### Institute for Christian Teaching Education Education Department of Seventh-day Adventists

# "RIGHTLY DIVIDING THE WORD OF TRUTH:" INTERPRETING BIBLICAL STATEMENTS ON NATURAL PHENOMENA

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## "Rightly Dividing the Word of Truth:" Interpreting Biblical Statements on Natural Phenomena

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Shew thyself approved unto God, a workman that needeth not to be ashamed, rightly dividing the word of truth. II Timothy 2:15.

#### **Purpose**

This study hopes to provide clear guidelines for correctly interpreting the Bible's many statements on natural phenomena. It hopes to avoid the twin dangers of claiming too much information from Biblical statements or claiming too little from those same statements. A balanced, fair-minded approach will be based on sound principles of interpretation (or hermeneutics) that are rooted in inspired writings and not based upon secular philosophies. These principles will be derived both inductively and deductively. The Bible will be treated as a fully inspired document, but will not be considered a "textbook" on any of the natural sciences.

In order not to disappoint anyone, this study will not promise to deal with the health or medical sciences as they are touched upon in Scripture. Neither will it be dealing with statements on Biblical chronology or on purely historical topics. The same principles elucidated for interpreting the Bible's statements on natural phenomena can be applied to Ellen G. White's comments on natural phenomena as well, but I leave it to the reader to make such application.

#### Starting Assumptions

- 1. The Bible is fully inspired and the parts of it are equally inspired, whether in the Old Testament or the New Testament; thus, its statements on natural phenomena are inspired and trustworthy for their intended purposes. (2 Tim. 3:16; 2 Pet. 1:21)
- 2. God through Christ is Creator of all things, animate and inanimate. One would expect that as Creator he is able to provide information about the natural world that will make us his creatures appreciate him more and bring us into a closer relationship with him. (Neh. 9:6a; John 1:3; Col. 1:16; Rev. 4:11)
- 3. God is sustainer of his creation, and his power is just as much exerted in upholding his inanimate and animate creation as in his original creation of such. Biblical statements regarding God's providential workings in nature are just as significant as its statements on origins. (Neh. 9:6b; Jer. 10:12-13; Matt. 5:45; Acts 14:17; Col. 2:17; Heb. 1:2-3)

4. God has given us a general revelation in nature in addition to his special revelation given to patriarchs, prophets, kings, statesmen, priests, disciples, historians, and holy men of old. Since he is the Author of both special and general revelation, we can confidently expect that the two revelations would be in harmony with each other. (Psa. 19:1-6, cf. v. 7-11; Acts 14:17; Rom. 1:19-20). One should especially note that wisdom is obtained by studying both the book of nature and the written Word. (Job 12:7-12; Prov. 6:6; 2 Tim. 3:15)

#### **Interpretative Principles**

Before starting the process of interpretation, one must keep in mind "the interpretative triangle," as Moises Silva calls it, composed of these three elements: 1) the author, 2) the text, and 3) the reader. We believe the *author* of the Bible to be inspired, the *text* of Scripture to be authoritative, and thus the *reader* of the Bible must be illuminated, if we are to be successful in our task of understanding and applying Scripture. We will start with the reader, then move to the text, and finally end with the author and authorship of the text. The following are some generally recognized principles of Biblical interpretation or Biblical hermeneutics gleaned from Seventh-day Adventist and other conservative scholarly sources:<sup>2</sup>

- 1) The interpreter (or *reader*) begins his/her work by asking for the guidance of the Holy Spirit, the one who can lead into all truth (John 14:26; 16:13).
- 2) The element of faith is important and a personal relationship with Christ as well, because spiritual things are best understood spiritually (1 Cor. 2:12-16).
- 3) The reliance upon spiritual guidance does not eliminate the need for the training of the human mind, nor does it negate the fact that the human mind is to be used for testing and weighing that which is true and separating it from that which is false (Rom. 12:1-2). The process of sanctification, which is to be a prerequisite of sound interpretation, involves the cleansing of all the human powers: spirit (=mind), soul, and body (Eph. 4:23; 1 Thess. 5:23). The art of testing involves "proving" all things with these powers of the mind, soul, and body (1 Thess. 5:21).
- 4) The understanding of the Biblical *text* must begin with reading it in its original languages. This is a necessary prerequisite that is often skipped over in the haste to get at the final synthesis of one's research. (Even if one does not know the original languages, one can use analytical concordances to uncover the words used in the original text, and one can rely heavily upon the commentaries written by those who have expertise in using the original languages.)
- 5) The text must be examined in its four levels of interpretation:
  - a) The level of the word and the syntax of the sentence. It is hazardous, however, to base an interpretation entirely upon one word, thus giving rise to the significance of the sentence as a whole.
  - b) The level of the chapter or literary unit in which the sentence appears.
  - c) The level of the book containing the chapter.
  - d) The level of the entire Bible. Under this last point, we can derive the related principle that "Scripture interprets Scripture." (Isa. 28:10, 13; Luke 24:27, 44-45; Acts 17:11).

