The Bible & Science

Wayne Jackson

The Bible and Science
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With warmest regards,

Wayne Jackson

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Preface

It is an exciting time to be alive. Space travel, instant, worldwide communication via the internet, and laser surgery — the technology boggles the mind. But have we outgrown that ancient and revered Book which our ancestors held so dear? Has modern science made the Scriptures obsolete? The fact of the matter is, true science, and a correct view of the Bible, are in perfect harmony. And both are important to our lives.

If God exists (the evidence is overwhelming that He does), and if He is the ultimate Author of the Bible (there is powerful proof that He is), then we have every right to expect that the Scriptures will be perpetually relevant for mankind. One simply cannot "outgrow" the Mind of the everlasting God!

May one assert that the "spiritual" truths of the Bible are meaningful, but its "scientific" references are flawed? No, that is not consistent. The "sum" of the various parts of sacred Writ are "truth" (Psa. 119:160 ASV). The Scriptures are scientifically credible. In fact, "science" never quite "catches up" with Scripture.

In a time of much religious and moral confusion, the author sends forth this volume, hoping that it will help sincere souls who desire to know the true character of God's Word in a world of increasing complexity.

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As you can see by looking at the **Table of Contents**, much material is included in the complete, printed version that is not available in this ebook format. We hope that this sample will whet your appetite for further study.

We hope you will want to order the complete book. By doing so, you will receive the complete course encompassing thirteen thrilling studies into our Lord's marvelous creation. And you will help us. The income generated from the purchase of this book will help us to continue to develop the resources that will help many develop a powerful, personal faith in our Heavenly Father.

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Chapter 1

Science Is Not A Sacred Cow

"Science!" Oh, the magic in that word — at least for a lot of folks. For many people, science has become a religion. The laboratory is the "holy place," and the scientist, adorned in his white lab coat, is the "high priest." In fact, many have become so enchanted with science they think they have outgrown the need for God. One writer declares: "The discoveries of astronomers, geologists, and space explorers have undermined the faith of all but the most devout . . . and [even] among believers, God is more likely to be seen as a force or spirit than as an all-seeing watcher over human behavior" (Packard, 27). Richard Dawkins, a professor at Oxford University, says that with the advent of Darwin's theory of evolution, "it [is] possible to be an intellectually fulfilled atheist" (6).

This attitude, though, results from a serious misunderstanding of what science is, and what it can and cannot do.

Science Defined

Exactly what is "science"? The word derives from a Latin term, *scientia,* which simply means "knowledge." One source defines science as: "Knowledge based upon the observation and testing of facts worked into an ordered system acting as a base for new knowledge and a guide for ways of getting it" (Graham, 404). A more simple definition is this: "A branch of study concerned with observation and classification of facts and

especially with the establishment of verifiable general laws" (Webster). But as we shall presently see, the word "science" can be used in a rather loose way.

Science Classified

For the purposes of this study, we will classify science under three categories. (1) Physical science deals with non-living materials. For example, astronomy (a study of the stars and other heavenly bodies) and geology (a study of the earth's structure and history) are physical sciences. (2) Biological science deals with living organisms. Zoology (the general study of animals) is a life-science. Physiology (a study of the processes within living things) and anatomy (the study of the structure of living things) are also life-sciences. (3) Then there is an area that may, for lack of a better term, be designated as intellectual science. For example, mathematics is said to be the "science" of the relationship between numbers. Logic is the "science" of correct thinking. It should be noted that not all that is classified as "science" can be investigated in the same way.

The Scientific Method

In coming to a correct view of science, it is extremely important that one have a proper understanding of what is known as "the scientific method." Simply stated, the scientific method is a collection of rules or principles by which one arrives at true "scientific" knowledge. Here are the steps.

First, there is the *observation of facts*. One must be able to perceive the data empirically, i.e., with the senses. If the subject is incapable of sense perception — seeing, hearing, touching, smelling, tasting — it cannot be subjected to the scientific method, hence, according to the definition provided above, could never meet the criterion of true science. Can one "scientifically" prove the existence of God, angels, or the soul? No; these are not subject to the scientific method. It is the case, however, that one can argue the existence of God on logical premises. For a consideration of this, see our book, *Fortify Your Faith.*

Second, there is the *statement of a problem*. Is there a proposition that may account for the facts of a phenomenon? If so, one may propose an hypothesis as a possible explanation. For example, suppose a native from the equatorial region should visit Wyoming. Knowing nothing of the climatic conditions that are characteristic of the northern hemisphere, he observes a pool of water in the evening. The following morning he notes that it has turned to ice. He may wonder: "Did the darkness of night cause the transformation? Did some substance enter the water to produce the change?" He may advance an hypothesis, but whatever his "guess," it will require further investigation.

Third, as suggested by the illustration just given, an hypothesis is subjected to a *testing* process. The testing (experimentation) may subsequently suggest that the hypothesis is either false or perhaps true. Years ago astronomers speculated that there was intelligent life on Mars, because it was believed that "canals," visible through the telescope, were evidence

of rational habitation. Subsequent exploration, however, proved that "hypothesis" to be faulty. There is an old saying: "Science without experience is sheer speculation."

Fourth, if an increasing body of experimental evidence seems to support an hypothesis, it may become classified as a *theory*. A theory is not "proof" of anything; it merely suggests that sufficient evidence has been gathered already to warrant further testing.

At this point we must emphasize that any view which cannot be subjected to a testing process, cannot qualify — either as an hypothesis or a theory. Ideas which deal with the origin of the universe, or the origin of human beings, cannot be labeled properly as "science." They are not capable of being tested. This is why some honest scientists are forced to admit that the idea of human evolution does not pass the criterion of a "credible theory" (Danson, 35).

