

Should Adventists consider evolution?

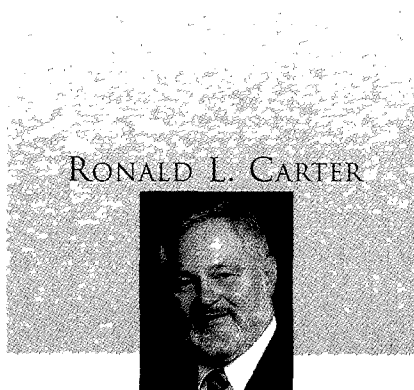
Editorial note: This is the fourth in an extended series of Ministry articles. They are presented in no particular order. These articles were first presented as papers at the Seventh-day Adventist Faith and Science Conferences of 2001 through 2004. This article has been adapted for Ministry and edited with the Ministry reader family in mind.

No scientific theory has changed human thinking more than Darwin's theory of evolution. For some, evolution provides the primary organizing principle of life, its origin, and the mechanisms for complexity. For others, evolution is the greatest threat to belief in God, causing legions of believers to question or lose faith in Scripture. Pastors too frequently hear individuals say they can no longer believe in biblical creation or a universal flood because of the theories of contemporary science. Thus, evolutionistic thinking is seen by many as an enemy to Christian faith that should not be considered by the believing community.

Our witness: thoughtful and accurate

How should Seventh-day Adventists consider the claims of evolution? A thoughtful study of evolution by the church seems necessary for two reasons.

First, Adventists believe that careful study of both nature and Scripture can lead one to God. Imbedded in the science of evolution are realities that appeal to reason and that are compatible with and can provide insights into God's interaction with His creation (e.g., God's grace in providing mechanisms for survival in a changing ecology through time; processes that are consistent with Scripture and the *great controversy* motif). The proper interaction of faith and reason is central to a sustainable commitment to God. We cannot



accept or reject views regarding science or faith ignorantly or apathetically.

Second, it is our responsibility to give an account of our faith to the world, and we will be benefitted by developing an appropriate, reasonable, and correct apologetic of our beliefs. For meaningful dialogue among our members and for a positive influence in the world, we must have an accurate, mature understanding of the theories of modern science, its rules and methods, whether we agree with them or not. We must be able to use the language of science credibly and properly.

A problem: evolution has many meanings

In the study of evolution it is particularly difficult to communicate precisely because the key terms describing and qualifying evolution are numerous and changing, with unique meanings within opposing schools of thought or between scientific subspecialties.

Evolutionistic thinking may be seen to consist of four related and overlapping notions: process, mechanism, theory, and philosophy.

Evolution as process. Evolution as process simply means inherited (genetic) change within populations over time (generations). Few Adventists reject the idea that humankind has changed since creation. Since the Fall these changes have continued, being passed on genet-

ically. They have been and continue to be influenced by the ever-changing environment. Acceptance of such post-creation change is essentially an acceptance (if partial) of the process of evolution but need not be attached to any one theory of evolution.

Evolution as mechanism. Evolution as mechanism involves five principles: (1) Life begets life; living organisms produce offspring that are very similar to their parents. (2) Even though descendants resemble their parents, extensive variation, primarily due to new mutations and genetic recombination, exists among offspring. These variations are the raw material of evolutionary change. (3) Organisms have the potential to reproduce exponentially, yet in nature population size tends to be in balance (most exceptions are anthropogenic). (4) Due to resource limitations, disease, competition, and stochastic factors, not all organisms survive. (5) Those animals that, on average, produce a greater number of descendants in future populations are described as the most "fit."

These five observations form the core of Darwin's theory of evolution, or differential survival due to natural selection. Mechanisms of evolutionary success (fitness) are measured by the number of viable offspring produced in succeeding generations. Fit or adapted organisms are not necessarily those that meet some human standard of performance or perfection. The processes and mechanisms of evolution are descriptive and need not be seen as synonymous with a particular theory or philosophy, yet they are cornerstones in the theory of organic evolution.