- 6) Ordinarily a given passage must be understood in its literal sense, unless such interpretations create contradictions, or unless the context and the style of the passage both demand a figurative interpretation.
- 7) Generally a given statement within a passage has just one primary meaning, not a multiplicity of meanings.
- 8) A passage must be viewed within its historical, cultural, religious, and literary background. In many cases the interpreter must go beyond the Bible and investigate related concepts in the ancient Near East, if this is possible. However, one should never force ANE concepts upon Scripture that are foreign to the tenor and teachings of Scripture.
- 9) The genre of a particular passage must be correctly identified. Prophecies, allegories, parables, types, legal documents, narratives, poetry, etc. are each interpreted by slightly different principles, depending upon their specific genre.
- 10) The purpose for a particular statement must be taken into account. The one interpretation of a given passage must harmonize with the purpose for the writing of that passage.
- 11) A better acquaintance of the *author* of a particular passage is often helpful in correctly interpreting that passage. But in many cases the exact authorship is unknown, as in the books of Esther and Hebrews. Having a better acquaintance of the divine Author of Scripture is also valuable in interpreting Scripture, which brings us back to the starting point of the "interpretative triangle:" the starting point being the reader, who needs to know the Author better.

These are only a few of the hermeneutical principles for better understanding the purpose and meaning of Scripture, but they are the more significant ones. We could delve more deeply into the various methodologies or types of criticism that have been applied to Scripture, but there are many helpful resources outlining such. Basically, when it comes to using a scholarly methodology, we are recommending the simplest one for the student or the lay person to follow, and that is the historical-grammatical approach that has its roots in the Protestant reformation. This is in contrast to the allegorical approach of many of the early Church fathers, which is used even today by the Roman Catholic Church. We reject approaches that attempt to find deeper, hidden meanings in Scripture that are said to be even more important than the surface meanings. In the following study we reject the concept that one can find hidden esoteric meanings with "modern" insights in the Bible's natural phenomena statements. This is akin to medieval allegorical interpretations that attempt to find hidden spiritual or metaphysical truths in Biblical statements.

The fact that the literary genres of prophecy and typology in the Bible require specialized rules of interpretation raises the question of whether the Bible's statements on natural phenomena might benefit from additional principles of interpretation.<sup>3</sup> We suggest that the above principles need not be replaced, but they can be enhanced and supplemented with additional principles specific to natural phenomena. A starting point in developing principles of interpretation for scientific statements is found in Bernard Ramm's chapter, "The Problem of Inerrancy and Secular Science in Relation to Hermeneutics," in his book *Protestant Biblical Interpretation.* We will employ here two basic methodologies for

deriving additional principles: first, by *inductively* formulating principles from an examination of Scriptural statements on natural phenomena; and second, by *deductively* setting forth over-arching principles that can best provide harmony between Biblical faith and scientific research. This latter point is based upon the theological truth that in God we can find "no variableness, neither shadow of turning" (James 1:17, KJV), or "no variation due to shadow of change" (RSV). God's revelation in the natural world ought to harmonize with his revelation in his written word, in that God's very nature is a unity and a harmony (Deut. 6:4; John 17:21).

#### Five Categories of Statements on Natural Phenomena

All of the Bible's statements on natural phenomena can be subsumed under five general categories, each of which may require slightly different principles of interpretation. We will give examples of issues of interpretation under each of the categories with suggested possibilities for resolving those issues satisfactorily. The examples are not intended to be complete. For example, we will not discuss the miracles of Christ, but concentrate only on the miracles associated with the exodus and the beginning of the conquest. And then we will extract from this discussion some additional principles of interpretation.

