that direction. An Adventist missionary, Dr. Webster, who was a friend of my uncle, suggested that I should apply for the Adventist Nursing School in Bangkok, which I did.

What led you to become an Adventist?

Although I was a baptized Christian, something was still missing. At nursing school, I discussed with many pastors about Sunday and Sabbath and other things. Later, I took Bible studies for about three years with several pastors and finally with Dr. Ethel Nelson. Two weeks before graduation, at age 21, I was
baptized into the Seventh-day Adventist Church. From then on, it was total commitment to God.

■ How did you become involved in church work?

When I graduated in 1965, there was a nursing shortage in the United States. Of the 24 who graduated with me, 23 went to the U.S.A., and they asked me why I was not going. Four years previously I made a covenant with the Lord that if I passed the entrance examination and got into nursing school then, I would serve Him. I realized that I had a promise to keep, and I am still keeping it.

■ And what led you into academics?

While I worked as a nurse, I continued reading and studying and wanted to learn more and more. One day I went to the medical director and told him that although I enjoyed working in the Phuket Hospital, I felt the need for further study. So they sent me overseas to study for my master’s degree. Ten years later, they sent me again to complete my doctorate.

■ In 2002, you were honored as an Outstanding Citizen of the Year. In Thailand, a country with 90 percent Buddhist population, this was quite a distinction for an Adventist. What impact do you think this has had on the public perception of Adventists in Thailand?

In a way, I think the award was for the whole church. There are a lot of good things the Adventist Church does and can offer to society. When I was awarded this honor, people said to me how they wish that educators in high positions in the society would emphasize this idea of service to others. They are impressed that we teach our graduates to think of others more than themselves, to go the second mile. Because of this they have very high respect for the service orientation in our educational system. The award has highlighted the role of our church in Thailand.

■ For the past two years you have served as the Chair of the Quality Assurance Committee for the Association of Private Higher Education Institutions in Thailand (an association of 57 colleges and universities) and as a committee member of the National Quality Assurance agency. Why were you appointed to these roles?

The association was looking for someone who knew about accreditation. I made known to my friends that Mission College had some experience in this area. The National Council of Education then invited me to make a presentation on the quality assurance criteria used by the Adventist Accrediting Association.

The Office for National Education Standards and Quality Assessment has now been established as part of the government’s educational reform program. I was appointed to serve as one of the 11 committee members to set up the criteria for higher education institutions. Through these contacts, Mission College has gained a lot of respect, and we are viewed as one of the top quality-higher education institutions in the country.

■ You frequently work with high-profile people and organization’s that are not Christian. How do they relate to your Adventist beliefs?

Ninety-nine percent of my government and education contacts are with non-Adventists. One of the high-ranking officials in the Royal Army said to me, “We are very jealous of your God, because you have committed everything to serve Him.” They have also observed that Adventists are good people, willing to serve others. Adventists have systems of education and of health care that have very high reputations. Because my colleagues know that I cannot meet with them on Saturday, they graciously change the meeting times to Sunday to accommodate my religious convictions.

■ You have become a popular speaker on the public speaking circuit at universities and at military colleges and hospitals. What do they hear from you that they don’t hear from others?

One of the things in life that I enjoy doing is presenting seminars. And most of my seminars integrate biblical principles. I talk about servant leadership, and this is almost foreign to them because the normal practice in the world is “to be served, not to serve.” When I talk about giving yourself for the service of your people or when I speak about not running after position and a name but let a name and position run after you, they think it is something peculiar. Particularly in settings where competition and fighting for position are a strong part of the organizational culture. But they learn something.

■ Rarely does a woman achieve a senior leadership role in an Adventist college or university. How have you found it being a female leader in a male-dominated church structure—and that, too, in Asia?

Personally, I don’t find it difficult. My background has taught me that I am not less than any other person in the world. Male or female, it doesn’t matter! My family always told me that if I don’t bend my neck down nobody can step on my back. So be sure to walk confidently and straight up all the time. Not running after position and a name but let a name and position run after you. My family always told me that if I don’t bend my neck down nobody can step on my back. So be sure to walk confidently and straight up all the time. Not higher than others, but not inferior either! If you study well, have a good personal life, are hard-working, truthful and follow virtue, then nobody can step on you. Most of my vice presidents are male. When I work with them I forget that I am female and they are male. There is an important mission to achieve, and our love for God helps us to work together as a team.

■ What advice would you give to young people today who attend public universities or who want to get involved in public life?

Continued on page 29.
What is truth?

by Willmore Eva

Is truth that illusive?

Is truth as elusive as this story indicates? In a sense in it is, and yet in another, it is not.

Either way, it is characteristic of our time to reject the idea that there is any such thing as definable, normative truth. Then there are those who feel that they are members of an elite who have scaled the forbidden peak, captured the Great White Bird, and caged it.

But between these extremes are the majority of us who have a great desire to crack the code of life's mysterious meaning. It's a puzzle we are always working on. And it's not uncommon for us, if we have encountered a number of those "false summits" in our pursuit of the Bird of Truth, to become highly skeptical, while at the same time we are asking Pilate's famous question, "What is truth?"

The source of our struggle is in part due to the fact that we have witnessed so many lies, shadings, and truncations that we distrust almost any truth claim. In a survey conducted a few years ago, Canadian teenagers were asked the penetrating question, "What do you wish for most in your life?" The number one answer was, "Somebody we can trust."³

In his life as a journalist, Malcolm Muggeridge had seen first hand so much hypocrisy and manipulation paraded as truth that he had become hard and cynical. He writes of his late-in-life movement from cynicism to certitude, and exposes the value of seeing and embracing verifiable truth. With devastating candor, he says: "Truth is very beautiful; more so, as I consider, than justice—today's pursuit—which easily puts on a false face. In the nearly seven decades I have lived through, the world has overflowed with bloodshed and explosions whose dust has never had time to settle before others have erupted; all in purportedly just causes. The quest for justice continues, and the weapons and the hatred pile up; but truth was an early casualty... The lies of advertising, of news, of salesmanship, of politics! The lies of the priest in the pulpit, the professor at his podium, the journalist at his typewriter!"