Finally, once a theory is formulated, and then widely tested, the facts may appear to be so firmly established that the phenomenon receives the status of a *law*. It is thus proper to speak of the "laws of reflection" or the "laws of thermodynamics." It is not proper to regard the idea of evolution as a "law," or, indeed, as we pointed out just above, even a "theory."

That is why it was so silly to say, as one document (signed by 177 biologists) asserted a few years back, that evolution is a scientific law "as firmly established even as the rotundity of the earth" (quoted by Bales, 7). That is absurd! Photographs of the earth, made from the moon, document the shape of the earth. Where is objective evidence of Darwinian evolution?

More recently Stephen J. Gould of Harvard asserted that "evolution [is as] well documented as any phenomenon in science, as strongly as the earth's revolution around the sun" (59). His statement is equally extravagant.

The Limitations of Science

Science, then, by its very methodology, is strictly limited in a number of ways.

First, as noted already, science is limited to *sense perception*. If a proposition cannot be physically examined and subjected to empirical analyses, it simply does not fall within the domain of science. Note again the definitions of science that we gave at the beginning of this chapter. A concept may be perfectly valid, such as the idea that God exists. The case for God's existence may be argued quite logically, but it cannot be *demonstrated scientifically*. Jehovah cannot be put into a test tube or placed under a microscope.

The common view regarding the beginning of the universe is called the "Big Bang" theory (though note our qualification of "theory" above). But this notion about the origin of the universe cannot be classified legitimately as "scientific." No historian was there to witness the commencement of the universe; no one captured the event on video. The Big Bang idea is pure speculation — and speculation, in fact, that runs counter to a significant amount of evidence.

Second, science deals with the *present*. Since genuine science demands

experimentation, and since experimentation has to occur in the here-and-now, it should be obvious that any event, alleged to have occurred in the ancient past, does not fall within the scope of true science. Again, this rules out the idea of man's supposed evolutionary origin.

Third, science is limited to explaining *how* things work; it cannot address such issues as *why* they happen. Forensic science, for instance, can explain how a bullet is fired from a gun and enters a victim's body, but it cannot determine whether the shooting was a murder or a tragic accident. Other information would be required for that conclusion.

Fourth, science deals only with *matter*, i.e., the material — that which occupies space. In his book, *The Limitations of Science,* J.W.N. Sullivan, described by *Time* magazine as one of the world's "most brilliant interpreters of physics," adamantly stated that "science is confined to a knowledge of structure" (142).

One cannot, for example, scientifically demonstrate the existence of the soul. Attempts to weigh an individual, before and after death, and to determine the density of the human spirit, have been exercises in futility. The case for the human soul must be argued in some fashion other than by the application of scientific rules. Science can neither affirm it nor deny it.

Dr. Louis T. More, who was not sympathetic to Christianity, nonetheless acknowledged: "Science does not embrace all phenomena and it has not, for its use, all the criteria of truth" (354). Again note this from Sullivan: "[S]cience deals with but a partial aspect of reality, and . . . there

is [not the] faintest reason for supposing that everything science ignores is less real than the world it accepts" (147).

Fifth, science deals with phenomena that are *repeatable*; it cannot address *unique* events (such as the claim of historical miracles). One evolutionist notes that in science, "observations and experiments must always be reported in such a way that they can be repeated and verified, and must *always be repeated and verified before they are incorporated into the body of knowledge"* (Curtis, 12; emp. WJ).

Did life accidentally jump-start itself several billion years ago? Evolutionists claim that it did. Can that event be repeated and verified? No, but evolutionists believe it anyway — and pass it off as "science."

Dr. George Wald, a professor at Harvard University, in describing the "spontaneous" origin of life said that "time itself performs the miracles" (49). If the fortuitous commencement of life could occur (and there is absolutely no evidence that it did or can), such would have been a unique event.

The notion of "spontaneous generation," believed so vigorously by evolutionists, cannot be classified as "science." And since there were no "witnesses" to this alleged singular event, the idea is wholly void of any support.

"Spontaneous generation" is a philosophical "belief," not a scientific proposition.

The Checkered Past of Science

Any person who has a proper estimation of true science, cannot but be an admirer of those men and women who studied hard, who sacrificed selflessly, and who brought to us the numerous achievements in the domain of science by which we are so blessed today. But the historical reality is, along the way, that which has been called "science," has been littered with blunders of a colossal magnitude.

At various points in the past, superstition, sailing under the flag of science, taught: (1) the eternality of matter; (2) alchemy, the notion that common metals could be transformed into gold; (3) the spontaneous generation of life; (4) the recapitulation theory, i.e., the idea that during the nine-month gestation period the human embryo passes through the major stages of its evolutionary past; (5) the human body, with scores of so-called "vestigial" organs, is a museum of our evolutionary history; (7) the "steady state" theory, i.e., that matter is being continuously created; (8) the geocentric theory, the notion that the sun revolves around the earth; (9) the earth is flat; the contemporaries of Columbus believed he would sail off the edge of our planet; (10) the earth is supported by solid pillars; (11) the inheritance of "acquired" characteristics; (12) the preformation theory, the notion that in every woman's ova are complete human beings in miniature format; (13) departed wicked souls inhabit the interior of the earth; (14) the human brain is composed of "earth;" (15) astrology, the idea that the planets determine human destiny, etc., etc.

All these embarrassments, and others too numerous to detail, should

remind us that some, who have posed as "scientists," have been the most gullible, egotistical people on earth. To suggest that their pontifications must be taken with a grain of salt is to express it mildly. The most astounding thing of all, however, is the fact that the Holy Scriptures, though composed over a span of some sixteen centuries, never endorsed a single one of these baseless theories!

Conclusion

In view of these facts about how science works, its limitations, and its history, it ought to be very clear that not everything today that is called "science" actually is — in the legitimate sense of that term. We need not, therefore, be intimidated by the wild assertions that "science" disproves the existence of God, or "science" undermines faith. Science simply cannot deal with such matters, and we must not allow ourselves to be mesmerized by powerful sounding words, intimidating personalities, and the superficial pronouncements of the news media.