- 1. Statements on the supernatural origin of the world.
  - a) The issue of whether Gen. 1:2 is describing the creation of electromagnetic radiation: "And the Spirit of God was moving over the face of the waters." (All Scriptural quotes will be from the Revised Standard Version, unless otherwise noted.) The verb "moved" in Hebrew here is descriptive of the fluttering of a bird, as it is so employed in Deut. 32:11 ("Like the eagle that stirs up its nest, that flutters over its young...). The concept of fluttering is said to denote the steady beating of wings, somewhat like the moving of waves. Some scientists have suggested that this text is stating that God started his work of creation by creating out of nothing electromagnetic radiation, of which light is just one form. This raises the complex question of whether energy was created prior to matter, and whether light has mass. Assigning the creation of "light" as a form of this radiation prior to day one of creation unfortunately creates a contradiction with the following verse, where God says, "Let there be light." The electromagnetic interpretation of Gen. 1:2 is rejected on the basis that it is hazardous to develop an entire theory or model upon one Biblical word (see principle 5a above).
  - b) The issue of the meaning of the expression "after its kind" (KJV) in Gen. 1:21: "So God created the great sea monsters and every living creature and every living creature that moves, with which the waters swarm, according to their kinds, and every winged bird according to its kind." This verse is sometimes used to develop or confirm the Law of Reproduction, which states that all creatures in the natural world must reproduce offspring closely related genetically to the parents. This law is often set forth as an objection to the theory of evolution, which suggests that with small variations creatures can develop over long ages into totally new creatures, there being no limits to the amount of variation. Scripture is said to put bounds upon variation. The question is raised whether this passage is speaking to the question of reproduction, for the same expression is used in a

non-reproductive setting in Lev. 11:14-22, 29. There it is used in a culinary setting. If we conclude that Moses is the same author of both passages, then we would not expect he would contradict himself in the usage of the expression, "after its kind." The principle of establishing authorship and then comparing similar expressions by the same author helps to clarify the meaning of a particular expression. Even if we cannot establish authorship, we have the principle that we should compare the entire Old Testament to understand a particular Hebrew expression, and thus we find the same expression appearing in Eze. 47:10. This passage likewise says nothing about reproduction. These and other Old Testament passages do speak of a variety of created animals that can be distinctly identified. The various boundaries separating members of the animal world can also be deduced from reading the New Testament: "For not all flesh is alike, but there is one kind for men, another for animals, another for birds, and another for fish" (1 Cor. 15:39). However, to attempt to correlate Genesis 1 with modern genetics based upon the expression, "after its kind," is to read too much into the inspired text.

- c) The issue of the order of creation within the framework of a day-age theory (Genesis 1). The famed archeologist, William F. Albright, states that the sequential order of the six days of creation cannot be improved upon as a description of the geological epochs for the origin of life over millions of years. Is that really true? The third day of creation has recorded the creation of two types of plants: 1) trees bearing fruit containing seeds, and 2) grains/grasses bearing seed, which can be eaten (Gen. 1:11). Both of these two categories are angiosperm plants, that is, those which have an edible protective covering encasing the seed. In the fossil record the first angiosperms did not appear until long after the first fish and the first land vertebrates appeared, thus if Genesis is describing the fossil record, it has the wrong sequence. The plants of Day 3 should be created after the land animals of Day 6! In addition, when the word day (Heb. *Yom*) appears in Genesis modified by an ordinal number, it always refers to a literal 24-hour day (as in Num. 7:11ff.). Even Bernard Ramm, who advocates a more figurative interpretation of the days of creation admits that Hebrew lexicon studies do not permit the age-day interpretation of *yom*.
- 2. Statements on the destruction of the world in the time of Noah.
  - a) The issue of the interpretation of the expression "breaking up the fountains of the deep" (7:11, cf 8:2), whether this refers to the splitting apart of continents. Continental drift, or plate tectonics, is the theory that all the continents were once joined in one land mass that for a while was divided into two land masses, followed by several continents. Many creationists suggest that the continents were divided at the time of the Flood (Gen. 7:11) or in the time of Peleg (10:25). The expressions, "fountains of the deep" and "fountains of the great deep," are best understood as referring to fresh water springs, which were unleashed at the time of the Flood to provide enough water to blanket the earth. One does not need to postulate the prying apart of continents in order to release Flood waters.