Evolution as theory. Scientific theory is a well-substantiated explanation of some aspects of the natural world—an organized system of accepted knowledge that applies in a variety of circumstances to explain a specific set of

phenomena. The theory of evolution applies insights and observations from process and mechanism to the past (for example, the fossil record) and attempts to reconstruct the best (most parsimonious and naturalistic) account of the history of life.

Due to the inherent limitations in the more history-oriented natural sciences (such as absence of repeatability, incompleteness of the fossil record, and lack of direct observation for most events), all theories of evolution through time will remain primarily inferential and speculative. However, these theories often suggest logical ways to interpret the data and suggest testable experiments on plausible processes and mechanisms that may have happened in the past.

While there are several competing theories of biological evolution, neo-Darwinian theory is the best known and emphasizes small genetic changes that over time add up to species diversity originating from a single tree of life (gradualism). Other theories of evolution emphasize different elements (such as polyphyletic vs. monophyletic origins, or earth origins vs. panspermia), and still others emphasize different mechanisms (gradual vs. punctuated; or stochastic, or selection driven, or directed evolution).

Evolution as philosophy. Evolution as philosophy plays a central role in philosophical naturalism. Naturalism rejects any explanations inaccessible to the methods of science and must be explicable by known material mechanisms in the universe. It rejects all notions of God or divine purpose. Some believe that philosophical naturalism is becoming the religion of science.¹

A basic question facing the church is How can we best communicate to the world that we reject evolution as philosophy, along with the many theories of organic evolution, while at the same time we remain open to the processes and mechanisms of evolution that are demonstrable?

Many have attempted to use the terms *micro* and *macro* to signal these distinctions, yet these terms are problematic.

Problematic terms: micro and macro

Creationists often use the term *microevolution* in a nontechnical sense to refer to any level of biological change that is deemed biblically safe or acceptable. The term *macroevolution* is then used to describe levels of evolution that seem unacceptable to our belief (i.e., deep taxonomic change—reptiles to mammals or production of new features like feathers).

Science defines *microevolution* as genetic (allelic) change within populations, or beneath the level of the species, and does not include the formation of new species. Species are groups of organisms that naturally interbreed or are defined by having all their members distinguishable (diagnostic features) from all members of another species.

Macroevolution is an ambiguous term. Its many definitions fall into two categories: those that emphasize taxonomic quantity (any change producing new species) and those that focus on the quality of change (new adaptive strategies, new structures, new body plans).

Biologists who study evolution at or above the species level view the production of new species (speciation or cladogenesis) to be examples of macroevolution. Paleontologists working with hard tissues (bones rather than genes) and often incomplete fossil records tend to look at evolution more in terms of an overview of the history of life. Their definitions of macroevolution emphasize major changes in form or structure (*bauplan*) and see macroevolution dealing only with largescale morphological changes, requiring long periods of time and producing modifications that lead eventually to the formation of higher taxonomic groups.

Due to the ambiguity of the terms, some creationists recommend that we not use the word *macroevolution* even though its meaning includes speciation, which they accept as demonstrable and

allowed within a literal reading of the Bible.

At this point, there is a significant dilemma for the church. When we communicate with students in the biological sciences the acceptance of only microevolution (change below the species level) and at the same time reject macroevolution, we give the impression, implicitly, that we as a church accept the concept of “fixity of species,” and this stance has drawn the most intense antagonism against creationists.

The label of “fixity of species” is often automatically given to short-age creationists and characterizes them as being scientifically illiterate. Since Adventism has long accepted speciation, should we allow ourselves to be misunderstood in one area merely so that we are not misunderstood in another area?

Some suggest that neither *micro* nor *macro* should be used and that we should not even use the word *evolution* in any favorable light. Others have found the term *macroevolution* apologetically beneficial because it allows them to shed the claims of fixity of species and to be technically accurate within some schools of thought, but, if that is done, it is incumbent on them to be most cautious and stipulate which definition of *macroevolution* is being used.

