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Nature's Contribution to Creation Theory

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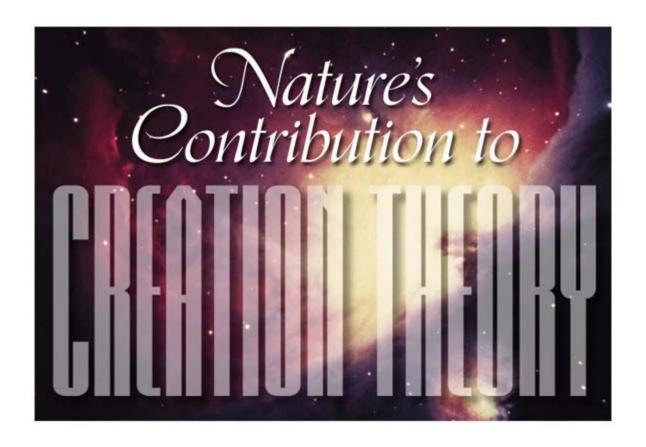


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Sometimes what we consider as biblical has no basis in Scripture.

By L. James Gibson

The study of nature and the study of special revelation have a long history of interaction. Many scholars consider that Christianity has had a beneficial impact on efforts to study nature systematically. Conversely, the study of nature has also made contributions to our understanding of special revelation.

First, it may be useful to note that the approach to the study of nature has changed, and with it, its relationship to special revelation. Humans have studied nature from the dawn of history, but not always with the same approach taken by modern scientists. Modern science can be considered as beginning with the development of mathematical physics in the 17th century by

such scientific luminaries as Galileo, Descartes, and Newton.

Although the founders of modern science generally saw nature as an expression of God's wisdom, modern science has tended to separate God from the study of nature. By excluding any consideration of divine activity and focusing exclusively on the relationship between matter and energy, science has become increasingly secular. It is now considered inappropriate to mention God in explaining events in the cosmos. This is a change in the philosophy of science since the days when Ellen White stated that science and the Bible should be in harmony. The present refusal of scientists to acknowledge God means that modern science is no longer friendly toward the biblical record of divine activity in nature.

What Did We Expect?

Many Seventh-day Adventists, myself included, have been educated to expect harmony between science and Scripture. This expectation is based upon certain statements from the Bible, and especially from Ellen White.

To illustrate: "The heavens declare the glory of God; the skies proclaim the work of his hands. . . . Their voice goes out into all the earth, their words to the ends of the world" (Ps. 19:1, 4, NIV).

"God is the author of science. . . . Rightly understood, science and the written word agree, and each sheds light on the other." 1

Presumption of harmony led me, and others, to suppose that conflict between science and Scripture was only superficial, that scientific research by dedicated Christians would uncover the truth hidden by the anti-religious bias of godless scientists. And it is true that anti-religious bias has a significant impact on the attitudes of many scientists.

An example: "It is not that the methods and institutions of

science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our *a priori* adherence to material causes to create an apparatus of investigation and set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot allow a Divine Foot in the door. The eminent Kant scholar Lewis Beck used to say that anyone who could believe in God could believe in anything. To appeal to an omnipotent deity is to allow that at any moment the regularities of nature may be ruptured, that miracles may happen."²

Many scientists truly have an anti-religious bias. The situation is much more complex, however, than mere bias. Even dedicated Christian scholars have been unable to develop satisfactory explanations for some of the challenges that science presents to faith in Scripture. The conflict is much more than superficial.

Why Did Our Expectations Fail?

How can we account for this situation? How can there be conflict when we have been told by special revelation that there should be harmony? What is a proper response to the conflict?

Many of us draw on our scholarly training to address this problem. We may say something like, "The Bible is not a textbook of science." The implication of this statement often seems to be something like this: The Bible talks about spiritual things, while science studies the real world. Therefore, we can ignore the Bible when considering Earth history.

Many Christians find this approach unsatisfactory. One problem with this approach is that the Bible talks about the real world, too. Much of what the Bible discusses deals with God's interaction with the world, both animate and inanimate. If God

has been intimately involved in Earth history, what confidence can we have that science can find the truth by excluding any reference to the supernatural? If God has not been involved, what motivation do we have for making any effort to find harmony between science and Scripture?