Muggeridge ends his powerful tirade with this amazing insight: "It is truth that has died, not God!"³

These days, truth is up for grabs. We seem permanently stuck in perpetual crisscross, trying to pretend we're not bewildered, as we look nervously at the million contradictory signs packed together and pointing in all directions. It's no wonder so many of us have come to believe that "truth is whatever I believe it to be."

The heart truth

Most people today consider truth to be propositional—a gathered selection of the most productive norms, the most verifiable teaching and philosophy, the most incisive worldview.

Those who have a traditional Christian orientation see truth as a faith, a religion, a body of doctrine, the most biblical approach. All these definitely have their place in the scheme of things. But they are part of an outer court of truth. They are not in the inner sanctum, where living truth resides.

In this light, perhaps the most radical
differenced between the faith of the Old Testament and that of the New is just this: The Old expresses truth in terms of following a teaching, a formulated, written code, and a way of living and behaving that is by all means God breathed, holy, just, good, and eternal in its scope and authority, but is there to introduce something more to come.

In contrast, the New Testament, in the light of the accomplished arrival of Jesus, expresses truth in terms of a living, flesh and blood Reality. Jesus is the seeable, knowable One, the One who composed and administered the law and inspired the prophets of the Old Testament. He is Himself the very definition of truth. He came for the express purpose of being known to us. He is Truth (John 14:6-10) with a capital “T.”

In part at least, this is what that magnificent passage, John 1:1-3, 14, is saying. (See also Hebrews 1:1-4.) Truth has its origin and its highest and most complete expression in this Word which became flesh, which was in the beginning with God, and was (is) God. What Jesus said, did, and was, is the infinite sum total of truth. When the “it” of truth becomes the “He,” the face of truth changes radically, and such Truth is distinctly knowable (1 John 1:1-4).

Finding truth, Zacchaeus style

In the search for knowing truth, consider that strange little dwarf of a man, Zacchaeus. He was greedy, self-centered, and exploitative. But we have to say, “he had it right,” because, if for no other reason, he was after a person rather than a mere teaching. “He wanted to see who Jesus was” (Luke 19:3, NIV). Luke means to tell us that Zacchaeus was clearly not satisfied with merely looking at Jesus.

This little man was passionate about his search. Luke uses two terse descriptions of Zacchaeus’ search: First, he ran ahead, then he climbed a tree. The acts of running and climbing are acts of eager priority. The fact that he ran ahead of the crowd says volumes about the quality of this man’s search. The fact that he climbed the tree at the end of his run completely confirms his unself-conscious passion.

This man’s search also involved calculation and planning. He ran and climbed because “Jesus was coming that way” (vs. 4, NIV). He looked at the trajectory of Truth, and he patterned his path accordingly. He made an educated calculation of the direction Jesus was traveling, and saw that if Jesus continued in that direction, He would pass beneath the branch on which Zacchaeus knew he had to perch himself.

In the end, Zacchaeus could only wait for the arrival of Truth. There’s no way other way. No human manipulation can work. Authentic truth gives us the slip the moment we try to control it. It may even seem to simply disappear from sight so that uncertainty and speculation take over. But the fact is that real Truth does not evaporate; rather, it evades disrespectful, possessive fingers, those that try to insist it be or act a certain way.

Yet with all the questions about Jesus coming that way, and Zacchaeus being in the right place at the right time, Jesus does this magnificent thing. He stops right where this little man needs Him to stop, because God and His truth have a characteristic way of coming to those who really want it and who are searching for it.

And so Luke says that Jesus “reached the spot” (Luke 19:5, NIV)—a provocative description. And wonder of wonders, Jesus looked up at Zacchaeus! All his life he’s been looking up, at everyone and everything. He’s tried to hide his deformity, his inferiority. He’s tried to pretend it is not all that bad. Now, coming down from the tree and standing next to Jesus, it’s finally not so, in fact.

Finding and embracing definitive truth has a great deal to do with whose thinking and proclamation we consider to be authoritative, and wether or not we actually see and apprehend who is, in fact, presenting us with a potential revelation of truth.

Conclusion

I remember a particular time when my older sister and I were told to go and wash the dishes. This sort of thing happened quite often in my childhood, but on this particular occasion I definitely had other things in mind. I’d just decided that washing dishes was women’s work. Naturally, my sister didn’t like my lack of cooperation, and told me in no uncertain terms that I should help her, adding, “Dad told me to tell you that you should help me.” That, of course had no effect at all upon me. And the argument heated up.

Just then, much to my dismay, my father’s shadow crossed the kitchen door. He looked in and said, “Will, please help your sister with the dishes.”

And what did I say?

“Yes, sir!”

What made the words become flesh? It was seeing the father and hearing him speak the words. This is just what the Father did when He sent us His Son!

O God, give us ears to hear what the Spirit is saying (Revelation 2:7, 11, 17, 29; 3:6, 13, 22).

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Notes and references

Before a new medical product or technology gets to the patient, it undergoes a rigorous research and testing process, including testing on animals. The use of animals in such clinical research is legally permissible. But is it ethically appropriate? Further, in our time, the legality of an action speaks nothing of the existence (or non-existence) of a biblical or theological basis for the determination that the behavior is legal. While the Bible may have been the “law of the land” in ancient times, today’s courts rely on secular codes and statutes for their determination of what is “right” and “wrong.”

Does human benefit justify animal use?

Medical literature contains numerous examples of the clinical benefit provided to humans by animal-derived products. Dysfunctional human heart valves can be replaced with porcine heart valves; incisions can be effectively closed with sutures made from bovine viscera; and porcine skin can be used to treat large burns. On a molecular scale, epinephrine (derived from bovine adrenal glands) can be used to stimulate the heart in crisis situations; bovine thrombin facilitates blood clotting; and bovine pancreas can be the source of insulin for diabetic patients. Daily, millions of patients worldwide benefit from animal-derived medical products. Millions more experience the benefits of medical products that were first tested on animals before being marketed. Further, physicians learn both basic science and surgical techniques through the use of animals in the course of their medical training. This professional training directly impacts their knowledge and skill, thus facilitating patient care and treatment.