Strengths of evolution

If we are to consider the theory of evolution and its various meanings, we should be willing to understand its claims and strengths. The following list presents what I believe to be evolution’s strongest appeal.

- ◆ Evolution as science appeals to reason and claims to be a self-correcting, honest, open, and nonauthoritarian approach to pragmatic truth.

- ◆ Evolution makes useful predictions that help us to understand patterns of diversity in nature.

- ◆ Mechanisms of microevolution are observable and measurable.

WWW.MINISTRYMAGAZINE.ORG

◆ Patterns of speciation appear to follow patterns along natural corridors such as land bridges, and island dispersal patterns through valley pathways and around ecological barriers.

◆ Living and ancient organisms are found distributed geographically close to their proposed fossil ancestors, regardless of their habitat or specific adaptations. Examples: marsupials (with one exception) inhabit only Australia while placental mammals are virtually absent in Australia.

◆ Evolution accounts for fossil transitional forms: a range of transitional fossil forms linking dinosaurs (reptiles) and birds, and reptiles to mammals. Fossil whales exist that have legs (some appear to have had the ability to move about on the land, others did not), thus showing a macroevolutionary connection between land mammals and whales.

◆ Vestigial forms (pythons, legless snakes, have vestigial pelvises beneath their skin, and some lizards have rudimentary, nonfunctional legs underneath their skin).

◆ Evidence from molecular sequence comparisons using both genes known to be under selection and sequences from nonfunctional DNA sequences (pseudogenes, endogenous retroviral genes, and mobile genetic elements) when analyzed

to show patterns of common descent (cladistics) show patterns of copy errors that are consistent with phylogeny rather than ecology or design.

Weaknesses in theory of evolution

As a trained biologist, I respect the science of evolution but find the following weaknesses of the theory to be substantial.

◆ Much of the logical strength of evolutionary theory comes only after one accepts its primary *a priori* assumption that all organisms are related by descent and that there is only one "true" tree of life starting with a single (or perhaps a few) ancestor type. These assumptions limit the possible scenarios that will be seriously proposed.

◆ Ancient evolutionary relationships are historical and, therefore, can never be conclusively confirmed or refuted by scientific methods.

◆ Much of macroevolution (macro in the paleontological sense) is based on incomplete data (missing or partial fossils and the absence of soft tissue for DNA analysis).

◆ Many evolutionary explanations are difficult to test because they are prone to the so called "just so stories" that assume that what is in nature must

be adaptive now or in some previous setting.² In many ways evolutionary theory has become too comprehensive, providing contingency explanations for nearly any possible biological outcome and, therefore, irrefutable.

◆ Fossil transitions between many of the putative primary branches in the tree of life are not consistent among data sets (morphology often contradicts molecular sequences, and sequence data from one gene often tells a different evolutionary scenario from a different gene in the same organism).

◆ Evolutionary theories of the origin of life (abiogenesis) are poorly supported by empirical scientific data.

◆ The theory of natural selection does not explain well the evolution of irreducibly complex structures.

◆ Theories of evolution are not independent of human politics and bias.