Questions

1. Give the best, one-word definition of "science" that you can.
2. Expand your definition slightly.
3. Name three categories sometimes assigned to "science."
4. Explain why the matter of "origins" does not come within the scope of "science."
5. Though it is commonly called the "theory of evolution," explain why the evolutionary concept actually does not meet the standard of a credible theory.
6. List the stages in the "scientific method."
7. What are some of the limitations of science?
8. Discuss the statements of Louis More and J.W.N. Sullivan about the range of scientific inquiry. Did these respected scientists allow for "truth" beyond that which can be determined by the scientific method?
9. Can modern science determine whether or not Jesus Christ performed miracles? If not, explain why.
10. Discuss some of the historical "blunders" of the scientific community.

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Chapter 2

Is The Bible Scientifically Credible?

There are various views that people entertain regarding the Bible. Some hold it to be strictly a human document — respectable with age, but certainly not an inspired revelation from God. They merely consider it as one of the great literary efforts of antiquity, much as the works of Plato or Shakespeare.

Others feel that the Scriptures have some sense of "divinity," but they do not believe that the Bible is entirely the Word of God. It may contain sacred truth, they allege, but it also has an admixture of purely human ideology. They would contend, therefore, that much of the Bible's history is flawed, and certainly it is "scientifically" antiquated. Neither of these views is consistent with the Bible's claim for itself. "All scripture is inspired of God . . ." (2 Tim. 3:16-17).

Many Bible students, including this writer, happily acknowledge that the Scriptures are verbally inspired — the infallible word of God. We are confident, as a result of careful and sustained study, that whenever the Bible touches upon a subject, it is accurate — if its language is truly understood. If God is the Author of nature, and if He is the Source of the Scriptures, the two will be in harmony, for He is not a deity of confusion (1 Cor. 14:33).

Our focus in this chapter, then, is this: Is the Bible accurate from a *scientific* standpoint?

The Bible: Not a Book of Science

It is frequently said that "the Bible is not a book of science." There is, of course, some truth in that. The Scriptures were not designed to set forth the law of gravity nor to explain that water is composed of two gases — oxygen and hydrogen. It is generally the case, though, when such a statement is made, that the author of it intends to convey the impression that the Bible is scientifically vulnerable; that it contains, in fact, outmoded "scientific" data. That simply is not the case.

While it technically is true that the Scriptures are not a textbook on science matters, when they *incidentally* touch on issues that relate to a scientific theme, we have every right to expect that the sacred documents will be without error. For example, it is also true that the Bible is "not a book of mathematics." It does not teach us how to add, subtract, or do fractions. Nevertheless, when it does discuss numbers, we expect it to be mathematically accurate. In Daniel's prophecy of the coming Messiah, he predicted that certain events would be fulfilled in "seventy" weeks; the sum was then segmented into sixty-two, seven, and one (Dan. 9:25-27). These figures add up to seventy. We do not expect a math "mistake" in such instances. We ought not, therefore, to be distracted by the meaningless quip: "The Bible is not a textbook on science."

The Bible's Scientific Precision

It is an amazing fact that though it was completed some twenty centuries ago, the biblical record is always consistent with the discoveries of

science. This certainly cannot be said for any modern textbook dealing with scientific issues. Current science books will be obsolete within a very brief time.

When George Gamow published the 2nd edition of his book, *Biography of the Earth* in 1948, he had to write a special preface correcting errors in the first edition, because, as he noted, "many changes have taken place [during the past seven years] in our ideas concerning the origin of the planetary system." (He still had a galaxy of errors in that work.) Consider some of the following points:

(1) Many have argued (and some still do) that the universe is eternal; there never was a time when it did not exist. But Moses wrote: "In the beginning God created the heavens and the earth" (Gen. 1:1). But, as Dr. Robert Jastrow has pointed out: "Modern science denies an eternal existence to the Universe. . ." (15). This is one of the clear implications of the Second Law of Thermodynamics. Everything is "running down." It must have been, therefore, "wound up" at some point in the past.

(2) The book of Genesis states that Jehovah's creative activity concluded with the sixth day of the initial week (2:1-2). Accordingly, there is no creation of "matter" being effected today. This is perfectly consistent with the First Law of Thermodynamics, which asserts that according to present processes, matter is not being created now (which further suggests that it cannot *create itself*). It may be altered in form (e.g., from a solid to a gas), but it is neither being created nor destroyed.

Yet contrast these facts with the contention of Bertrand Russell

— just forty-five years ago: "There is no reason why the world could not have come into being without a cause; nor, on the other hand, is there any reason why it should not have always existed" (7). These statements are absolutely absurd, and no self-respecting intellectual would echo them today. But the Bible is wonderfully current.

(3) Consider Paul's statement in his address to the philosophers of Athens. ". . . He [God] made of one every nation of men to dwell on all the face of the earth . . ." (Acts 17:26 ASV). The expression "of one" translates the Greek *ek henos*, literally "out of one male." The word "blood" (KJV) does not appear in the older Greek texts. And so, the inspired apostle affirmed that the entire human family was descended from one man, Adam.

This asserts the unity of humanity — contrary to ancient Greek ideology. The Athenians claimed to be an indigenous people — a special creation, and all others were considered barbarian (cf. Rom. 1:14).

This idea has its modern counterpart as well. Charles Darwin, the "father" of modern evolutionism, argued that the "Caucasian races" are superior, and from this concept Adolf Hitler developed his notion of the "master" race. As late as World War II, the U.S. Red Cross segregated blood (for transfusion purposes) according to race types. It is now scientifically known that there is a basic physical unity shared by all ethnic families of the earth.