Acknowledging the “good” that comes from safe and effective medical products, does this “good” justify the use of animals? Does this “good” demand a moral obligation to use animals for the development of such products? Could there be a theological basis for using animals in clinical research if the intent of the research is to improve human health? If there is theological support for such use of animals, do humans have moral obligations to the animals used?

The Bible was written at a time and setting lacking high-tech surgical and pharmaceutical technologies, and it contains no prescriptive commentaries with regard to the use of animals in the course of medical care (or research). Lacking such instructions, one can reflect on the Bible’s general remarks regarding animal care. For example, Exodus 23:5 requires that animals in distress be aided; Deuteronomy 25:4 requires that oxen be allowed to eat while grinding grain; Deuteronomy 22:10 requires that animals that are incompatible not be forced to work together.

These verses portray animals being used in the course of human goals and point out that humans have a duty to respect and care for them. Further, the fact that animals are not viewed in isolation, but in a setting of their relationship with humans could be seen as relevant to the discussion of medical experimentation.

Aristondo has argued that in all human-animal relationships, the welfare of both the human and the animal is relevant; however, animals can be sacrificed for important human needs, including the advancement of clinical medicine. This hierarchy of humans over animals is seen to be reflected in Genesis 1:26 and Genesis 9:2 that speak of human dominion over the animal kingdom. In this superior position, humans can be seen as managing the use of animals, with the responsibility to employ animals for goals that serve the best interests of humans, and at the same time, ensuring that the animals are cared for in all settings (e.g., home, farm, laboratory).

Contemporary Jewish teaching suggests that relief of human pain and suffering takes precedence over considerations of animal welfare; similarly, the benefits to the general public supersede the welfare of individual animals. Judaism also teaches that animals were created to serve humankind, thus their use as food, labor, and companions are permitted—the only caveat being that the animals be treated in a manner that takes into account the pain and suffering that the animals may be subjected to.

If this position is accepted, the failure to conduct clinical research requiring the use of animals would be considered immoral because in “saving” these animals, the potentially substantial clinical benefit to humans is lost. No morality is seen in “saving” animals from being used in clinical research unless the research methods cannot minimize the animal’s pain and discomfort, and po-
tential benefits to the community at large are not foreseeable.5

Not all medical research results in beneficial products or technologies. Some experimentation produces data that is inconclusive or products that are harmful to humans, animals, or the environment. Often, there is no accurate way to predict what the experimental outcome will be. Thus there is no way to guarantee the use of animals only in those experiments which will be successful in facilitating human benefit. Because of this uncertainty, and the real possibility that experiments may result in products that are harmful (e.g., toxic, injurious), the intent of the research project is relevant to decisions about animal experimentation. Mere curiosity is not enough to justify the use of animals in medical research; rather, the goal must be to gather data that is relevant to the relief of suffering, cure of disease, prevention of illness, or maintenance of function.

Duties amid dominion

While the Bible does not refer specifically to “animal experimentation” as a permissible (or impermissible) activity, in the experimentation setting, the biblical imperative of respect and care for animals should translate into research protocol measures that would prevent or minimize pain and suffering to animals. Such measures could include analgesia, environmental temperature control, secure shelter, nutrition, hydration, and veterinary care.6 Physical handling of animals should be done in a manner that minimizes unnecessary stress. The number of animals used should be no more than needed to provide statistically defensible data. Animals should only be used in experiments that require them. Alternate models such as tissue culture or computer simulations should be used in place of animals as scientifically appropriate. Research protocols should be analyzed by an institutional review committee to ensure that the methodology is scientifically sound, and that measures are included that ensure animal welfare. Lastly, all research personnel should be trained with regard to principles of research ethics and animal welfare.

Conclusion

While I have attempted to show biblical support for the use of animals in clinical research, others use the Bible to decry the use of animals in such research. The Canadian animal rights group, CARE (Christian Animal Rights Effort), interprets certain Bible texts to place animals and humans on equal moral ground, and argue that animals should not be used even for food or clothing.7 PETA (People for the Ethical Treatment of Animals) also use such biblical interpretation in their arguments against the use of animals for food, clothing, and medical research.8 Just as there are multiple interpretations of biblical passages by various individuals and religious denominations in respect to theology and doctrine, there are multiple interpretations of the Scripture in matters such as animal experimentation. The “right” interpretation will always be a matter of argument among different groups of Christians.

Whatever those differences may be, I concur with philosopher David Smith9 that animals are also creatures of God, and they rely on humans and their Creator for some of their needs. While God may permit humans to use animals for human goals, this is not without the obligation to prevent or minimize animal pain and discomfort during this use. Accepting the hierarchical role of humans over animals also requires the acceptance of the obligations humans have to animals with regard to matters of safety and welfare. A hierarchical role means more than “being in charge”; such a role requires care and nurturing of one’s charges, in this case, research animals. While improving the safety and efficacy of clinical medicine is a worthy goal, pursuing this goal without reflecting on the welfare of research animals is a dereliction of duty demanded by the Word of God.

Katrina A. Bramstedt (Ph.D., Monash University) is a bioethicist at the Cleveland Clinic in Ohio, and a former medical device engineer specializing in cardiac implants.

Notes and references

6. See 1 above.

Faith & Science Conference

Adventist scientists, theologians, and graduate students are invited to attend the Conference on Faith and Science, August 13-20, 2003, at the Glacier View Ranch in Colorado. For more information, contact the Geoscience Research Institute, Loma Linda, California 92350. Phone: 909-558-4548. E-mail: conference2003@grisda.org.
Currently, vegetarianism is the in thing. From show biz stars to environmentalists, from religious adherents to animal-rights activists, to be a vegan is not only the healthy thing to do but also to be on the politically correct side. More and more research is showing that plant-based diet is better for human life and longevity. Nutritionists and health professionals continue to insist that we include in our diet more whole grains, legumes, fruits, and vegetables.