Before going further, perhaps we should reconsider what inspiration has to say on the topic. Could we have misunderstood? Perhaps we have focused on the quotations that affirm our ability to discover truth, failing to balance them with quotations that point out the inadequacy of our efforts to understand the world and our tendency to place our own opinions above the information God has revealed to us.

Romans 1, for example, points out that we are disinclined to accept the evidence that God has plainly shown us in nature: "Ever since the creation of the world his eternal power and divine nature, invisible though they are, have been understood and seen through the things he has made. So they are without excuse" (vs. 20, NRSV).

The accuracy of this statement is reflected in the quotation cited above from Richard Lewontin. But this is not the only problem. Consider the following quotations from Ellen White (who has a great deal to say about God and nature):

"The most difficult and humiliating lesson that man has to learn is his own inefficiency in depending upon human wisdom, and the sure failure of his efforts to read nature correctly. . . . of himself he cannot interpret nature without placing it above God."

This does not sound as though we should expect harmony between science and Scripture. Maybe we need to revisit her writings to see if we have correctly understood what she is trying to tell us. When Ellen White wrote about science agreeing with Scripture, she was using *science* with a meaning different from the way it is commonly used today. Today, the word *science* is

understood as referring strictly to material causes. Spiritual or non-material causes are specifically and explicitly excluded. Ellen White had a term for such an approach to the study of nature: "False science is something independent of God."⁴

Since modern science, by majority definition, excludes any explanation involving God, it does not represent the approach that Ellen White meant when she said science and Scripture should agree. Thus, we cannot legitimately apply Ellen White's statements of expected harmony to the current, completely secular, nature of science. We need to look further into her statements to find a more realistic expectation.

What Should We Expect?

Many of us have expected science and Scripture to be in harmony, and we have quoted Ellen White in support, but this is based on a highly selective reading of her messages. Due to the totally secular nature of modern science itself, conflict seems inevitable.

"I have been warned that henceforth we shall have a constant contest. Science, so-called, and religion will be placed in opposition to each other, because finite men do not comprehend the power and greatness of God."⁵

Such quotations have forced me to re-evaluate my expectation that "science" and Scripture will agree. I now recognize that conflict is to be expected, especially when science attempts to explain an event in which God acted in direct ways with which we are unfamiliar. Since Scripture emphasizes such divine activity, we can expect frequent conflict between the modern, secular practice of science and the record of divine activity in Scripture. This conflict is especially acute with regard to the biblical record of past events that cannot be scientifically tested and confirmed. This problem greatly complicates the

potential of science to contribute to creation theory.

Three Classic Cases

Despite the difficulties noted above, the study of nature has revealed much that has contributed to our understanding of Scripture. One way this has been accomplished is by clarifying certain terms in Scripture by narrowing the range of possibilities that seem consistent with observation. There are famous examples in which biblical interpretation has been clarified through the study of nature.

1. The Flat Earth Myth. Some scholars have claimed that the Bible teaches the Earth is flat, although this claim has been refuted. The Bible does use language that permits the interpretation that the Earth is flat. Isaiah 11:12 and Revelation 7:1 refer to the Earth as though it has four corners. On the other hand, Isaiah 40:22 refers to the circle of the Earth. It seems the biblical text is ambiguous on the question of the shape of the Earth. (No circle has four corners, though neither is a circle necessarily spherical.)

According to Jeffrey Russell, the notion that the Bible teaches the Earth is flat was popularized by the overtly antibiblical writing of Washington Irving and Andrew Dickson White in the 19th century. According to these authors, Columbus had to fight against this biblical error in order to gain approval for his voyage to the New World. This legend is false.

Very few scholars of the Middle Ages actually believed the Earth was flat, and neither Columbus nor his contemporaries were among them. A few early Christians held a view of a flat Earth, but leading Christian and Greek thinkers from the fourth century A.D. onward have favored a spherical Earth.

In the case of the shape of the Earth, science has contributed to our understanding of creation by clarifying a point

that the Bible left ambiguous.