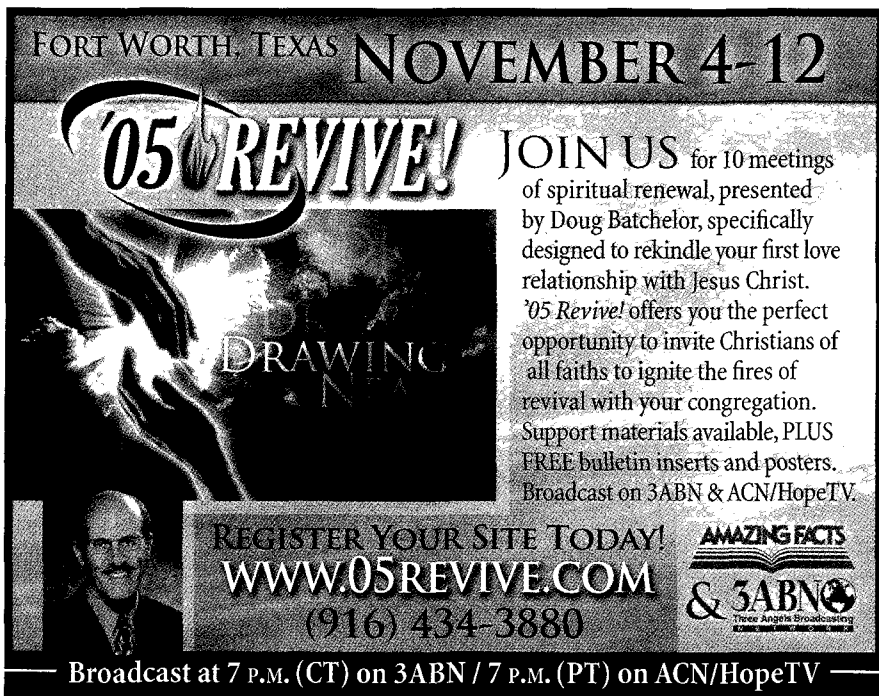
◆ The theory of evolution has become dogma and a religion for many of its proponents.

◆ Current evolutionary theories (i.e., sociobiology) claim to be capable of answering not only the how questions but the why questions. Philosophically speaking, this claim is an especially weak position when it automatically excludes possible answers simply because they are outside the possibility of scrutiny by the scientific method.

Conclusions

Should Seventh-day Adventists consider evolution? To sustain a faith-based relationship with God, I believe that we must seriously and thoughtfully consider all challenges to our beliefs. When doing so, however, we should not be intimidated by or easily swayed by human philosophies or by the claims of science, for knowledge is limited by human reason, politics, and the requirements of the scientific method.

We must be humble about discoveries in science as well as those in theology. We must realize that we don't understand many things and must, therefore, be open to all truth. While being open to things revealed through science and the mind, we must be unambiguous about our commitment



FORT WORTH, TEXAS NOVEMBER 4-12

'05 REVIVE!

DRAWING

JOIN US for 10 meetings of spiritual renewal, presented by Doug Batchelor, specifically designed to rekindle your first love relationship with Jesus Christ. '05 Revive! offers you the perfect opportunity to invite Christians of all faiths to ignite the fires of revival with your congregation. Support materials available, PLUS FREE bulletin inserts and posters. Broadcast on 3ABN & ACN/HopeTV.

REGISTER YOUR SITE TODAY!
WWW.05REVIVE.COM
(916) 434-3880

AMAZING FACTS
& 3ABN
Three Angels Broadcasting

Broadcast at 7 P.M. (CT) on 3ABN / 7 P.M. (PT) on ACN/HopeTV

and reliance on faith in the Bible and the leading of the Spirit. Some things will always require commitment without having all the answers, whether, by nature, they are scientific or spiritual. Given the ambiguity of the word *evolution*, it is particularly important that we be clear about our definitions.

In addition, we should be charitable to others as we discuss these issues. We can't assume that someone who speaks in support of evolution necessarily supports atheism or theistic evolution.

Students who have become knowledgeable about evolutionary processes and mechanisms can be disappointed when parents and pastors reject any form of evolution just because of what the word could mean without considering the way they are attempting to use it. We may genuinely help the conversation by using terms correctly and, most importantly, recognizing that much of what is being described as evolution may in fact be about processes and mechanisms that can be accepted within a biblical postcreation model.

How we treat each other is often more important than how we treat ideas. Too often we claim that evolutionists are unreasonable or are primarily motivated by a desire to reject God. Evolutionary theories require much faith in naturalism, but they are also not unreasonable. They should be treated professionally for what they are while remembering that just because something is reasonable, it does not necessarily mean that it is correct.

As creationists we must avoid making dogmatic statements or doing apologetics by vibrato.