But is vegetarianism merely a religious, mystic, or political issue? Or is there sufficient scientific evidence to suggest that a balanced vegetarian diet provides all the nutritional and health needs of the body? Twenty-six nutritionists and scientists make a convincing scientific case for vegetarianism in this well-documented book, called *Vegetarian Nutrition*

Nearly half the contributors are Adventists, with 11 from Loma Linda University. The book has 20 chapters covering a diversity of topics, including the history of vegetarian diets, moral and spiritual issues pertaining to meatless diets, and the environmental impact of meat production. Written from a positive public-health perspective rather than as an apologetic defense of vegetarianism, the book adequately covers the advantage of vegetarian diet in the prevention of chronic conditions such as coronary heart disease, cancer, obesity, and osteoporosis. Other topics covered include vegetarian diets for athletes; the health-promoting properties of the many phytochemicals in plant foods; and vegetarian diets during pregnancy, lactation, childhood, and adolescence.

While tracing the historical roots of vegetarianism to moral and religious arguments, the book argues for a stronger basis. “This zealous fusion of moralism with nutrition unfortunately has given vegetarianism the reputation of fanaticism, and thus inhibited objective evaluation and recognition by mainstream nutritional science, as well as the public at large” (p. 485). That is one reason why modern nutritionists take great pains “to keep morality separate and distinct from physiology, and not allow sentiment to dictate science” (p. 484). Well said!

Although the book is scientific, it is readable and interesting. For example, one author points out that the meat abstainers who formed the first vegetarian society in 1847 in Ramsgate, England, minted the term “vegetarian” from the Latin *vegetus*, which means lively or vigorous, thus emphasizing physical rather than moral health (p. 494).

The Loma Linda University Food Guide Pyramid (p. 426) is another addition to the already crowded marketplace of food pyramids. The pyramid suggests that a vegan should intake 13 servings a day of fruits and vegetables and 15 of whole grains and legumes. This is a substantial amount of food. It is not clear to the reader what adaptations should be made to the number of daily servings for different stages of life cycle or different genders. The optional line drawn on the pyramid could be confusing to some, since one has to refer back to the text to pick up the necessity of adding vitamin B₁₂ sources to the diet.

Health professionals, college and university health teachers, graduate nutrition students, undergraduate dietetic students, and others interested in vegetarian nutrition should find this book interesting and useful reading, and a valuable comprehensive resource. Its almost 1,700 scientific references ensure that.

Winston J. Craig (Ph.D., University of Queensland) chairs the Department of Nutrition at Andrews University, Berrien Springs, Michigan, and has taught nutritional biochemistry in Adventist colleges and universities for the past 27 years.

**Vegetarian Nutrition**

Reviewed by Winston J. Craig

**The Four Faces of Jesus**

Reviewed by Roberto Badenas
the universalism of the gospel in Luke; and the symbolism and the Christology in John.

The whole book, but specially the first part, contains excellent short summaries and practical outlines on some basic study themes, such as the parables (pp. 47-58) or the discourse on the end of the age (pp. 82-90). Some studies, such as the healing miracles of Matthew 8 and 9 (pp. 32-38) and the crucifixion in Luke (pp.169-182), are supported not only by biblical and theological analysis but also illustrated through interesting archeological data.

The book devotes an entire section on the Synoptic problem (i.e., the fact that we have three parallel accounts). This is perhaps the most scholarly part of the book, providing a short, accurate, and handy survey of the theories that explain the synoptic relationships (pp. 201-210). The section is also an important reflection on the implications of the synoptic question on the doctrine of inspiration (pp. 211-221).

The final part of the book deals with some key Gospel themes: the Gospels’ witness to Jesus, the kingdom of God, salvation, community, discipleship, and mission. As if to enrich the gospel portrait of the divine/human mystery, the author provides an enlightening discussion of the Christological problem from the Nicene Creed to the Chalcedonian definition. Obviously, such a brief digest of so broad a subject may leave the informed reader unsatisfied, but it will be extremely appreciated by students, and by those not exposed to early Christological controversies.

One quality worthy of special notice is the didactic character of the book. As an experienced New Testament teacher, McIver writes with a clear organization of material, and with a clarity of style easy to follow. So he lists, among many other subjects, five principles of interpretation of parables (pp. 55-57), five prominent themes in Luke (pp.125-128), seven meanings of the cross (pp. 177-179), seven facts in the synoptic problem that need explaining (pp.197-200), and six different facets of salvation presented in the Synoptic Gospels (pp. 302-304).

Although the book deals with a scholarly subject, it does not fail to deal with such practical issues as community, discipleship, and mission (pp. 311-320). One of the best features of the book, in my opinion, is the natural way by which the author invites the reader to know experientially the subject matter of the Gospels: the person of Jesus. “We cannot know Jesus secondhand,” says McIver. “If we want to know what He is like, we each need to sit down and read the Gospels for ourselves. There we will find insights that belong to us alone, and it will be these that make Jesus real to us” (p. 242). For the disturbing and inescapable question the Gospels ask is none other than: “What will you do with Jesus?” (p. 320).

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A Thousand Shall Fall
by Susi Hasel Mundy (Hagerstown, Maryland: Review and Herald Publ. Assn., 2001; 172 pp., paperback).

Reviewed by Wilma McClarty

“Nobody, nobody, can defeat us!”
With this high-voltage sentence, Susi Hasel Mundy begins the captivating account of her family’s determination to be faithful to Jesus and to the Seventh-day Adventist Church during the terror of Nazi Germany.

Born during the war, the author relies for her narrative on the memories of family members who witnessed the horrors of the war. Her parents and siblings have preserved meticulous details of their experience during World War II in writing and on tapes. Several pages of family photos personalize the story. Although the author admits to taking some liberties with some details and sequence of events, she remains faithful to her intention, “to illuminate more brightly the truth.”

Franz and Helene, parents of Kurt, Lotte, Gerhard, and Susi, dominate the narrative. Although the children shared the sufferings, only Franz and Helene daily faced political, religious, physical, and economic hurdles that constantly confronted the opponents of Hitler’s regime.