Evolutionary anthropologist Dr. Ashley Montague has written that "all the ethnic groups of man must have originated from a single ancestral

stock." He says "the more we study the different groups of man the more alike they turn out to be" (184). Again, the Bible proved true after all!

Alleged Inaccuracies

Unbelievers charge, however, that there are scientific blunders in the Scriptures — which ought not to be there if the narrative was given by God. Here are a few examples generally cited.

(1) In Genesis 1:6 Moses wrote: "And God said, Let there be a *firmament* in the midst of the waters . . ." (KJV). It is argued that this passage suggests there is a *firm* vault in the heavens that holds back the waters. There is a mistaken notion here alright, but it can be traced back to the Septuagint (Greek version of the Old Testament - from the 3rd century B.C.). Those translators were influenced by the ideas of their day in their rendition of the original term. However, the Hebrew word *raqiya* simply means an "expanse" (cf. NASB), and it does not imply a "solid" sky.

(2) We are told that the Bible contains references to the "unicorn," a mere mythical animal (cf. Num. 23:22 KJV). If the Scriptures are inspired, surely, it is charged, they would not embody such absurdities. Again, though, it is a matter of an inaccurate translation. It is now known that the Hebrew word *re'em,* in this context, refers to a species of extinct wild ox, and not to the legendary "unicorn."

(3) Some allege that the Scriptures contain a scientific blunder when they refer to the "four corners of the earth" (cf. Rev. 7:1). Supposedly, this is a mistake from those days when unenlightened man believed the earth

was flat. But the biblical phrase is simply a figurative expression for the *extremities* of the earth. Some time back the U.S. Marine Corps published a brochure affirming that this branch of the military has men "serving the flag at the four corners of the earth." Does anyone suggest that our government does not know the shape of the earth?

In addition we must mention that Isaiah spoke of God as sitting about the "circle of the earth" (40:22). Scholars have pointed out that the Hebrew word for "circle" (*chuwg*) "is compatible with the notion of the earth as a sphere" (Archer, 637). These examples could be multiplied several times over.

False Science Not in the Bible

Invariably, writings that are strictly "human" in composition reflect the "science" of their day. This is why, even today, science books have to be revised and rewritten every few years. It would be unthinkable to use a science text published just ten years ago. "Science" changes, and yesterday's science is frequently today's *superstition!*

It is an amazing thing that the Bible does not incorporate into its records the pseudo-science of the antique world. Surely this is evidence of its divine character. But consider the following — by way of contrast:

(1) Aristotle, the great Greek philosopher, said that the brain is a "compound of earth and water." He further taught that the human brain "is larger in men than in women." It isn't. He suggested that the "region of the heart in man is hotter" than in animals (Chapter 7). The truth is, most

birds and many mammals have warmer internal heat than humans.

(2) In the famous *Papyrus Ebers*, a medical text written in Egypt in the 16th century B.C., there is a prescription to prevent losing one's hair: "When it falls out, one remedy is to apply a mixture of six fats, namely those of the horse, hippopotamus, the crocodile, the cat, the snake, and the ibex. To strengthen it, anoint with the tooth of a donkey crushed in honey" (quoted by McMillen, 11).

Though Moses was raised in Egypt and was "instructed in all the wisdom of the Egyptians" (Acts 7:22), when he penned the Pentateuch (the first five books of the Bible), he incorporated no antique superstition into his narrative. In fact, that Old Testament narrative is astoundingly ahead of its time. The sanitation regulations, incorporated into certain portions of the Pentateuch (which presuppose the existence of "germs") cannot be explained except by the fact that God was behind the message.

Conclusion

When one argues that the Bible is scientifically flawed, or, in an attempt to compromise the integrity of scripture, flippantly quips: "Oh, the Bible is not a book of science," the Christian must rise to a defense of the flawless character of the sacred record.

Questions

1. Describe some of the views that people entertain concerning the nature of the Bible.
2. What claim does Scripture make for itself, in terms of its origin?
3. The statement is frequently made: "The Bible is not a book of science." What is right about that statement? What could be wrong about that statement?
4. If the Scriptures contain factual errors in matters of science, history, etc., can one have confidence in their *spiritual* instruction?
5. Cite some examples of how Genesis 1 is in harmony with scientific law.
6. What is the significance of Paul's affirmation regarding the unity of the human family (Acts 17:26)?
7. Is the Old Testament accurate when it mentions the "unicorn" (KJV)? Where does the problem lie?
8. Did biblical writers endorse the notion of a "flat" earth? Explain.
9. How are the writings of Moses different from those produced in Egypt during the time he was growing up?

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Chapter 3

The Bible and Astronomy

> "And God said, Let there be lights in the expanse of heaven to divide the day from the night; and let them be for signs, and for seasons, and for days and years: and let them be for lights in the expanse of heaven to give light upon the earth: and it was so. And God made the two great lights: the greater light to rule the day, and the lesser light to rule the night: he made the stars also" (Genesis 1:14-16).

The word "astronomy" derives from two roots — *astron,* "star" and *nomos,* "law." The word suggests an arrangement or distribution of the stars. This, in itself, implies a law-giver or an arranger. The Greeks called the universe *cosmos* (not *chaos*), suggesting order. The Bible itself speaks of the "ordinances" of the heavens (Jer. 31:35). It is a fundamental principle of logic that where there is law, there must be a law-giver. The U.S. Constitution did not compose itself! The law-giver, the orderer of the universe, is its Creator, God.

More formally stated, astronomy is the science of the study of the stars, planets, etc., together with their movements and relations to one another. Originally, this "science" was steeped in superstition (astrology); it is only in relatively recent times that it has gained scientific respectability. And even now, it is woefully afflicted with evolutionary baggage.

The Origin of Heavenly Luminaries

Basically, there are two views of the origin of the universe. It occurred either *naturally*, or its commencement was *supernatural*. The question is:

To which concept does the evidence point?