2. The Geocentric Universe Error. A second example is the famous story of Galileo and the geocentric universe.⁷ In this case, Bible believers actually did claim that the Bible teaches the centricity of the Earth. This belief was apparently supported by texts describing the sun as "going down" (e.g., Gen. 15:12, NASB). These texts, and others, seemed to suggest the interpretation that the Earth is the center of the universe.

Science has shown otherwise. The Earth is not even the center of our Solar System, much less the center of the universe. The popular interpretation of the text was shown to be incorrect. (The Earth does function as the center of existence for observers living on its surface. Technically, one can choose any point of reference one wishes for the center of the universe, but the Earth makes a very awkward and inconvenient choice from the standpoint of studying the cosmos.)

The solution to this problem is to recognize that the Bible writers recorded events as they were perceived at the time, without the broader perspective available to people living today. In this case, science has contributed to our understanding that the language of the Bible may be phenomenological rather than analytical.

3. The Extra-biblical Error of Fixity of Species. A third example concerns the notion of fixity of species. Some creationists have taught that species do not change appreciably, but are relatively fixed in their structure and characteristics. Although this concept is not taught in Scripture, the phrase "according to their kinds" (e.g., Gen. 1:24) has been used in its support.

Charles Darwin, who was trained in theology at Cambridge, was apparently taught fixity of species. In an 1844 letter to Joseph Hooker, he commented that asserting that species might change was like "confessing a murder." The inference that

species were fixed was justified theologically by arguing that to admit that species have changed would be to imply that God's creation was so imperfect that He had to make adjustments from time to time.

However, the idea of fixity of species is not derived from the Bible. There is nothing in Scripture that teaches either that the creation is now in the same condition as when it was created, or that species cannot change. What really happened in this case was that an idea from secular Greek philosophy, Plato's typological thinking, was incorporated into Christian theology, and the Bible was then interpreted as teaching it. Thus, it could be claimed that science supports the Bible.

Later changes in scientific thinking resulted in what appeared to be conflict between science and Scripture, but was actually conflict between the old and new ways of practicing science.

In this case, science has contributed to our understanding of creation by showing that species are not immutable, but can change. This example provides a strong warning against incorporating non-biblical ideas into Christian theology and then claiming they are taught by the Bible. Although we welcome harmony between the two approaches to knowledge, the Bible does not depend on scientific support.

In each of these three examples, science has corrected or clarified ideas that were claimed to be biblical. In the first case, the problem was largely invented by anti-biblical writers and has been debunked. In the second case, the problem was real, but a satisfactory solution has been found in the realization that Bible writers may have used ordinary language, not technical language, to describe what they saw or to illustrate their point. In the third case, the problem was caused by incorporation of extra-biblical ideas into Christian doctrine. We would be wise to remember these examples as we study the relationship of science and

Scripture today. Some problems may be spurious, some resolvable, and some legitimate.

Contributions to Creation Theory From Scientific Discoveries

The idea that nature shows signs of a purposeful creation is an old one. Many Bible writers saw God's hand in nature. Today, this concept may be expressed in the term "Intelligent Design." Several discoveries in science have been interpreted as examples of intelligent design.

Fine-tuning of the Universe. The continued existence of a habitable universe depends on the specific properties of matter and energy. For example, the fundamental forces are balanced against one another in such a way that complex molecules can form and persist, yet they can also react and undergo chemical changes. The chemical bonds are strong enough to preserve molecules, yet weak enough to permit them to change. If the strength of chemical bonding forces were not balanced properly, life as we know it would be impossible.

Numerous other examples could be given to illustrate the precise balance of the fundamental forces and physical constants. A number of authors have discussed this topic. The point is that nature is so finely tuned that Intelligent Design seems a much more plausible explanation than chance. This finding of science supports the literal interpretation of biblical texts that state that the heavens were created by God for a purpose.

