

Newton's Approach to Science: Honoring Scripture

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Introduction

Isaac Newton is recognized today by almost all scientists to have been one of the greatest, if not the greatest, scientist who ever lived. His breadth of knowledge, his ability to analyze and synthesize the physical world, his development and use of the calculus, his formulation of the three laws of motion, and the expression of the law of gravitation have been unequaled by any other scientist before or since.

Yet, it is not widely known that Newton was also a Christian and a Bible scholar. He studied the Bible diligently and wrote commentaries on portions of scripture, such as his monograph on the book of Daniel. He clearly believed that God is the Creator and sustainer of our universe. Misunderstanding the source of Newton's creativity, some critics have suggested that Newton would have been more productive if he had not wasted so much time studying and writing about the Bible.

It is understandable that non-Christian scientists would advocate a naturalistic, non-Biblical approach to science. But, this same attitude seems to prevail among Christian scientists as well. By and large, professing Christians who are active scientists tend to play down any use of scripture as a basis for their science. They may refer in a general way to design or God being somehow involved behind the scenes, but few attempt to use the Bible as a serious resource in designing or implementing scientific investigations. If the Bible is to be trusted on such spiritual issues as salvation, the church, or prophecy why can it not be trusted on such physical issues as origins, earth history, or the future?

This article will explore some of the current attitudes and implications to using the Bible as a source of information to "do" science. The consequences of Christian scientists restricting themselves to non-Biblical sources of information will be discussed and an appeal made to take the Bible more seriously in formulating research questions and interpreting scientific data. A case will be made that the Bible can be used to develop a worldview of earth history which is superior to a naturalistic worldview. Although, the Bible obviously does not contain a great deal of scientific detail, it does provide a framework which should direct our scientific thinking. After all, if the Bible is God's Word and it reveals Truth, then the closer we get to the Truth in our presuppositions, the faster we will discover the Truth in the details.

The Current Attitude

The current attitude in the academic and scientific community is that science and religion are completely incompatible. It is believed by many that science is a system of knowledge based on experimentation, observation, and logic. Religion, on the other hand, is viewed as a system of faith based on myth, culture, and self delusion. A researcher is allowed to have a personal religion, but he should never permit it to affect his work, or he will no longer be considered a legitimate scientist.

In a recent court case involving the right of the ICR Graduate School to teach science from a Biblical perspective, a physics professor from California State University at Long Beach testified that if Isaac Newton were on the school's faculty today, his position on creation would prevent the school from being recognized by the State of California. This professor objected to statements such as the following in *Mathematica Principia* where Newton said:

"This most beautiful system of the sun, planets, and comets could only proceed from the counsel and dominion of an intelligent and powerful Being. This Being governs all things, not as the soul of the world, but as Lord over all, and on account of His dominion He is wont to be called Lord God, Universal Ruler." (Newton, 1686).

When questioned how this professor could make such a statement about one who is recognized as possibly the greatest scientist who ever lived, he replied that if Isaac Newton persisted in maintaining a creationist position as he did in *Mathematica Principia*, knowing what we know today, he would not be recognized as a credible scientist (Lerner, 1990).

The reason this antagonism has reached such extreme proportions is because science has been redefined to include only natural explanations. All observed and hypothesized processes in the universe must be the result of natural causes. No supernatural explanations are allowed. Phillip Johnson has described this approach well in his recent book when he said:

Theistic or "guided" evolution has to be excluded as a possibility because Darwinists identify science with a philosophical doctrine known as *naturalism*. Naturalism assumes the entire realm of nature to be a closed system of material causes and effects, which cannot be influenced by anything from "outside." Naturalism does not explicitly deny the mere existence of god, but it does deny that a supernatural being could in any way influence natural events, such as evolution, or communicate with natural creatures like ourselves. *Scientific* naturalism makes the same point by starting with the assumption that science, which studies only the natural, is our only reliable path to knowledge (Johnson, 1991, p. 116).

When science is defined in this manner and someone violates the rules of investigation by incorporating a supernatural cause or referring to the Bible, he is determined to be unscientific. Even if one believes that God only intervenes at special occasions like creation or the Flood and the laws of science otherwise operate routinely so that the scientific process can normally be trusted, he will still come under criticism. The rhetoric can become inflammatory when power structures in the government and societies are involved. For example, the governing boards of over 20 scientific societies, in the United States, have released statements, or resolutions, expressing their opposition to the teaching of creationism and its identification with science. Such position statements have the effect of blocking acceptance of journal articles from "creationists."