The common view today is that the universe resulted from the "Big Bang." It is suggested that all the matter then in existence (which supposedly dates to some 20 billion years ago) "was compressed into an infinitely dense and hot mass" (called a "cosmic egg") that finally exploded (about 10 billion years ago), thus producing the ordered systems of the universe (Jastrow, 2-3). According to an article in *National Geographic*, the "egg" was "many billions of times smaller than a single proton" (705). Where this "egg" came from, no one seems to know. Certainly no "cosmic chicken" has yet been located! There are, however, many problems with the Big Bang theory. Consider just two of them.

(1) As noted already, the Greeks called the universe the *cosmos,* meaning "order," because it is so precisely mechanistic — like a brilliantly designed, well-regulated machine. No mere "explosion" could have occasioned this machine. A blowup in a printing factory does not produce an encyclopedia. A stack of lumber and dynamite cannot construct a house. But ". . . every house is built by someone; but the builder of all things is God" (Heb. 3:4 NASB). Intelligence can fashion a habitable dwelling; mere force cannot. And so, "accident" is not an adequate explanation for an ordered system. Henri Poincare (1854-1912), considered to be one of the greatest mathematicians and original thinkers of his day, declared: "The world is divine because it is a harmony" (Young, 135).

(2) An explosion propels objects radially — in all directions. If one lights a firecracker on the driveway, following the denotation, the distribu-

tion of the paper fragments will give a clear idea of the effects of a "bang" — and there will be no discernible order. The planets of our solar system are characterized by spinning and curving motions (e.g., in orbits), with lovely balance. This marvelous arrangement argues for design, not randomness.

For further study, see the feature article, "The Big Bang" (December, 1999) on our web site - http://www.christiancourier.com.

Astronomy and Design

As suggested above, a study of the heavenly luminaries reveals that the universe was "put together" in a well-orchestrated way. A recognition of this "harmony" is the foundation of scientific investigation. Let us illustrate this point.

David, the great psalmist, a thousand years before the birth of Christ, declared: "The heavens declare the glory of God and the firmament [expanse NASB] showeth his handiwork" (Psa. 19:1) The starry hosts of the heavens testify concerning God in two ways. The vastness of the expanse is a commentary on his *power*. The organization is testimony to his *intelligence*. Let us briefly think about these two matters.

First, the number of heavenly bodies within the universe is beyond our ability to comprehend. Primitive astronomers tried to number the stars. In 150 B.C., Hipparchus estimated there were less than 3,000 stars. Three centuries later, Ptolemy suggested a slightly larger figure. One of the latest estimates today is that there could be as many as 100 septil-

lion stars in space (that's a one followed by twenty-six zeros). And Albert Einstein suggested that the totality of space could be as much as 100,000 times greater than *known* space (Boyd, 289). All the while, though, the Scriptures had taught that the stars are numberless (Gen. 13:16; Jer. 33: 22). And God knows them all by name (Psa. 147:4). What power has the Maker of this universe!

Second, David described the starry hosts as Jehovah's "handiwork," indeed, the exquisite work of his "fingers" (Psa. 8:3). Job exclaimed that the heavens were "garnished" by the Creator (Job 26:13). The original term is a feminine form suggesting "fairness, beauty, brilliancy." A New Testament writer says the "worlds" were "framed" by the word of God (Heb. 11:3). Reflect upon some of the design features of the Lord's universe.

(1) Our earth is the third planet from the sun (93 million miles away). It is spinning on its axis at the rate of 1,000 miles per hour (at the equator). Too, the earth is moving in an elliptical orbit around the sun at an average speed of 66,600 m.p.h. It travels 595 million miles in its yearly route around the "track." Here is a good question: What started this movement? There is no *natural* explanation. Sir Isaac Newton's First Law of Motion asserts that a stationary object will remain so until force is exerted upon it from some other source. This fact has forced many philosophers and logicians to postulate a "Prime Mover." The Bible calls Him "God."

(2) The earth is delicately balanced in its orbit. As the earth moves around the sun, centrifugal force pushes it outward (much like a weight

attached to a string and whirled above your head). At the same time, the force of gravity pulls it toward the sun. It has been estimated that it would take a steel cable at least 8,000 miles in diameter (comparable to that of our earth) to equal the strength of the force which ties this planet to the sun (Stoner, 55). Gravity! What a mysterious force. We constantly see its effect, but still do not understand it. We can explain the principle of its universal force, but we really do not even know what it is.

> The very law which molds a tear,
> And bids it trickle from its source,
> That law preserves the earth a sphere,
> And guides the planets in their course.
> *Samuel Rogers*

The amazing balance between these forces of nature can be explained reasonably only in the light of intelligent design.

(2) Some scientists refer to the "mathematical orthodoxy" of the universe. In his book, *The Universe and Dr. Einstein*, Lincoln Barnett talks about the "functional harmony" of the universe (22). Think about this. As the earth travels in its orbit around the sun, it must make minute adjustments to conform to its elliptical "track." Our planet digresses from a straight line one-ninth of an inch every eighteen miles. If the modification was only a tenth of an inch, our globe would gradually move toward outer space and eventually become a frozen ball. If the adjustment was as much as one-eighth of an inch, we would be pulled toward the sun and finally incinerated. The balance is just right.

If not for the mathematical precision of the universe, how could

astronomers predict eclipses? How could space scientists target satellites with such pinpoint accuracy? Consider this interesting bit of history. Prior to the year 1846, the planet Neptune was unknown to earth's astronomers. It is too far away (2,800 million miles) to be seen with the naked eye. In the early 1800's, two scientists, John Adams in Great Britain, and Jean Leverrier in France, working independently, had noticed strange behavior in the orbital movements of the planet Uranus. They surmised that perhaps the gravitational pull of some unknown planet was affecting Uranus. Working strictly "on paper" with mathematical calculations, each man — unaware of the other's labor — predicted where the invisible planet ought to be. In 1846, Johann Galle of the Berlin Observatory made a search for the hidden body. He discovered it less than one degree from the predicted location. What eloquent testimony to the "mathematical orthodoxy" of the universe. Who was the great Mathematician who put it all together?