- Besides, when the fountains of the deep are closed up at the end of the Flood, as recorded in Gen. 8:2, there should no longer be moving continents today. But continents are still moving, albeit very slowly, which explains why we experience earthquakes and volcanic eruptions. The breaking up of the "fountains of the deep" at the Flood then should not be linked with the break-up of the continents.
- b) The issue of how the waters were being drained off the face of the earth at the time of the Flood, whether episodically or gradually. Gen. 8:3 reads: "And the waters returned off the earth continually," and many Bibles have the marginal reading, "in going and returning," so that the text literally says: "And the waters returned off the earth in going and returning." Whitcomb and Morris in citing another Flood geologist, Byron Nelson, find a connection between this interpretation and cyclical deposits in the coal beds called cyclothems: "Here is described some ebb and flow, some back and forth movement of the Deluge waters, as they slowly retreated into the ocean depths." A problem is created by taking a too literal interpretation of a Biblical passage, similar to the situation when one sees electromagnetic radiation in the "fluttering" of the Spirit of God in Gen. 1:2. One should observe how the expression, "going and returning," and similar expression, "coming and going," is used in other passages, especially those in the book of Genesis. The principle is that a given author is going to be consistent in his use of a particular expression. We believe that evidence indicates there is only one author for the book of Genesis. Hence, Gen. 12:9 (KJV) clarifies the expressions of 8:3, 5: "And Abram journeyed, going on still toward the south" (marginal reading, "going and journeying"). The New RSV for Gen. 12:9 correctly translates this: "And Abram journeyed on by stages toward the Negeb." This expression parallels the "going and coming" of Flood waters, which is not a reference to the back and forth movement of the waters, as many Flood geologists have suggested, but it means simply a "step-by-step progression in a certain direction." It is a misinterpretation or misuse of Gen. 8:3-5 to suggest that it describes specific geological phenomena, such as cyclothems.
- 3. Statements on recurring natural phenomena not associated with miracles
  This is probably the category with the most numerous examples scattered throughout
  Scripture. We will interpret these statements in light of the truth that God is the
  creator of all things, and thus he holds the right to the providential care of all things.
  We will not deal with the effects of evil to taint, interrupt, and negate the good that
  God is attempting to carry out through his providence. That is another separate issue.
  - a) The issue of the hydrological cycle in Eccles. 1:7 (and in other passages): "All streams run to the sea, but the sea is not full; to the place where the streams flow, there they continue to flow." This is thought by some to be a description of the modern understanding of the hydrological cycle with its emphasis on evaporation, transport of moisture through winds, precipitation on higher elevations, water descending through streams and rivers to enter the ocean, and then evaporation from the ocean surface to start the cycle all over again. Evaporation is also described in Job 36:27 ("For he draws up the drops of water; he distills his mist in rain"). One does not need, however, a modern understanding of hydrology in order to interpret these and other similar passages on precipitation (e.g. Job 26:8;

- 37:11-12, 16; Psa. 135:7; Jer. 10:13). These descriptions were based upon very accurate eyewitness observations by Biblical writers well versed in natural phenomena—by Job and Solomon, for example. Solomon was widely known for his wisdom, and in particular his knowledge of the natural sciences. "He would speak of trees, from the cedar that is in the Lebanon to the hyssop that grows in the wall; he would speak of animals, and birds, and reptiles, and fish. People came from all the nations to hear the wisdom of Solomon." (1 Kings 4:33-34) In today's terminology we would call Solomon a "scientist" studying the natural or field sciences. Did he receive his knowledge of nature from a vision? Probably not. He was a keen student of nature, however, and in many cases he received information from those that traveled. Solomon may not have ever visited the mountains of Lebanon, but he knew all about the cedars of Lebanon. 12
- b) The issue of whether Job lived during the "ice age," which he is said to describe as an evewitness. "From whose womb did the ice come forth, and who has given birth to the hoarfrost of heaven? The waters become hard like stone, and the face of the deep is frozen." (Job 38:29-30) Is this a reference to a giant ice sheet covering the far north of the Northern Hemisphere? If so, one could also suggest that Job witnessed ice-age creatures that lived in the Holy Land during the ice age and became extinct thereafter, such as the behemoth and the leviathan (Job 40:15ff.; 41:1ff.). Or one could suggest, as some creationists have, that Job is portraying dinosaurs and extinct reptile-like creatures associated with dinosaurs that lived before the ice age. All of this is highly speculative. The interpretative triangle suggested by Moises Silva is helpful at this point. If one must take into account the reader of any given for interpreting that passage, then one must ask the question whether the readers of the book of Job in ancient times had an acquaintance with dinosaurs. Probably not. One must also keep in mind the poetic nature of these passages in Job, and the purpose they are written for—not to give hidden insights into natural science, but to extol the power and wisdom of the Creator, who made these. One good possibility for the "behemoth" of Job 40:15 is the hippopotamus.<sup>13</sup> If Moses wrote Job, as most conservative scholars suggest, then he could have observed the hippopotamus, which lived along the Nile River. An alternative possibility is that this mysterious creature was the wild buffalo that fed among the reeds of the Galilee region, according to Marvin H. Pope. 14 The leviathan could have been the crocodile that inhabited the Nile, but was symbolic of the "sea creature" of the ocean described elsewhere in the O.T. (Psa. 74:14; Isa. 27:1), which could be destroyed or controlled only by God. It is unnecessary or even misleading to find pre-historic dinosaur-type creatures described in the book of Job when we have other better interpretations. Nor can we find evidence of an ice age in the time of Job. Archeological excavations in the Middle East do not find evidence of an ice age there.
- c) The issue of the mystery of bird migration and flight. In Job 39:26-27, God asks the question: "Is it by your wisdom that the hawk soars, and spreads its wings toward the south? Is it at your command that the eagle mounts up and makes its nest on high?" Elsewhere bird migration is used as a rebuke against the wisdom of humankind: "Even the stork in the heavens knows its times; and the turtledove, swallow, and crane observe the time of their coming; but my people