Most scientists tend to shy away from such controversies. They prefer to not become involved in public arguments or major controversies. By their nature, most scientists tend to be withdrawn and prefer to work in a quiet, non-controversial environment. They generally eschew political posturing and public pronouncements. Although many scientists are religious or are sympathetic to those who are religious, they are unwilling to reveal their positions for fear of ridicule or reprisals. On the other hand, there are some scientists who are very aggressive about promoting a naturalistic worldview and even some who advocate sanctions against those who would conduct science from a supernatural perspective.

Carl Sagan's Naturalistic Worldview

Carl Sagan was one of the most articulate spokesmen for a naturalistic worldview. Before he died of cancer in 1997 he had written numerous books about the cosmos and man's place in it. He was active in many scientific organizations and in at least one which was aggressively antagonistic toward the mixing of the Bible and science. His willingness to express his views on the origin of life openly in his writings and public speaking was unique, to the

point of alienating many of his more-reserved colleagues who thought he was no longer functioning as a scientist himself. However, his writing talents were well received by the public and the literary community.

Carl Sagan believed that man was the result of natural processes operating over billions of years in a vast ocean of space. He could become highly sentimental over the immensity of time involved in man's evolution and the incredible improbability that life had occurred by chance. He had one great hope: to find life existing somewhere else in the universe. I believe his rejection of God as creator produced a void in his worldview, which drove him to this search for life elsewhere in the universe. He searched for almost 30 years for some evidence that we are not alone, but he died with his dream unfulfilled. He made an intriguing statement about 25 years into this search when he said, "We've been looking for life beyond the Earth for 25 years now, and we haven't found it anywhere. There must be something unique about the Earth" (Sagan, 1992). I don't believe he ever realized how incredibly true this statement was.

I had the distinct privilege of meeting Carl Sagan personally at the American Geophysical Union meeting in San Francisco in December 1994. I had been drawn to his session by a sincere respect for his writing and speaking skills over the years, and I believe the Lord led me to speak with him at that time because he didn't have long to live. He was to be the first speaker following a 30-minute intermission. I introduced myself and expressed my appreciation for his ability to articulate science in a way that could be understood by the public. He knew of the Institute for Creation Research where I work, but had not heard of me personally.

He immediately began asking a series of leading questions about how a well-trained scientist like me could have confidence in a book written by a bunch of ignorant sheep herders thousands of years before any real science had been discovered. He was so intent on pursuing our conversation, that the session chairman had to come down from the podium and interrupt our conversation to begin the next session. I was puzzled at the time by his aggressiveness in questioning my reasons for confidence in the Bible. I later found out that he was to speak to the Commonwealth Club of San Francisco that evening where he introduced his new book, *The Pale Blue Dot*. In this book and in an article he wrote for Parade Magazine in 1995 entitled, *Through the Valley of the Shadow of Death*, Carl Sagan was probably more transparent than he had ever been about his search for God and eternal life. I am certain that the nearness of death was forcing him to reexamine some of the presuppositions on which he had based his life.

I exchanged a half dozen letters with Carl Sagan over the next year and a half. We continued the conversation started in San Francisco and I came to care for him as a friend. Probably the most poignant interchange was over a statement he had made in his book, *The Pale Blue Dot*. After several leading comments about the unreliability of the Bible, he said in this book, "The evidence so far at least and from the laws of nature aside, does not require a Designer. Maybe there is one hiding, maddeningly unwilling to be revealed" (Sagan, 1994). I responded in one of my letters by saying, "Scientists have the greatest opportunity of all to see the evidence of God's marvelous provision for man in His creation. Yet, by and large, scientists today tend to be almost totally blinded to the evidences. Because of the kinship I feel toward you about the things of science, I request that you reconsider your relationship to God. Ask Him to reveal Himself to you. He is not hiding from you. Rather, He is waiting for you to see him" (Vardiman, 1995).

The final letter I received from Carl Sagan before his death contained the response, "Asking God to reveal himself to me presupposes his existence. Plainly, this would be an inconsistent approach for someone who sees no evidence for such a God" (Sagan, 1995). This response has haunted me ever since. Carl Sagan's wife, Ann Druyan, asserted in the epilogue to his last book, *Billions and Billions*, that, "Contrary to the fantasies of the fundamentalists, there was no deathbed conversion, no last minute refuge taken in a comforting vision of a heaven or an afterlife" (Sagan, 1997). I still hold out hope that he made peace with his maker and I will see him again someday.