One unbelieving scientist, Dr. Edward Friedkin, a physicist, has confessed: "It's hard for me to believe that everything out there is just an accident . . . it seems likely to me that this particular universe we have is a consequence of something which I would call intelligent" (Wright, 69).

The Purpose of Heavenly Luminaries

Why did God create the sun, the moon, and the stars? Most of them are far beyond man's ability to visit, even if a human could survive there. If one wanted to draw a map of our universe, with a scale of 1 inch = 93

million miles (the distance from earth to the sun), his paper would have to be four miles long to include our next nearest star. The map would need to be 25,000 miles long just to reach to the center of the Milky Way galaxy!

Moses described the purpose of the planets and stars in Genesis 1. They were designed to "divide the day from the night," to be for "signs, and for seasons, and for days and years," and to serve in the expanse to "give light upon the earth" (1:14-15).

The sun provides light (and heat) upon the earth for the day time. It is called the "greater" light (compared to the moon); it is significant that the inspired writer did not say, the "greatest" light (as the sun would have appeared to the ordinary observer fifteen centuries before Christ), for there are many stars larger than the sun.

The rotation of our earth upon its axis, in relation to the sun, produces the day-night sequence. The revolution of the earth in its orbit around the sun, each 365 days, measures the year. The inclination of the earth on its axis, relative to the sun, provides our seasons, which facilitate the growing of crops.

For many centuries the stars have served as material "signs," i.e., navigational devices for the mariner. On their dangerous voyage to Rome, Luke notes that the inmates of the ship were unable to see either sun or stars for many days, hence, knew not where they were (Acts 27:20). Moreover, the constellations Pleides and Orion (Job 38:31) make their appearances in the spring and fall respectively, thus heralding the coming of these seasons.

Further, the Lord has made use of celestial bodies as "signs" for the teaching of *spiritual* lessons. When Joseph dreamed of the sun, moon, and stars bowing down to him (Gen. 37), it was a prophetic symbol of his future glory. Balaam's prophecy of a "star" to come out of Jacob (Num. 24:17), is most likely a preview of the coming of Christ, who refers to himself as "the bright and morning star" (Rev. 22:16). Perhaps it is significant that the wise men from the east, who followed the star to Bethlehem, may have been from the same region where Balaam himself had lived.

When the Israelites went to battle against a coalition of pagan tribes, God caused the sun to stop in the middle of the sky, where it hastened not to go down for about a whole day (cf. Josh. 10:13 NASB). Though skeptics dismiss this account as purely mythical, and liberals attempt to find naturalistic explanations, the conservative scholar accepts the event as a miracle, possibly a localized refraction of light (Davis/Whitcomb, 69), as an evidence of God's presence with his people. Certainly that day was unique in the annals of earth history (cf. Josh. 10:14).

God employed some sort of heavenly light ("star" — a generic term) to guide the wise men to the place where the infant Christ lay (Mt. 2:2, 9). This phenomenon cannot be explained save by a miracle.

Conclusion

The sun, moon, and stars are magnificent evidences of the Creator's genius and power. They are both aesthetic and functional. Dr. Arthur Harding, Professor of Mathematics and Astronomy at the University of

Arkansas, wrote:

> As we look at the machines in some of our factories we sometimes wonder at what the mind of man has created, overlooking the fact that we are living on a little world that is a part of a gigantic machine which is operating silently and everlastingly in the sky . . . Surely here is a gigantic machine which makes us stand in awe and wonder at the power of the creator who could design such a machine and put it into operation (67).

Unfortunately, over the centuries, some have given the heavenly bodies undue prominence. It is an interesting fact that whereas the ancient heathen gave much attention to the sun, moon, and stars — even worshipping them — the Hebrews were not preoccupied with such matters, doubtless due to prohibition against star worship, etc. (cf. Dt. 4:19; 17:2-5; Isa. 47:13; Jer. 44:19).

Modern devotees of astrology (who allege that the sky's luminaries have control over the destinies of men) are equally pagan.

Truly, the heavens do declare the glory of God (Psa. 19:1ff).

Questions

1. Define the term "astronomy." What does the etymology of the word imply?
2. Cite two logical flaws in the "Big Bang" idea.
3. What two elements of God's nature are illustrated by the starry hosts of the heavens?
4. What was Newton's First Law of Motion?
5. What are the two forces that stabilize the earth in its relationship to the sun?
6. Illustrate "mathematical orthodoxy" in the universe.
7. List some of the "purposes" of the heavenly luminaries.
8. Discuss the implications of Prof. Harding's statement that the universe is a "gigantic machine."
9. What is the difference between "astronomy" and "astrology"?
10. What is God's view of the practice of astrology?

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Chapter 5

The Bible and Geology

Some theories are born, and they die fairly soon; scientific investigation kills them. It doesn't take long to reject the notion that a horse hair can turn into a worm when soaked in water. But other baseless views are more difficult to eradicate. Hypotheses concerning the formation of distant galaxies, or the precise composition of the earth's interior, linger on and on, simply because they cannot be subjected to the kind of scientific scrutiny that quickly discredits error. Such is largely the case with reference to the "science" of geology. This field of study deals with the distant past, fogged in obscurity, and it is saturated with reckless speculation.

Geology involves a study of the history of the earth, its composition, the forces that have worked upon it, and the remains of ancient plants and animals. It was a fledgling discipline until the advent of Darwinism; it then came into its own — as an alleged "biography of the earth," to borrow the title of George Gamow's book. Now, many claim that geology provides the "proof positive" that organic evolution has occurred. Others (even some evolutionists), are more reserved.