Forty and a pacifist, Franz was drafted and assigned to an elite troop, Pioneer Company 699, whose duty involved building front-line bridges. The author provides a map showing the long and torturous road Franz had to take: from Germany to France to Poland to the USSR, getting as far west as the Caspian Sea before turning back east through the Crimea, the Ukraine, Romania, Hungary, Austria, and back to Germany. Although Franz was a sharpshooter by talent, as a Seventh-day Adventist he knew better than to tempt himself with wearing a pistol. So he crafted a wooden look-alike and carried it instead. After six years of war, Franz arrived back in Frankfort just as the war ended, free and healthy. “Of the original company of 1,200 Pioneers, only seven survived; only three of those were not wounded. Franz

Continued on page 29.
For Your Information

Adventist world leaders adopt public campus ministry policies

In 1987 three departments at the world headquarters of the Seventh-day Adventist Church—Chaplaincy, Education, and Youth—agreed to cooperate in initiating and supporting programs designed to minister to Adventist students attending public colleges and universities around the world. It is estimated that this group represents approximately 150,000 Adventist members, and the number grows each year.

At the World Church Headquarters a committee was established, known by its acronym AMiCUS (Adventist Ministry to College and University Students), that in 1989 launched College and University Dialogue as a network publication. Soon each world division appointed departmental leaders to promote and supervise this ministry in their territory. Similar assignments were made at the level of unions and local conferences or missions.

In 1995, members of the World Church Executive Committee adopted a series of guidelines to provide new impetus for this ministry and to define responsibilities at various levels of church administration. These guidelines were published in Dialogue 8:1 as Adventist public campus ministry continued to consolidate and expand around the world.

In October 2002, as this ministry reached its 15-year anniversary, world delegates attending the Annual Council of the General Conference Executive Committee voted three new policies that are now part of the Working Policy, describing the responsibilities of the Departments of Adventist Chaplaincy Ministries (FA 15), Education (FE 90), and Youth (FY 25).

These policies are summarized below, for the benefit of leaders in this important ministry.

Public Campus Ministry

Objectives—Adventist Chaplaincy Ministries, the Education Department, and the Youth Department collaborate in providing support to Seventh-day Adventists who, for a variety of reasons, attend public colleges and universities around the world. Working under the supervision of a General Conference appointed committee on Adventist Ministry to College and University Students (AMiCUS) and in coordination with the world divisions, these three departments promote and support initiatives designed to meet the spiritual, intellectual, and social needs of Adventist students on public campuses worldwide. In cooperation with leaders at various church levels, the committee aims to achieve these objectives by strengthening the faith commitment of these students to Seventh-day Adventist beliefs and mission, providing opportunities for Christian fellowship, preparing students to deal with the intellectual challenges that arise in a secular environment, developing their leadership abilities, and training them for outreach, service, and witnessing on the campus, in the community, and in the world at large.

The AMiCUS Committee cooperates with the Adventist Volunteer Center and Global Mission by encouraging the involvement of these Adventist students as student missionaries or volunteers. It also engages the support of the Public Affairs and Religious Liberty Department in order to obtain, at the regional level, Sabbath exemptions for class assignments and examinations for Seventh-day Adventist students.

Responsibilities—The AMiCUS Committee provides overall supervision and coordination of this global ministry and, in consultation with leaders in the world divisions, promotes initiatives designed to:

1. Organize associations of Adventist students in public campuses and hold special meetings for them,
2. Publish and distribute College and University Dialogue, a Handbook, and other materials that support this ministry, and
3. Train campus chaplains, lay leaders, and pastors in university centers.

The committee also develops an annual budget to carry out its international ministry.

Adventist Chaplaincy Ministries focuses on providing training for campus chaplains, lay leaders, and pastors in university centers and on developing materials to support their ministry. Adventist Chaplaincy Ministries also maintains an international list of Seventh-day Adventist campus chaplains.

The Department of Education focuses on producing Dialogue in parallel language editions (English, French, Portuguese, and Spanish) and distributing this journal on the basis of orders received through the world divisions. The Department of Education also promotes the value of Seventh-day Adventist education, encouraging these students to continue their studies at a Seventh-day Adventist college.
or university, where possible, and to make their professional services available to church institutions once they complete their studies.

The **Youth Department** focuses on fostering the organization and activities of student associations in college or university centers, training students for leadership and outreach and holding regional student conventions and retreats.

**Role of the World Divisions**—Each world division shall assign to one or two qualified department directors the responsibility of leading in the ministry to Adventist students on public college and university campuses, with support from the General Conference AMiCUS Committee and in coordination with union leaders in their territory. This ministry seeks to:

1. Foster the organization and activities of Adventist student associations in public campuses and to maintain a current list of them,
2. Hold regional meetings for these students,
3. Budget funds for the free distribution of *Dialogue* and other needed material,
4. Offer specialized training for campus chaplains, lay leaders, and pastors in university centers,
5. Train students for outreach, service, and evangelism on their campuses, their communities, and beyond,
6. Promote the involvement of Seventh-day Adventist university professors and other professionals as mentors in this ministry,
7. Connect these students with Seventh-day Adventist colleges and universities as potential transfer students where possible and eventually as faculty members,
8. Assist local leaders in establishing and maintaining good relations with administrators of public colleges and universities in which Adventists are students,
9. Engage the services of the Public Affairs and Religious Liberty Department in preventing or solving Sabbath observance issues related to Seventh-day Adventist students in public campuses, and
10. Provide coordination and guidance for this ministry to their counterparts in the unions and local fields, as well as periodic assessment.

**Tantipoonwinai**

Continued from page 21.

First, we have to know who we are, what we stand for, and what we believe. And we should not lose that identity. Nor should we be afraid of what we believe and what we stand for.

Second, live well, study well, and serve well as befitting God’s children. Be a living testimony, and people will respect you.

**Interview by Gilbert M. Valentine**

Gilbert M. Valentine (Ph. D., Andrews University) is provost and vice president for academic administration at Mission College. He served at Adventist colleges in New Zealand, Pakistan, Great Britain, and Australia before moving to Thailand two years ago.

Dr. Siriporn Tan’s e-mail: president@missioncollege.edu

**A Thousand...**

Continued from page 27.

Hasel, the man with the wooden pistol, was one of the three.” A miracle that the author attributes to his father’s faithfulness to Christ and his inner determination not to fall prey to the Nazi dogma.