It was evident from his writings, as well as his membership in the National Center for Science Education (a California group dedicated almost exclusively to the advocacy of evolution and the removal of scientific creationism from society), that Carl Sagan believed Scripture was unreliable and should not be used as a basis for scientific investigation. Unfortunately, the eloquence of his oratory and others like him has brought disfavor upon the use of Scripture in any meaningful way in the conduct of science. Funding of research, peer review and publication of research results and recognition of scientific accomplishments are strongly affected by attitudes developed by people like Carl Sagan. It is not too much to say that scientists in the twentieth century must fear for their professional lives if they rely upon scriptural support in any of their work. Yet, research conducted from a Biblical perspective by those willing to forego the usual support and recognition is making significant progress and will eventually be recognized for the contribution it is making.

The Development of a Creationist Researcher

I was trained as a scientist in the traditional non-theistic, mechanistic tradition. My undergraduate physics degree was from the University of Missouri at Rolla, which is a well-known, no-nonsense engineering school. The curriculum was very rigorous, requiring five years of work to be accomplished in four. No time was devoted to the philosophy of science or religious considerations. Even the physics department spent little time debating the Heisenberg Uncertainty Principle or the dual nature of light. These and other concepts which seem so philosophical today were generally accepted as fact by the students and applied to various situations to explain how the world functioned.

At the end of the undergraduate physics degree program, I needed a break from the heavy demands of the previous four years. In addition, I was not happy with the direction a graduate physics degree would take me. The emphasis was on non-Newtonian modern physics, with all the unreality of relativity and quantum mechanics. I was attuned to describing the world as I sensed it, not one which required concepts foreign to my everyday experiences. A four-year commission as an officer in the Air Force solved both my problems. The Air Force sent me to St. Louis University where I received a second B.S. in Meteorology, and then I spent the next three years conducting field research in cloud physics and weather modification. I found meteorology to be a thoroughly enjoyable extension to my physics background because it was simply applied classical physics. I didn't have to struggle with relativity or other foreign concepts. Thermodynamics and fluid motion became familiar concepts, which could not only be calculated but sensed by the flow of heat from my fingers and the flow of air through my hair.

Although my training in the Meteorology Department at St. Louis University was more of the traditional, applied science I had received as a physics undergraduate, I was required to take three courses in addition to the science program to complete a second bachelors degree. St. Louis University is a Jesuit school and required me to take a course in ethics, one in the philosophy of Thomas Aquinas, and a history course. The three courses didn't seem to have much impact upon me at the time, other than seeming to reinforce my allegiance to science which I could see, taste, touch, hear, and smell. However, the brief contact I had with the logic, philosophy, and Catholicism in these courses were to bloom later into an entirely new appreciation for the unseen from a religious viewpoint. When I attended St. Louis University in the late '60s Teilhard de Chardin was having a significant influence on the Catholic church and particularly, the Jesuits. At the time, before I became involved in creationism, I did not appreciate the strange infatuation the priests seemed to have for evolution as taught by Chardin.

Upon leaving the Air Force for graduate school, I entered Colorado State University to study under one of the leading field researchers in cloud physics and weather modification. My interest was again to study nature in a way that was describable in easily-observed ways and could be sensed. My specialty was in the physics of winter, mountain precipitation and the potential for augmenting snowfall through artificial means. My graduate

experience leading to a doctorate and the following eight years of postdoctoral work in this field were very enjoyable, satisfying periods in my life. I spent a lot of time in the mountains of Colorado and California observing unique weather conditions and experiencing beautiful scenery. The science was satisfying both from understanding nature but also from the prospect of contributing additional water resources to the dry western states.

During graduate school and following, in addition to the traditional science training I received, two major influences began to have an effect. The study of ice crystals under a microscope, which was a major part of my research, and the teaching about God and the Bible in my church both produced significant changes in my worldview. I became an expert in the identification of ice crystals which form in clouds under various environmental conditions. This aspect of ice crystals was purely technical and conformed to known laws of nature. However, the beauty and order of the one hundred or more types of ice crystals began to exert a subtle influence on me. I began to appreciate the beauty and order I was seeing in nature, and began to discern some of the characteristics of the Creator through His creation. It became clear to me that the Creator appreciates order and beauty. I was seeing his handiwork displayed under my microscope. And the more I studied ice crystals to find why they form the way they do, the more order I found underlying the apparent surface order.