do not know the ordinance of the Lord." (Jer. 8:7) There is no attempt in these passages to unravel the mystery of how and why birds migrate. One can speculate as to whether the ancients knew about bird migration because of Palestine being one of the major flyways between Europe and Africa. It is not necessary to know the modern science of ornithology in order to appreciate the descriptive beauty of these passages and the truths they teach.

- d) The issue of whether ocean currents are described in Psa. 8:8, which speaks of "the fish of the sea, [and] whatever passes along the paths of the seas." One must first note that the creatures are said here to be moving, and not the ocean waters in motion. Second, one finds a similar expression to "paths of the seas" in ancient Greek literature. Does this mean that Homer along with the psalmist was inspired to give us scientific information about oceanography? Matthew Maury, who is considered to be the father of modern oceanography, was enamored with this passage, and it is said that he made discoveries of ocean currents, which he mapped, based on the insights of this passage. That is an overstatement. He did recognize Psa. 8:8 in his writings, but whether that verse gave him the impetus to discover ocean currents can be debated. 16
- e) The issue of interpreting the passages on Orion and Pleiades. In Job 38:31 the question is asked: "Can you bind the chains of the Pleiades, or loose the cords of Orion?" Modern astronomy has shown that Pleiades has 250 suns all traveling together in the same direction, like a flock of birds. Also it is known that all the stars of Orion are going in different directions. Some creationists have suggested that Job is 3500 years ahead of his time in terms of astronomy in describing these two constellations. Would a non-astronomer believer find the same truths taught in Job that a Bible-believing astronomer would? I doubt very much if there could be agreement on how to interpret this. Whether or not the Bible teaches modern astronomy is not the important issue; the real issue is whether the Lord has continuous power over the vast reaches of the universe in guiding galaxies and stars in their courses. That is the same issue as in 3 c) above.
- 4. The statements on miraculous events surrounding the exodus from Egypt, the wandering in the wilderness, and the conquest of Canaan.

Here we find a continuous series of miracles starting with the ten Egyptian plagues. The plagues are not entirely inexplicable because certain of them were reproduced or counterfeited by the wise men in Pharaoh's court. The Bible does not say whether they relied upon Satanic powers to do so. The question is whether one should be able to come up with a scientific explanation for each of the exodus miracles in order to fully appreciate and understand them. Some of the miracles connected with the exodus, the 40 years' wandering, and the conquest are as follows:

- a) The ten Egyptian plagues
- b) The parting of the waters of the Red Sea
- c) The manna
- d) The healing of the bitter waters
- e) Water coming out of the rock
- f) The flock of quails providing food
- g) The opening of the ground to swallow up Korah and his kin

- h) The crossing of the Jordan River
- i) The sun and the moon standing still for Joshua's army

We will not attempt to address each of these miracles, but we can make two significant observations regarding these miracles. First, in many cases God may have employed natural agents to accomplish these miracles, just as Christ in the healing of the blind man used the agency of clay to draw out the poisons from the eye and to provide healing. In some cases the Bible even identifies the natural agents. In the crossing of the Red Sea, it describes how "the Lord drove the sea back by a strong east wind all night." (Exo. 14:21, emphasis supplied) Does the use of a natural agent lessen the magnitude of the miracle? Certainly not. The timing of the drying up of the Red Sea is a "miracle," just as the timing of the drying up of the Jordan River was a miracle, even though it has been suggested the Lord used a landslide upstream from the Israelites to temporarily block the Jordan. More than that, the wind that dried up the Red Sea was of unusual intensity, perhaps not seen in centuries. This added to the magnitude of the miracle.