The Temporality of the Universe. Science has discovered evidence that seems to indicate that the universe is not eternal, but that it had a beginning. This raises the question: How did the universe begin? Experimental evidence does not produce any answer to this question. Especially when one takes into account the fine-tuning mentioned above, the possibility of Intelligent

Design is a reasonable hypothesis to account for the origin of the universe. This discovery supports the literal interpretation of biblical texts that claim God created the starry heavens.

exceedingly complex. This complexity extends to the smallest unit of life, the cell. The simplest living cell contains hundreds of complex molecules of specific composition, none of which has been observed to form in abiotic systems. Living cells are irreducibly complex, in that there exists some minimum complement of molecules required for life. This complement is irreducible because it cannot be reduced without killing the cell.

The origin of life is universally recognized as an unsolved problem for a materialistic worldview. Many books and papers have been written about this problem. The irreducible complexity and specified information found in living cells are characteristics of intelligent activity. The discovery that cells are extremely complex, information-rich systems has contributed to creation theory by supporting the inference drawn from the Bible that all life owes its origin to God's creative activity.

Polyphyly. Polyphyly means having separate ancestries. The claim of polyphyly is that living organisms have descended from numerous ancestors of independent origins. The opposite view is monophyly, which is the claim that all organisms have descended from the same original ancestor.

There are two lines of evidence for polyphyly. First and foremost is the evidence from selection experiments. Scientists have raised, manipulated, and tested thousands of generations of bacteria, and hundreds of generations of fruit flies, mice, and other species. Results show that existing anatomical structures may vary considerably, but new structures do not form. Claims by evolutionary scientists that long periods of time are sufficient to generate new body types are merely claims and cannot serve as evidence. The actual evidence in hand indicates limits to

change and implies numerous lineages with separate ancestries.

A second line of evidence comes from the pattern of morphological gaps in the fossil record. The morphological gap between two similar species, such as a horse and a zebra or donkey, is guite small, and the number of intermediate evolutionary steps is quite small. But the morphological gap between a horse and a grasshopper is enormous, and the number of intermediate evolutionary steps should be extremely large. The probability of finding an intermediate between species in the horse family should be quite low, since there are only a small number of intermediate steps. Yet many species of fossil horses are known, and evolutionists feel they have a fairly good record of the evolution of the horse. In contrast, the probability of finding some evolutionary intermediates between a horse and a grasshopper seems quite large, since so many intermediate steps are required. Yet there are no intermediates linking the two phyla chordata and arthropoda. If chordates and arthropods have separate ancestries, as appears to be the case, there cannot be any evolutionary intermediates between the horse and the grasshopper.

Fossil intermediates are most notably absent among the groups with the largest morphological differences—the phyla—and most notably present among groups with small morphological differences—within families.¹¹

As others have noted, scientific evidence can also be used to argue for monophyly. Patterns of similarities in DNA sequences, the near universality of the basic chemical processes in all living cells, and the sequence of fossils are all used to argue for monophyly. All this evidence, however, is circumstantial rather than direct, and is consistent with polyphyly as well. The most compelling evidence is directly observable in the resistance to major morphological change observed in selection experiments.

Although the evidence is mixed, science has provided substantial evidence of the existence of numerous lineages with separate ancestries. This evidence has contributed to creation theory by supporting the interpretation of Genesis 1 as indicating the discrete creation of numerous different groups of organisms.

Human Uniqueness. Humans stand apart as qualitatively distinct from the rest of creation in certain ways, principally in the development of their minds. Humans seem to be the only species with the capacity for intelligent speech, abstract thought, religious worship, a sense of right and wrong, and artistic creativity.

Physiological and morphological similarities of humans to other creatures have been used as an argument for human descent from more primitive primates. Some circumstantial evidence is consistent with this claim, but empirical evidence does not support the notion that organisms develop capacities beyond what they need for survival. For example, natural selection does not seem capable of driving the evolution of the human mind to develop capacities that are of no immediate use, yet human intelligence seems far greater than is necessary for survival.

Scientific confirmation of the uniqueness of the human mind contributes to creation theory by supporting the interpretation of human creation with mental capacities implied by what the Bible refers to as "the image of God" (Gen. 1:27, NIV).

Catastrophism. Scientists have discovered evidence of many impacts by extraterrestrial objects that caused devastation on the Earth. In some cases, the devastation appears to have been global and is associated with the disappearance of large numbers of now-extinct species from the fossil record. Before acceptance of extraterrestrial impacts in the scientific community, the idea of global catastrophe was emphatically rejected. Now global catastrophism is recognized as part of the history of our Earth.