The book’s epilogue tells what all the six Hasels did after the war. But the author does not forget Helene’s equally demanding role during the absence of her husband. She was one of those of whom the English poet Milton may have written, “They also serve who only stand and wait.” “Wait” she did, always anticipating news of her husband, but “stand” she did not. Burdened with the daily tasks of feeding, clothing, comforting, and protecting her children, her life became a blur of Nazi confrontations. She was often invited to join the Nazi League of Women, with the promise of increased food and clothing allowances. But she refused, reasoning: “I’ve seen my Nazi neighbors coming back from their vacations rested and tanned, their children plump and well dressed. Yet I want nothing to do with Hitler’s system—because if I accept their benefits, I’ll be unable to refuse their demands.”

The back cover describes the book as an “inspirational story.” That it is, thus fulfilling the author’s wish “that this book will be an encouragement to God’s people during the time of the end.” But more than inspiration, the book seems to shout and tell to all who will listen, “God is in charge.”

Wilma McClarty (Ed.D., University of Montana) chairs the Department of English at Southern Adventist University in Collegedale, Tennessee. E-mail: mclarty@southern.edu
While I was a freshman at the University of Michigan, my life truly changed. I discovered the anchor of my spiritual life, and since then, I have known who I am, why I am here, and where I am going. No evangelist convicted me to follow the new way. No pastor knocked at my door to tell me my need for conversion or how I could experience transformation in Jesus. I found my new destiny when a group of dedicated Adventist students on this secular campus chose to share with me what they had: their faith, their friendship, and their joy—something I did not have.

Campus ministry changed my life. Ever since, I have joined this group of joyful and sharing Adventist students to make a difference on our campus. Through much training in the Word of God, prayer, and a lot of hard work, the campus ministry at the university is going strong. Our experience can be yours as well if you are a student at a secular university. Here’s what has happened to us over the years.

**Something to think about**

Campus ministry is no easy task, but it comes with many advantages. First, campus ministry has a ready public: students who have left the comfort of their homes and are looking for independence. They want to experiment. They acquire tolerance for different viewpoints and ideas. Most of them are in a search mood—for direction in their lives. They face challenges to their value system, and they are open to hear new truths.

Second, campus ministry can attract Adventist students who have chosen to attend public colleges or universities. Just because they are Adventists, we cannot assume that they would join the Adventist group or ministry. They may have chosen the institution for various reasons: finances, campus location, or specific course programs not available in Adventist institutions of higher learning. Perhaps some are pursuing a graduate or doctoral degree in a big-name institution. The most dangerous reason, however, could be that some of them may want to run away from Adventism. Campus ministry can serve them all.

Our group strives to be different from other Christian groups on campus. We take pride in being unabashedly Adventist! It is surprising how many students join us because they see something different about us, and want to know what makes us different.

**Where to begin**

If your campus has no organized Adventist group and there are several Adventist students there, it’s time to start one. But before you do, here are some preliminaries. First, define your ministry’s vision. Begin with a twofold objective: (1) to reach out evangelistically to non-Adventists, and (2) to minister and train Adventists in order to fulfill the first objective.

Second, work toward forming a core group that is interested in outreach. Make prayer and Bible study central to the spiritual growth of this group, in order that each member may experience a Bible-based revival movement that will turn them into active missionaries.

Ask God to bring the right people your way, the ones who share the group’s vision. Without shared vision and values, no group ministry can be successful.

Third, don’t work in a vacuum. Visit the local churches to find any students who might attend your college or university. Establish a strong rapport with members and the pastors of the churches. They will be glad to help and support you. Contact Adventist academies for graduating seniors who may be planning to attend your college, and send them a warm invitation to join your group when they reach the campus. Put up fliers all over campus looking for Adventists. Often the registration office can help you by giving a list of students who marked Seventh-day Adventist as their religious preference on their application form. Prayer and hard work can soon result in a viable group to begin your campus ministry. That’s what we did, and now we have at the University of Michigan, an official campus ministry—Adventist Students for Christ (ASC).

**How to grow**

Organization must lead to growth and effective ministry, and here, too, some important steps are necessary. First, obtain official recognition for your group from the college or university, as such recognition brings many advantages. Get to know the campus policies, procedures, privileges, and responsibilities that govern campus student organizations. Some colleges provide funding to recognized organiza-

Continued on page 33.
A


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Continued on page 35.
More than 200 Adventist students attending public colleges and universities in the Euro-African Division are gathered together in Eisenberg, Germany, November 1-3, 2002, for the second European congress sponsored by the Division AMiCUS (Adventist Ministry to College and University Students). The delegates represented various countries such as Austria, the Czech Republic, Belgium, France, Italy, Germany, the Netherlands, Norway, Portugal, Romania, Slovakia, Spain, and Switzerland.

In addition to devotional and social activities, the congress focused on the central theme, “Can we walk today in the steps of the Reformers?” Five Ad-

Special graduation for Adventists in Botswana

For years, Seventh-day Adventist students in the state-operated University of Botswana have been missing the high point of their college career: the graduation service. As part of its tradition, the university holds its graduation service on Saturday, and the government, in spite of repeated requests from church leaders, did not accommodate the Adventist students at the university.

So it was the case last year. For 44 Adventist graduates, including four from extension centers, the high point of their educational career was about to pass by without that moment of joy when one walks steady and strong, wearing a gown and cap of achievement, and receives a well-earned diploma from the university chancellor. The church leaders of Botswana, the members in the capital city of Gaborone, and students, after much prayer, turned this disappointment into a moment of dedication—as they have done in the past few years.

Not just a moment. While the university graduation service lasts only for a few hours, the church decided to have a three-day celebration affirming the value it places on Adventist graduates. Beginning with a Friday consecration, to a Sabbath baccalaureate, and a Sunday commencement, the ceremony had all the trappings of a graduation, plus the call to commitment to serve the church and the nation. Some of these graduates became Adventists while at the university because of the campus ministry carried out by Adventist students, and to them the service was especially meaningful.