The church I attended during graduate school taught that the Bible was God's Word and should be accepted literally in all places where it was possible to do so. I had previously been taught to take the Bible seriously, but not literally. Unfortunately, this had left me with a great lack of confidence in the Bible because I didn't know how to apply it to my life. I had been a Christian for over ten years before I came under the teachings of this church, but had never come to love God. I feared God, but didn't like Him because I didn't like what I read in the Bible. This church helped me to understand the sovereignty of God and why He does what He does. Then the Bible began to make sense and I came to truly love God. This change in my view of God led to my adoption of Philippians 2:13 as my life verse, "For it is God who works in you, both to will and to do of His good pleasure."

Once I could trust God, I began to take His Word literally and immediately found a conflict between the Bible and the science I was being taught in graduate school. I spent almost a year trying to resolve this conflict. I was finally able to develop a strategy for this dilemma which has become part of my Biblical hermeneutic. **When a conflict becomes evident between an apparent interpretation of the Bible and an apparent finding of science, it is not necessary to force a final determination to be made immediately without further investigation. It is possible that a misinterpretation of either or both of the statements of Scripture or the evidence from science have occurred. Since, of the two, Scripture speaks with greater clarity, until a satisfactory resolution can be made about the conflict, I will proceed with confidence in my interpretation of Scripture. Resolution may not occur in my lifetime.**

The opposite to this approach is typically used by many Christians who have accepted evolutionary theory or long ages for the earth. I believe a lack of confidence in the Bible has led to compromised positions. It is evident that evolution and an old earth are in conflict with the clear statements of Scripture. However, is it the Bible that has been misinterpreted or the evidence from science? Would it not be better to wait for a resolution to these conflicts, rather than compromise God's Word?

During the past fifteen years I have become an active creationist researcher. My formal training and experience prepared me well to conduct research. However, it hasn't been until the last seven years or so that I have been able to design and conduct research projects from what I believe is a truly Biblical perspective. Up until 1990 my research efforts were only half-hearted and my contributions were not well-focused or significant. I attribute this partially to the peer pressure I felt. I was afraid of what my colleagues would think or say about my attempt to conduct research from a truly Biblical perspective. However, a more important aspect was the lack of

confidence I had in the Bible. I didn't really believe that I could depend on the statements of Scripture to be used as a springboard for designing research questions or experiments.

In 1990 Michel Oard, a creationist associate, suggested that if the Genesis Flood was a real historical event during a single year, it would have caused the oceans to be heated, creating significantly different environmental conditions for many years following. This idea immediately caused me to ask a whole series of questions about the Ice Age and climate in a young-earth scenario which could be tested by numerical climate simulations and analysis of paleoclimate data. As the research proceeded over the next seven years, the results began to confirm some of my hypotheses, leading to more confidence in the Bible as a reliable source document for research.

I found that seafloor sediment confirms that the oceans were much warmer in the past - as warm as 90o F - and that if they cooled rapidly over the past five thousand years or so, the cooling curve agrees with well-established laws. Numerical simulations using conventional atmospheric climate models show that the precipitation of snow in the polar regions would have been greatly enhanced by the warm oceans resulting in an accumulation of two miles or more of ice in only a few hundred years. Even the variation in oxygen isotope ratios in ice cores drilled in Greenland can be explained by rapid changes in the coverage of ice shelves over the polar seas.

Because of the increasing confidence in the Bible these results produced, I have come to rely more and more on it to design research projects. I am no longer afraid that the Bible will fail me and I no longer fear the ridicule of my associates. I may still misinterpret portions of the Bible and I may still be criticized by my colleagues, but I am now working to understand earth history from a Biblical perspective which I hope will be more fully appreciated by future generations.

A Supernaturalistic Worldview in Research at Los Alamos

John Baumgardner is a geophysicist at the Los Alamos National Laboratory in Los Alamos, New Mexico. He is a graduate of the University of California at Los Angeles (UCLA) and was a member of the Campus Crusade staff for several years. While serving with Campus Crusade John was deeply grieved by the devastation being wrought in student lives by the dogmatic teaching of evolution on the university campus and found himself doing class room lectures that exposed some of the glaring defects in the evolution hypothesis and presenting the creation alternative. As he became more involved in dealing with these issues on campus, he became keenly aware of the importance of rightly interpreting the geological record and recognizing the centrality of the Biblical Flood in understanding the earth's physical history.