Creationists generally regard the fossil record as resulting

largely from the effects of a global flood. Discovery of large numbers of impact craters has brought the realization that the Flood must have been much more violent and much more complex than what would be envisioned merely from the effects of ordinary storm activity. A series of extraterrestrial impacts may have provided a major mechanism for the destruction of the Earth. The intermittent nature of extraterrestrial impacts might provide a mechanism for the stepwise pattern of deposition seen in the geological record. Thus, science has contributed to creation theory by showing that the Earth has been subjected to global catastrophic activity, although the supernatural causes of these events places them into conflict with the secular philosophy of modern science.

Science has produced discoveries in several areas that have contributed to creation theory, in many cases supporting the biblical teaching of supernatural Intelligent Design. These examples make it seem more reasonable to accept other claims in Scripture of divine activity in Earth history.

Conclusions and Recommendations

This has been only a brief sampling of this topic, but perhaps enough has been said to permit some lessons to be identified.

• Seventh-day Adventists have frequently overemphasized the expectation of harmony between science and Scripture. We have often failed to recognize properly the contrast between the secular nature of science and the supernatural nature of Earth history as described in the Bible. This has left many of us unprepared when we are faced with conflict where we expected none. We would benefit from a greater realization that the secular presuppositions of science, as presently practiced, will always stand in tension with the supernatural viewpoint of Scripture.

Somehow, our church members, especially those exposed to scientific training, need a greater appreciation of this reality.

- Study of Scripture and the study of nature can shed light on each other. Science has discovered evidence that has clarified some ambiguities in Scripture, such as the shape of the Earth and its relationship to the Sun. Other scientific evidence indicates that nature is not a closed system. There are gaps in the economy of nature, most famously in the origin of the universe, the origin of life, and the origin of the phyla. The nature of these gaps and their relationship to known regularities in nature suggest intelligent activity. If so, then a complete view of Earth history must include an awareness of supernatural activity and a willingness to go beyond materialism in developing theories of Earth history.
- We must be careful how we allow science and theology to influence each other. The relationship of science and faith is complex rather than simple.

We must be cautious when encountering simplistic scientific claims, either for or against the Bible. On the one hand, we should resist the temptation to use scientific discoveries as justification for rejecting Scripture. We must not permit our faith to be the hostage of science. We will always have to make some choices based on faith rather than empirical evidence.

On the other hand, we should resist the temptation to use scientific discoveries as justification for believing Scripture. Science does not provide simple answers to our questions about Earth history. Too often, we have rushed to adopt some preliminary scientific report as proof that the Bible is true. The Bible does not depend on science to justify its statements.

As mentioned earlier, conflict arose over the geocentric universe because the major group of Christians adopted a specific view of cosmology based on extra-biblical ideas that were culturally dominant at the time. Later, when different extra-

biblical ideas achieved cultural dominance, the view previously adopted by Christians came into conflict with the newer view. Similarly, fixity of species was a concept derived from extrabiblical sources and incorporated into Christian theology. When new extra-biblical sources gained cultural dominance, the older ideas were discarded. Since Christians had attached their theology to these old ideas, Christian theology suffered significant loss.

We must not incorporate extra-biblical sources in our system of faith. For example, we should beware of incorporating into our faith any particular model of the Flood. Another example is the trend among many Christians to accept evolution as God's method of creating. The evolutionary tenets of common ancestry and death before sin do not have any biblical support and have implications that undermine the basic biblical message of salvation by faith. Hopefully, we can profit from the lessons of history and resist any potential pressure to incorporate theistic evolution or similar theories into our theology.

Science has at times contributed to creation theory by clarifying certain ambiguous biblical texts and by supporting the inference that God is active in nature. Yet science does not affirm everything the Bible says about nature, nor does it have the tools to do so. Our faith in Scripture must rest on our confidence that it is God's special revelation. We must not permit science to determine whether we shall or shall not accept the teachings of Scripture.

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L. James Gibson, Ph.D., is Director of the Geoscience Research Institute in Loma Linda, California.

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