The university extended its cooperation for these special services. The Friday evening and Sabbath programs were held in one of the lecture halls at the university campus. The Sunday program was held in Boipuso Hall, a large and beautiful complex in the capital city used for special public functions. For Friday and Sabbath vespers, the graduating group invited Pastor Muyunda, a theology student from Solusi University, to speak. While I spoke at the divine service and Sabbath afternoon program, heavenly music seems to have dominated the entire weekend. Every activity emphasized the theme, “There Is Victory in Jesus Christ.” The graduating group certainly symbolized that victory to themselves, to their parents, and to hundreds of other believers who attended the services.

The university has some 80 Adventist students, three university deans, and one department chairperson, and all of them are involved in a vibrant campus ministry. Together with an active Adventist presence in the city, the church maintains a strong influence in the community and a cordial relationship with the government.

Hudson. E. Kibuuka (Ph.D., University of South Africa) is the director of education and AMiCUS for the East-Central Africa Division as well as Dialogue regional representative. His e-mail: 100076.3560@compuserve.com
Campus Ministry
Continued from page 30.

Our group gets about $600 to $800 a semester from the university. Often, groups can get free use of rooms or halls for their meetings. Meeting on campus has advantages over meeting in private homes, and inviting friends may become easier. Organized groups also have access to various modes of advertisement on the campus for their activities.

Outreach methods
Once a stable group is formed, start planning outreach activities. Outreach is the sure way to growth. Plan your meetings so as not to conflict with exam times, breaks, or holidays. Make your weekly meeting an occasion for friendship. Here at the University of Michigan, bringing our friends to meetings has proved to be the most effective way for growth. Communicate your presence on campus through advertisements, fliers, and personal contacts. Since students on campus can range from being atheist to Christian, programs should be geared toward varying groups. Here are some ideas that have worked for ASC:

Christian Programs: Morning devotion; prayer meeting; Bible studies (prophecy, doctrines, salvation); creation vs. evolution presentations; religious interest surveys; literature racks/tables on campus; worship through music; prison ministry.

Humanitarian programs: Singing at nursing homes; visiting hospitals; working with Habitat for Humanity or Adopt-a-Highway; hosting health/stop-smoking seminars; study groups (homework and studies).

Programs open to all students: Home-cooked dinners; vegetarian cooking class; stress-release massage; recreation nights (gym nights, social events, etc.).

In-reach methods
Organizing outreach programs for non-Adventist students is important. Equally so is nurturing and caring for fellow Adventists within the group. Promote personal study of God’s Word each day. Study and solidify our distinctive Adventist beliefs. Hold each other accountable and spend personal time with one another. Pray for and with one another. Make a conscious effort to get to know everyone in the group: call them by phone, e-mail them, and grab a meal together. Spiritual and friendship bonds help the group to be vibrant and growing.

Staying alive
One unique aspect of campus ministry is the constant turnover of students every few years. In view of this, prepare for transitions in leadership. Keep mentoring and training leaders who can step in whenever there is a need. Leaders may change, but ministry must go on. Pay special care to freshmen and help them to grow. They are the most vulnerable, yet teachable. Finally, keep praying that God will continue to bring people each year to keep the work alive. It is difficult to balance God’s work with a busy schedule of studies; however, keep claiming the promise that those who keep Him first, last, and best are the happiest people on earth.

As was said a hundred years ago, secular campus ministry is a work that “must be done” (Ellen G. White, Selected Messages, book 3, p. 234). This mandate leaves us with no other option.

Dr. Rolf Pöhler addresses the congress.

Roberto Badenas and Corrado Cozzi direct, respectively, the Education Department and the Youth Department in the Euro-African Division and coordinate AMiCUS activities in their territory.

Judy Namm, the president of Adventist Students for Christ at the University of Michigan, Ann Arbor, Michigan, is a senior in the School of Education. Her e-mail: jrnamm@umich.edu.

The campus ministry’s websites: www.umich.edu/~asforc and www.campushope.com
Looking for an opportunity to be involved in volunteer ministry, I was browsing through the Adventist Volunteer web site (http://volunteers.gc.adventist.org). One item caught my attention: Mongolia was looking for four English teachers. Where in the world is Mongolia? What are the people like there? What is the culture like? What do they eat?

The unknown has its own challenges. And I decided to apply. I would teach English to professionals during the day and conduct Bible studies at night. Teaching a language would become a tool to witness for the Lord. “Wow,” I said to myself. “This is exactly the kind of assignment I am looking for.”

I quickly learned all I could about Mongolia. It lies between Eastern Siberia and Northern China. It’s the home of three million people. Tibetan Buddhism is the common religion. It has the famous Gobi desert. One thousand years ago, Genghis Khan marched right across it to Europe. It has one organized Seventh-day Adventist church, with about 200 members. Its capital, Ulan Bator, is perhaps the coldest capital in the world. Until recently, communism defined its political and economic life. The more I learned about Mongolia, the greater my interest grew.

But I had to look at some immediate problems. The job did not start until January, and that meant I had to quit college in the middle of the semester. Worse still, I had never been a teacher and didn’t know how to teach English. And I didn’t know how to give Bible studies! The whole thing seemed wishful thinking and illogical! But I could hear a faint little whisper: “Do you trust me?” And I did remember reading, “They that trust in the Lord shall renew their strength....”

Why couldn’t I be one of those? After all, it was not my work. It was God’s.

Four months later, I boarded a plane for Ulan Bator. Shortly after arriving in Mongolia, I was telling the mission consultant’s wife that I wanted to do more Bible studies. The following Sabbath, Elder Dale Tunnell unfolded his plans for me. Six months earlier, a pastor of an independent congregation happened to see our mission headquarters as he was going by bus. He felt impressed to visit our church. The visit led to a discussion of what we believe, and soon he was convinced that the Adventist Church had the truth. After he studied our beliefs by himself for six months, he asked Elder Tunnell to send someone who would take his church through a series of Bible studies so they would all know who Seventh-day Adventists are and what they believe.

Elder Tunnel outlined my job. “Nathan, take care of this group. Study with them. Go through all our beliefs. Do it on Sabbath afternoons in the form of a worship service.” At first, I hesitated, for I am not a preacher. But the voice I heard before I left home seemed to be at it again. “Do you trust me?” Elder Tunnel invited me to watch him do it the first time, and then the task was mine.