The second point we can make in regards to these miracles is that they are not simply called miracles, but in Scripture are called "signs" as well (Exo. 7:3; 10:1-2; Deut. 4:34; Josh. 24:7; Psa. 105:27). A sign is an action designed to teach a deeper truth than the action itself. If one gives a scientific explanation to these miracles, then the original purpose of teaching a deeper spiritual truth can be undermined if not defeated. A Cambridge University physicist Colin J. Humphreys has attempted to give a scientific explanation or rationale for the miraculous events connected with the exodus in his book The Miracles of Exodus. To speculate on scientific causes is an innocent endeavor, as long as one does not limit the power of Deity to natural events.

#### 5. Statements on the end-time destruction of the world.

Statements on the end-time destruction of the world are similar to statements regarding the destruction of the world in the time of Noah, only that the one was by water, and the other will be by fire. Some creationists have invoked the theory of atomic energy in order to give a "scientific" explanation of the world's destruction, as described in 2 Peter 3:10: "Then the heavens will pass away with a loud noise, and the elements will be dissolved with fire, and the earth and the works that are upon it will be burned up." Likewise, atomic theory has been ushered in to explain creation as described in Heb. 11:3: "By faith we understand that the world was created by the word of God, so that what is seen was made out of things which do not appear." The scientific issue raised by these two passages is the problem of transforming energy into matter (creation) or matter into energy (destruction). But it is not necessary to understand atomic theory to explain these passages. Einsteinian physics is not being taught in these passages at any rate.

Some creationists have even found an allusion to atomic energy in one of the prophecies of the last days: "And it shall come to pass afterward ... I will give portents in the heavens and on the earth, blood and fire and columns of smoke." (Joel 2:28, 30) Literally in the Hebrew the last phrase reads "palm trees of smoke." The shape of a palm tree is said to be identical to that of the mushroom cloud from a nuclear explosion, so that this

prophecy of last-day events is purported to be a foretelling of the dawn of the nuclear age! One can easily see the fallacy of this interpretation that takes a literalistic reading of a single prophetic passage and expands it into a scientific scenario. The context points to events in the natural word that are signs of the end, not man-made events.

#### Interpretative Principles for the Bible's Statements Relating to Natural Science

In addition to the more general interpretative principles discussed above, we can add the following principles, which are set forth inductively and deductively.

- 1. From a survey of all these five categories of statements we can derive inductively the following maxims:
  - a) The purpose of the Bible is not to provide a textbook on the natural sciences. If it were to be considered a textbook, the question arises whether it is a textbook of ancient science or modern science or both. How would one tell which is which from any given passage?
  - b) If the Bible is not a textbook on science, then there is no modern science to be discovered on its pages. There is no "anticipatory science" in Scripture, even though many creationists, including Seventh-day Adventist creationists, have claimed that it anticipates the discoveries of modern science by thousands of years.<sup>20</sup>
  - c) It is not necessary to know the intricacies of modern scientific thought in order to interpret the Bible's statements that touch upon natural science. One does not need the wisdom of the secular mind to understand the gospel (1 Cor. 1:18-25). The gospel is even understandable to children, and thus the Bible should be intelligible to the common man and not require the knowledge of modern specialists to understand it, whether in theology or in science (Matt. 11:25; 2 Tim. 3:15).
  - d) The Bible's statements use the language of appearances rather than the language of inner reality when it comes to scientific phenomena.
  - e) It is not necessary to account for miracles in the Bible on the basis of natural principles in order to learn the lessons being taught by the miracles. Creation and the Flood are both the result of miraculous intervention. However, the Bible does assign natural agencies to some (not all) miracles, such as the wind in the crossing of the Red Sea or the wind in the drying up of Flood waters. In those specific cases, it is proper to look to natural science to better understand the role of those agencies in the miraculous events.
- 2. From a theology of creation and from the inspired writings of Ellen White we can derive principles that will aid in interpretation, applying such in a deductive sense.
  - a) The teachings of the Bible are not given to uncover the mysteries of science. This is based upon the fact that Christ's mission on earth, according to Ellen White, was not to uncover scientific mysteries that would captivate the imagination of researchers for centuries to come,

- even though he could have done so.<sup>21</sup> If the living Word of God refrained from doing so, one would expect on the basis of parallel thought that the mission of the written Word of God was not to unveil esoteric scientific mysteries either.
- b) While the Bible does not reveal the details of science, which one expects from a textbook of science, what the Bible does offer is a philosophy of science that encourages us to study science as the handywork of God. A Christ-centered, creation-oriented approach to the study of natural science is what the Bible challenges us to adopt.
- c) Utilizing the framework of the great controversy between good and evil, as best exemplified in the writings of Ellen White, aids one in interpreting Biblical passages, especially those passages in which the powers of both good and evil are manifest.