Earth's History: Two Views

There are two fundamental views of earth history. One is called *Uniformitarianism,* the other is designated as *Catastrophism.* The former is the evolutionary concept; the latter represents the biblical viewpoint. Let us

consider these two ideologies briefly.

"Uniformitarianism" is the notion that the earth's features, as currently observed, are the result of *gradual* changes, over a very long period of time (supposedly, several billion years). Thus, the slow processes we see occurring now are a commentary on the forces of nature in the past. The favorite phrase in the evolutionary vocabulary is: *"The present is a key to the past."*

[Note: It is here that we meet with a major contradiction in the evolutionary scheme of things. In advocating his *geology,* the Darwinist claims that the operations of the earth have always been *uniform.* But in arguing his *biology* (attempting an explanation for the "spontaneous" origin of life), he alleges that earth's conditions were *different* in the past! (see Simpson, *et al.,* 1957, 263, 741).]

An alternate concept for explaining the earth's features is called "Catastrophism." This is the idea that the planet's surface has been subject to violent changes in the past — and on a worldwide scale. From the biblical vantage point, the most significant of these would be the global Flood of Noah's day.

The key question, then, is this: Which of these ideas best conforms with the actual *facts* of geology? That is the thrust of this study.

The Geologic Column

Before we begin our discussion of the facts revealed in the geologic strata, we must say a brief word about the so-called "geologic column"

that appears in many geology and biology textbooks. It purports to show, in chart form, about twelve different geologic "ages," representing various life forms, as observed in the fossil record, beginning with the simple and moving toward the complex. What most people do not realize is this:

(1) That "column" exists nowhere on earth except on the paper of those books.

(2) It is a contrived construction based upon the presumption that evolution has occurred. Suppose we have several dominos scattered on a table. These will represent different strata (layers) of the earth with their respective fossils. How shall we organize these? If we assume that evolution has occurred — from the simple to the complex — we will stack the dominos accordingly, make a chart of them and publish it in a textbook! We need not be bothered by the fact that in the *real* fossil record, these layers are often all mixed up. The theory must take precedence over the facts!

(3) The "geologic timetable," as the column is sometimes called, is contradicted by numerous facts in the actual strata of the earth. For example, if all of the theoretical geologic records of earth's living creatures, that supposedly evolved over a span 2 of billion years, were stacked on top of one another (as in our domino illustration), the depth would be about 130 miles. Compare that with the fact that the earth's crust is only twenty-five to thirty miles deep!

We have thoroughly addressed this matter in our book, *The Mythology of Modern Geology.*

The Explosion of Life

One of the most amazing features of the geologic record is the fact that life forms virtually explode into existence. Dr. George Simpson of Harvard acknowledged that a great variety of organisms "are suddenly present" in the lower region of the geologic index (called the Cambrian Period). (This "index" is that artificially-arranged fossil column, referred to above.) Simpson calls this a "major mystery of the history of life" (1949, 18).

The truth is, every major invertebrate animal group has been found at the so-called Cambrian level — with no observable ancestors. But why is this such a mystery? Because if the theory of evolution were true, one would expect to see the different life forms sporadically and gradually appearing — with proliferation following. But that is not what the evidence reveals.

On the other hand, this circumstance is exactly what one would expect to discover as a consequence of the great Flood of Noah's time. The sedimentary (water-laid) strata that are the deepest would contain a vast number of simpler organisms — those that, due to lack of mobility and greater density (e.g., shelled creatures), would be buried more quickly in the upheaval of the Deluge.

The facts fit the biblical record much better.

The Complexity of Life Forms

Another aspect of geologic history, which even the evolutionists describe as "puzzling" (Kay/Colbert, 102), is the amazing complexity of the fossils in the Cambrian period. Consider, for instance, the little creature known as the "trilobite." It had eyes so complex that the math, explaining how the lens functioned, was not worked out until the last century! The trilobite is now extinct.

Incidentally, the issue for evolution is not exclusively, "how did all these creatures arrive?" — but, *where did they go?*

If evolution were the great fact of history, one should find fossilized organisms in various stages of development — from the incomplete to the complete — with the gaps filled in. But that is not the case; every organ and structure is complete. Not a single fossil has been discovered with half-formed features.

The Missing Links

We've all heard about "the missing link." That expression is a misrepresentation. It is not that there is a missing "link," it is a matter of missing "links" — *all of them* — between the major groups of earth's animals. This is true concerning creatures living upon the earth today, and it is equally true regarding those specimens buried in the fossil record. There are no provable "transitions." Evolutionary "geology" is "gap-ology."

The Genesis account affirms that the basic forms of biological life were created "after their kind" (Gen. 1:11ff). This statement is strictly at

variance with the idea that all living creatures have descended, through natural processes, from a solitary, beginning life source — that fortuitously sprang into existence.

If the story of evolution were true, there should be, in the earth's strata, a finely-graduated chain of evidence, with thousands of intermediate links between the major kinds of creatures. But the links are absent — because they never existed! In the various museums of the world, millions of fossil samples are on display, representing some 250,000 different species. And yet, the evolutionary "chain" still has the coveted "links" missing.

Charles Darwin was aware of this problem and confessed that this is "the most serious objection which can be urged against the theory" (313).

George Simpson of Harvard, affectionately dubbed "Mr. Evolution" by his admirers, conceded that there is a "regular absence of transitional forms" in the fossil record, and that such is a "universal phenomenon" — among both plants and animals (1944, 107).

Stephen Gould of Harvard, a leading defender of evolution today, says there is "precious little in the way of intermediate forms," and the "transitions between major groups are characteristically abrupt" (24). *But this is exactly what one would expect to find if the Genesis account is true!*

Perhaps this is why Mark Ridley, a professor of zoology at Oxford University, says that "no real evolutionist . . . uses the fossil record as evidence in favor of the theory of evolution as opposed to special creation" (830).