Should the church consider evolution? I hope so. Shall we adopt it? I hope not; not as philosophy nor as a theory of origins. ■

Ronald L. Carter, Ph.D., is dean of the school of science and technology, Loma Linda University, Loma Linda, California.

1 M. Ruse, "Is Evolution a Secular Religion?" *Science* 299 (2003): 1523, 1524.

2 ———, *Mystery of Mysteries: Is Evolution a Social Construction?* (Mass.: Harvard University Press, 2001).

Letters *continued from page 3*

struggles. If we were expected simply to pay back all we owed as a result of any of our failures and sins, when would enough be enough?

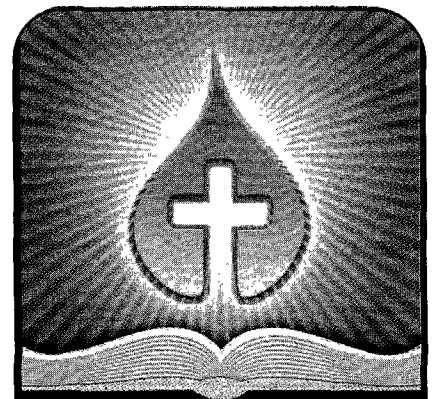
On church growth

We appreciate the fine research done by Monte Sahlin (March 2005) and his partners on church growth. But the article's statistics are facts, not conclusions. We have to use our judgment and common sense to draw conclusions from statistical facts. It seems to me that some of the conclusions reached in the report of the study might be erroneous. Just two examples: Sahlin points out that fast growing churches have more than one church service each Sabbath, whereas stable or declining churches have only one. Does this indicate as seems to be implied that having two church services causes growth? Isn't it more logical to conclude that it is the growth that causes the need for multiple services? He also suggests that fast growing churches find funds for hiring more church staff. Does adding more staff cause church growth or does the growth lead to more funds and the need for more staff?

And just one minor quibble. The author uses the word "reveal" in the title of the article and several times again in the text. Many years ago when I was writing a doctoral thesis at a secular university, I used that term. My mentor/major professor objected to my using it. Said he, "Revelations come from God through His prophets; I don't think you are either one." Of course he won the point.

—Charles H. Tidwell, Sr., Collegedale, Tennessee.

Correction: *The biographical sketch accompanying Stan Patterson's article "Pastoral Ministry: Management or Spiritual Leadership" (July/August 2005) mistakenly proclaimed Stan as possessing a Ph.D. degree. While Stan is well on the way, he does not yet have this degree. The editorial office regrets having jumped the gun!* ■



ACTS 100

acknowledgement • communion • training • service

Praying With Your Spouse

Here are some ideas for beginning a more effective prayer life with your spouse.

Be willing to collaborate. You may be unaccustomed to the type of prayer your spouse suggests. Try not to expect conformity only to your idea of how prayer time will be. Instead, approach your venture as an exploration of the richness each of you can contribute.

Be sensitive to each other. No matter how compatible you are in other areas of your marriage, if sharing prayer is new territory, you will need to communicate your expectations with each other. If your spouse feels inadequate, ask, "How's it going?" and ask the Holy Spirit to direct you into a relationship that is comfortable for both.

Don't judge your prayer time. Be careful not to compare your experience with rapturous prayers you have heard, read about, or imagined. Each day that you honor God as a couple, in whatever form best suits your personality, is a successful prayer time. The process is more important than the product!

Renew your commitment. When you miss a prayer time together, simply begin again. Be sure you don't keep a scorecard of missed sessions which turn into "spouse accusations."

Relax. We neither "arrive" nor become "experts." Jesus asks us simply to come as children. While it can be difficult to be vulnerable, when you make the choice to pray together, you will see your relationship deepen with God and with each other.

—Annette Eckart, *Marriage Partnership*, Summer 2003, pg. 15

Fresh ideas for developing
your church's spiritual life
www.ministerialassociation.com