#### Conclusion

As educators and as students of the Bible and scientific thought, we need to be aware of sound principles of Biblical interpretation that can be applied to all of the Bible's statements relative to natural phenomena. Seventh-day Adventist scientists, scholars, theologians, and students should not view the Bible as a science textbook. One should not attempt to uncover esoteric meanings of modern science from its pages, nor should one be required to explain on natural principles miraculous events, such as Creation, the Flood, and the Exodus from Egypt. But one should delve deeply into the divine word to discover principles that will illuminate the greatness, wisdom, love, and power of God—the fact that he originated all things by the spoken word and the fact that his providential care is constantly exercised over his created works. Knowing this will help us have a better appreciation of God the Creator, his created works, and his inspired Word. It will also aid us in finding greater harmony between scientific discovery and the Bible's many statements pertaining to the natural sciences.

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<sup>&</sup>lt;sup>1</sup> Moises Silva, "Contemporary Theories of Biblical Interpretation," in *The New Interpreter's Bible*, vol. 1 (Nashville, TN: Abingdon Press, 1994), 114.

<sup>(</sup>Nashville, TN: Abingdon Press, 1994), 114.

For interpretation principles, see Louis Berkhof, *Principles of Biblical Interpretation* (Grand Rapids, MI: Baker Book House, 1966); Gerhard F. Hasel, *Understanding the Living Word of God* (Mountain View, CA: Pacific Press, 1980); and Gordon M. Hyde, ed., *A Symposium on Biblical Hermeneutics* (Washington, DC: Biblical Research Institute, 1974).

<sup>&</sup>lt;sup>3</sup> For prophetic principles, see William H. Shea, Selected Studies on Prophetic Interpretation, rev. ed., (Silver Spring, MD: Biblical Research Institute, 1992), and Leif Hongisto, "Teaching Biblical Apocalyptic Literature," Christ in the Classroom, vol. 7 (1993), 75-94. For studies of typology, which deals with correctly assigning the respective types and antitypes, see Bernard Ramm, Protestant Biblical Interpretation (Boston: W. A. Wilde, 1956), 196-219, and Richard M. Davidson, Typology in Scripture (Berrien Springs, MI: Andrews University Press, 1981).

<sup>&</sup>lt;sup>4</sup> See Ramm, ibid., 182-195.

<sup>&</sup>lt;sup>5</sup> Henry M. Morris, Many Infallible Proofs (San Diego, CA: Creation-Life Publishers, 1974), 230-231.

<sup>&</sup>lt;sup>6</sup> William F. Albright, "The Old Testament and Archaeology," 135; cited in Carl F. H. Henry, God, Revelation and Authority, vol. 6 (Waco, TX: Word Books, 1983), 146.

<sup>&</sup>lt;sup>7</sup> The JPS Torah Commentary: Genesis (1989, p. 9), which offers an accurate translation, has this for Gen. 1:11: "And God said, 'Let the earth sprout vegetation: seed-bearing plants, fruit trees of every kind on earth that bear fruit with the seed in it." The footnote for this verse states: "Vegetation. Hebrew deshe' is

the generic term, which is subdivided into plants and fruit trees. A similar botanical classification is found in Leviticus 27:30." (Ibid.) The NIV has translated this verse also as denoting only two types of plants.

<sup>8</sup> Bernard Ramm, The Christian View of Science and Scripture (Grand Rapids, MI: Eerdmans, 1954), 222.

- <sup>9</sup> Gerhard F. Hasel, "Fountains of the Great Deep," *Origins* 1,1:67-72. The only other occurrence in the Bible where both the words "fountains" and "deeps" appear in the same sentence is Deut. 8:7, which clearly is referring to fresh-water springs and not the ocean depths.
- <sup>10</sup> John C. Whitcomb and Henry M. Morris, *The Genesis Flood* (Phillipsburg, NJ: Presbyterian and Reformed Publishing Co., 1961), 100.
- <sup>11</sup> The Anchor Bible for Genesis for Gen. 8:3 indicates the same thought as that found in a description of Abram's journeyings: "Little by little the waters receded from the earth." Abram stopped to pitch his tent in a sequence of sites in his travels, but the overall progress was in one direction. In the same way Flood waters would decrease, more slowly then more quickly, but the whole progress was always downward, according to a correct understanding of the Biblical text.
- <sup>12</sup> On the other hand, one can infer from a reading of Song of Solomon 4:8-11 that Solomon had first-hand knowledge of Lebanon that he would have gained only by visiting there.
- <sup>13</sup> The Seventh-day Adventist Bible Commentary, vol. 3 (Washington, DC: Review and Herald, 1954), 606. <sup>14</sup> Marvin H. Pope, The Anchor Bible: Job (Garden City, NY: Doubleday, 1973), 320-323. Pope reasons that the hippopotamus is not being described because its tail is not like a cedar tree (Job 40:17).