As he researched these geological topics, he sensed God's call to acquire the professional training and credentials to work on the mechanism of the Flood at a professional level. Although his prior training was in electrical engineering, he entered a graduate program in geophysics at UCLA and successfully completed his Ph.D. in 1983. His thesis research was done at Los Alamos National Laboratory where he developed the world's first three-dimensional, spherical model of the earth's mantle with the express purpose of investigating the mechanism of the Genesis Flood.

This research was specifically and directly motivated by John's conviction that the Bible's testimony of a world-destroying Flood is historically and scientifically true and that this event had played a major role in the planet's geological history. Indeed, it was his conviction that the Flood is the essential key to understanding the earth's past.

Because of John's evident skills in developing complex numerical models related to solving fluid and solid dynamics problems, Los Alamos offered him a job in the Fluid Dynamics Group in their Theoretical Division. Largely because of the access to large computers, such a position provides, John accepted this offer and has worked in this group at Los Alamos for the past 13 years. During this time he has continued the development of his computer model of the dynamics of the earth's mantle and lithosphere.

This model, called TERRA, is recognized as the premier code of its kind in the world. Last year NASA funded this research as one of its nine "Grand Challenge" projects for the next three years in its High Performance Computing and Communications Initiative. Part of the code's unique features is its exceptionally high performance on the current generation of massively parallel supercomputers.

John believes he has identified the essential mechanism that was responsible for the Flood cataclysm. He calls this mechanism "thermal runaway." It was first proposed in the early 1960's as a possibility inherent in the deformational properties of silicate rock. It allows the rapid subduction of the pre-Flood ocean floor into the mantle below, which leads to a temporary shallowing of the ocean basins, a dramatic rise in the world sea level, and intense global rainfall. The associated tectonic catastrophe moves continents by thousands of miles in a few month's time - remarkably similar to the Flood described in Genesis.

John is seeking to apply the best numerical methods, the largest available computers, the most complete physics models, along with the latest laboratory, seismic, geological, and space geodetic observational data to demonstrate that indeed there is a strong, even overwhelming case in favor of a tectonic/Flood catastrophe that produced most of the fossil record in a few month's time. There is no doubt that John believes in the validity of using the Bible to address fundamental scientific issues, especially those which relate to understanding the earth's past.

Conclusions

It is my contention that recognizing the Bible as a reliable source of information for the conduct of science is essential for an effective use of resources and for correct results. Consider Carl Sagan's search for extra terrestrial intelligence (SETI). I believe from several lines of argument using the Bible that the only extra terrestrial intelligence in the universe is God and His angels. If this is true, then the entire SETI program and a major portion of our space program is a complete waste of money.

More importantly, the general acceptance of the theory that elementary chemicals evolved into complex life forms over billions of years by naturalistic processes has led to a wholesale rejection of the Creator God and a generation that is expecting some superior life form to suddenly make contact with the Earth. Our current culture is inundated with books, movies, and videos about people, empires, and monsters on other planets, galaxies, and universes. The impact of this evolutionary myth is incalculable. Undoubtedly the most costly aspect to this delusion will be counted in lost souls at the final judgment.

Although science is not the most important activity on Earth, it has had an impact which is out of proportion to the number of people participating in it. It has changed our entire outlook on the Bible and origins. The church is now fighting a losing battle for the hearts and minds of our children because of the teachings of a false religion. One of the reasons for our defensive position in this battle is the fact that science no longer uses a Newtonian approach. Newton believed that God created the universe and everything in it. He studied the Bible diligently to understand God's revelation, not just on such traditional subjects as theology, soteriology, and eschatology, but also in relation to creation, the Flood, and Earth history. This revelation available in God's Word informed his worldview and approach to science. The predominant approach practiced today uses a secular approach. There is no God, the Bible is not reliable, and all science must rest on a naturalistic explanation.

It is time to reclaim science in the name of God. We need committed Christians to train themselves as scientists and counteract this culture of unbelief. Science based on a proper Biblical foundation can help reverse this slide into apostasy and unbelief. If we don't take action soon our world will continue to devolve as described in Romans 1:22, "Professing themselves to be wise, they became fools ... "

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