I have never seen God work in such an amazing way. In six months, God worked on 20 people and had them ready for baptism. I watched them grow...
spiritedly, and they were no longer strangers; they were now part of my family.

The ministry was fulfilling beyond what I expected. I decided to extend my work more and more to other parts of the country, this time with a friend. Ashleigh and I trekked to the country-side—camping, hiking in the mountainous forests, and visiting as many Christian groups as we could. Once we traveled by train through the night, got off at a remote station at four in the morning, and drove an hour by jeep over dirt roads to a little town where there was a small church. The town, at the base of a mighty mountain range, had probably four trees and more than 400 dogs. The living conditions were harsh—no running water, no toilet or bathing facilities, and only wood stoves for cooking and heating. But there was something that made me warm and happy: A young woman had come far from her home to plant a church here, and now she was ready to leave without anyone to fill her spot. Her commitment to the work and her need to go home moved me. And the Lord seemed to be on her side. So I decided to stay there for one year.

Moving to Sant was one of the scariest moves I’ve made. I was the only American within probably 200 kilometers. My command of the Mongolian language wasn’t that great, and I wasn’t a country boy. People there were gruff, hard-core, country stock. Most of them looked like people you wouldn’t want to have as your enemy. I prided myself, having grown up in Los Angeles, as being open-minded; but I soon saw that my open-mindedness extended only to those who were similar to me. Yet before long, I learned that these hard-exterior, rough-looking people had the warmest hearts one could ever imagine! They quickly adopted me as one of their own; the women encouraging me to call them Mom, the young men calling me Brother, and even some of the elderly gentlemen treating me like their son. No matter how different I was from them, they always accepted me just the way I was. They taught me what it meant to have a true Christian spirit of acceptance.

Living in Sant was tough, but most rewarding. Being on my own, I learned firsthand what it meant to have a relationship with Jesus Christ. I found I couldn’t get through my day without Him. Being forced to learn a new language and speaking like a three-year-old child, learning new practices, looking stupid pitching hay with a pitchfork, and harvesting hay with a scythe were all very large doses of humility. Without Christ, I would have thrown up my hands and walked away. It’s only when we step out of our comfort zone that we learn who we really are and how much we need God.

Two years after arriving in Mongolia, it was time for me to leave. I left the land of Genghis Khan, having ridden camels, taken treks through the Mongolian steppe, and having had adventures to thrill almost anyone. But more than all these, I came away a transformed person. I got a new worldview; a worldview that places trust in God at the core. God wants to transform each one of us into people only He can imagine. Do we trust Him to do it?

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Interchange
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Invitation
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• Curriculum and Instruction
• Educational Administration
• Leadership (online only)
• Library Administration
• Religious Education

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• Business Management
• Finance
• Management Information Systems

Master of Public Health
• Health Promotion
• Health Ministry

Education Specialist
• Curriculum and Instruction
• Educational Administration
• Religious Education

Doctor of Philosophy
• Curriculum and Instruction
• Educational Administration
• Religious Education

Theological Seminary

ACADEMIC PROGRAMS

Master of Divinity
Master of Ministry
Master of Arts in Ministry
• Pastoral Ministry
• World Mission
• Health Ministry

Master of Arts in Religion
• Applied Theology
• Biblical Studies
• Theological-Historical Studies

Doctor of Ministry
• Church Ministry
• Church Mission
• Church Leadership

Doctor of Philosophy
• Applied Theology
• Biblical Studies
• Theological-Historical Studies

Adventist International Institute of Advanced Studies (AIIAS)
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Above: “Blue-Winged Kookaburra”
This bird is similar to the laughing kookaburra, but with more blue coloring and white eyes that are very sharp—as this lizard is about to find out! This bird is found in the tropics of northern Australia.

Left: “Quality Moment” (The Laughing Kookaburra)
The kookaburra, Australia’s most famous bird, belongs to the kingfisher family. Its call sounds very much like laughter, but is actually a warning cry. It is almost like an icon in the typical Australian backyard. This painting depicts the tranquility of the laughing bird.

Left: “The Regal” (Wedge Tail Eagle)
My favorite painting. The majestic beauty and the strength of an eagle is a constant reminder of God’s promise: “They that wait upon the Lord shall renew their strength; they shall mount up with wings as eagles; they shall run, and not be weary; and they shall walk, and not faint” (Isaiah 40:31, KJV).
**Right: “Local Waterhole” (Galahs)**
Common in rural Australia, the galahs are very clever, have a lot of character, can be taught to talk, and make good pets. They actually drink from taps like this.

**Above: “Little Mate” (Forest Kingfisher)**
Even with all the wide range of colors and techniques available, no artist can capture or match the iridescent blue coloring of this beauty.

**Right: “Pots of Gold” (Rainbow Lorrikeets)**
The beauty and the brilliance of these birds’ coloring are proof enough for me of a Creator God. These birds are amazingly tame, even in the wild.
Above left: “Pondering” (Azure Kingfishers)
My years in the Solomon Islands introduced me to a wide variety of kingfishers. I would spend hours watching these little silent hunters fishing by the river. Stealth and patience are their secret. If I had a tenth of the fishing skills of these birds, my fishing expeditions would indeed be successful!

Above right: “Freddie” (Frillneck Lizard)
Who said the dinosaurs are extinct? Imagine Freddie roaming around a backdrop of smouldering volcanoes. Another outback Australian icon, they look fierce but are really all bluff.

Left: “Too Many Late Nights” (Red Eyed Green Tree Frog)
Frogs come in a huge variety of shapes and colors. This one is probably the most popular among frog lovers, and has such a character, that I had to put him on canvas.
**Right: “Only Four Came Back”**
*(Ducklings)*

As in the nursery rhyme “Old Mother Duck,” the ducklings go their own way one by one. Natural instinct, some say, but is there something more?

**Above: “What’s That?”**
*(Leadbeaters Possum)*

Curiosity displayed by one animal to another is really intriguing. What do they think when they encounter another animal they have never seen before? How marvelous it would be if we could understand animal communication.

**Right: “Old Bill”** *(Koala)*

Koalas take me back to my childhood when they were part of every child’s favorite cartoon strip, called “Blinky Bill.”