15 Homer's *Odyssey* 3,177 is said to refer to "the paths of the seas." Homer lived in either the 9<sup>th</sup> or the 8<sup>th</sup> century B.C., almost as far back as the time of David, who probably wrote Psalm 8.

- <sup>16</sup> For a discussion of the "paths of the seas" from a historical perspective, see David J. Tyler, "The impact of the Copernican Revolution on Biblical Interpretation," *Origins: Journal of Biblical Creation* No. 21 (July 1996):7; John R. Meyer, "The Life and Philosophy of Matthew Fontaine Maury, Pathfinder of the Sea," *Creation Research Society Quarterly* 19,2 (1982):91-100.
- <sup>17</sup> Phillip L. Knox, Sky Wonders (Mountain View, CA: Pacific Press, 1945), 32-35.
- <sup>18</sup> Colin J. Humphreys, The Miracles of the Exodus: A Scientist's Discovery of the Extraordinary Natural Causes of the Biblical Stories (San Francisco: HarperSanFrancisco, 2003).
- <sup>19</sup> James Reid, God, the Atom, and the Universe (Grand Rapids, MI: Zondervan Publishing House, 1968), 82-83 is just one example. (Other examples are given in the following footnote.) Some recent evangelical books have a chapter or two on the Bible and science, in which modern science is "discovered" in Biblical statements. See Chap. 8, "The Scientific Validity of the Bible," in Grant R. Jeffrey, Creation: Remarkable Evidence of God's Design (Toronto: Frontier Research Publ., 2003), 241-265.
- <sup>20</sup> Harry Rimmer, after noting that one proof of the inspiration of the Bible would be to find cases where its "writers anticipated the discoveries of modern science. *It is possible for the careful student of science and Scripture to discover literally scores of such anticipations!*" Harry Rimmer, *The Harmony of Science and Scripture* (Grand Rapids, MI: Eerdmans Publishing Co., 1938), 87. The founder of the modern creationist movement, Henry M. Morris, was heavily influenced by Rimmer and records for us "the anticipatory scientific insights in Scripture" in his book *Many Infallible Proofs*, 241-243. He also has written a book showing that the Bible lays the foundation for many fields of study, including astronomy, meteorology, geology, anthropology, and biology, called *The Biblical Basis for Modern Science* (Grand Rapids, MI: Baker Book House, 1984). Seventh-day Adventist authors that have written on astronomy being in advance of its time by millennia are Phillip Knox (cited above in note 17) and Lucas A. Reed, *Astronomy and the Bible* (Mountain View, CA: Pacific Press, 1919). Other books that have anticipatory science are S. Maxwell Coder and George F. Howe, *The Bible, Science and Creation* (Chicago: Moody Press, 1965); Ralph O. Muncaster, *Science: Was the Bible Ahead of Its Time* (Eugene, OR: Harvest House, 2000). For a further discussion of anticipatory science, see my doctoral dissertation, Warren H. Johns, "Creation and Revelation in the Thought of Bernard L. Ramm and Carl F. H. Henry," Andrews University, 2005, p. 132-135.
- 135.
  <sup>21</sup> Two examples of the many Ellen White quotes on Christ's refusal to open the mysteries of science are these: "He could have opened mysteries which patriarchs and prophets desired to look into, which human curiosity had been impatiently desirous of understanding. But when men could not discern the most simple, plainly stated truths, how could they understand mysteries which were hid from mortal eyes? ... He represented the spiritual and the heavenly, by the things of nature and experience." (Fundamentals of Christian Education, 236). "Jesus might have opened to the world door after door of the mysteries of science, and gratified the inquisitive mind; but did He do it? He had one object before Him.... It is to bring

to the human family the divine knowledge of the Christ of God, to teach them how they may save their souls." (Sermons and Talks, 1:255). See also ST May 1, 1893; ST Apr. 16, 1894; GCB Apr. 23, 1901; MM 116.