Demise of the Species

According to the theory of evolution, nature is endowed with marvelous and mysterious mechanisms for the creation and proliferation of living organisms. Supposedly, then, over the past 2 to 3 billion years, life forms have been exploding on the panoramic scene of history. If that view is true, one would expect a sparseness of fossils, the further back he proceeds in the fossil "biography." But this is not what the evidence reveals. It is believed that 98% of all creatures that have existed upon the earth now are extinct (Howard/Rifkin, 21). This doesn't fit with the story of evolution.

A Record of Degeneration

The evolutionary concept argues that by means of natural selection (the struggle in nature), animals that are more "fit" survive (Darwin's "survival of the fittest"), and the weak are eliminated. Ideally, then, species become hardier across the millennia. That, however, is hardly what the geologic evidence indicates.

Prior to the Flood the patriarchs lived many times longer than we now do (cf. Gen. 5:5, 27). By the time of Abraham, 175 was an "old age" (Gen. 25:7-8). Clay tablets from ancient Sumer (now southern Iraq) tell of kings who reigned fabulously long periods of time. While these texts contain obvious exaggerations, archaeologists contend "they may well be a legendary account of the fact revealed in the Bible that people did live to greater ages in early times" (Free/Vos, 38).

The same pattern of degeneration may be observed in the fossil his-

tory. "The fossils, regarded as a whole, invariably supply us with types larger of their kind and better developed in every way than their nearest modern representatives, whether of plants or animals" (Price, 206). Sir William Dawson said that "*degeneracy is the rule* rather than the exception" (quoted by Price, 211; org. emp). This circumstance is not even disputed. Some ancient locusts had a wingspan of over seven inches. Dragon flies had bodies a foot long. There were some frogs in the ancient world close to ten feet in length. The biblical record also hints of this degeneracy. The accelerating effect of sin has wrought a terrible price upon the earth and its inhabitants (see Rom. 5:12; 8:20ff).

Catastrophism and the Fossil Graveyards

It has been estimated that some 70% of the earth's strata are sedimentary (water-laid). This explains, in large part, why so many fossils have been preserved in the recesses of our planet. When a plant or animal dies, usually it is eaten by some other creature, or else it decays. "Only those [plants or animals] buried quickly and protected from decay can become fossils" (Welles, 364). Here is where the Genesis narrative and the evolution theory again come into serious conflict. As we noted earlier, Darwin's doctrine is based upon the doctrine of *Uniformitarianism,* that is, the *slow* processes now at work, according to evolutionary geologists, can "account for all the geologic features of the Globe" (Dunbar, 18).

But the truth is, the "biography of the earth" does not suggest that the fossils were laid down ever so slowly over vast periods of time. There

are fossil graveyards in many areas of the world which contain the preserved remains of all sorts of creatures, wildly thrown together in massive burial sites, and quite obviously interred very quickly. Moreover, they are grossly distorted, suggesting that they died rather violently. In his book, *The Fundamentals of Geology,* George Price has an entire chapter titled, "Graveyards," in which he documents these extensive fossil burial grounds — *worldwide* — which argue for rapid burial.

No Structural Change

When one compares the creatures of the fossil record, with their living counterparts, one fact stands out clear. Though there has been some degeneracy (see above), the structural composition is the same. George Simpson cites a couple of examples: "The little sea shell *Lingula* is amazingly like its Ordovician ancestor of 400,000,000 years or so ago, and an oyster of 200,000,000 years in the past would look perfectly familiar if served in a restaurant today" (1949, 192).

A Summary

Perhaps a brief summary, highlighting the contrasts between the evolutionary "explanation" of the earth's features, and that suggested in the Bible, would be helpful. Think about the following points.

(1) The "sudden appearance" of life forms in the geologic record is better explained in terms of creation than by the "gradualistic" evolutionary view.

(2) The universal "complexity" of creatures entombed in the fossil record is more consistent with the concept of intelligent creation, than the attempt to explain complex design by an accidental, blind, and progressive evolution.

(3) The "gaps" between the different "kinds" of plants and animals (both living and fossilized) argue more for special creation in categories of "kinds," than for gradualistic evolution.

(4) The progressive degeneration of earth's inhabitants is more in harmony with Scripture (the Edenic curse) than it is with the notion that creatures become more "fit" through the process of natural selection.

(5) The fact that ancient fossil creatures are identical in structure to their modern counterparts argues for the universal tendency of the stability of "kinds" (as stated in Genesis), rather than the transformation of life forms, as suggested by Darwinism.

(6) The massive "fossil graveyards" are more consistent with the biblical narrative (the Flood) than with the evolutionary notion of uniformitarianism.

Conclusion

A careful and honest survey of the geologic record can lead to only one conclusion. The findings of true geologic science are far more supportive of the Bible than they are the theory of evolution. This is simply beyond dispute. As Dr. Louis T. More, professor of physics at the University of Cincinnati (and an evolutionist), said a few years back in a series of

lectures at Princeton University,

> "The more one studies paleontology, the more certain one becomes that evolution is based upon faith alone . . ." (160).

Questions

1. Explain why some unsupported "theories" linger on longer than others.
2. Name and describe the two fundamental views of earth history.
3. What is the standard by which the "geologic timetable" has been arranged?
4. Why is the "explosion of life" in the (so-called) "earliest" stratum such a "mystery" for the evolutionist?
5. If organisms started out very "simple," and gradually evolved into "complex" forms, what would the geologist anticipate finding in the fossil record?
6. Do the major "gaps" in the fossil-laden strata better accord with the idea of *gradual* evolution, or creation according to "kinds"?
7. According to scientists who study the fossils, about what percentage of all earth's past creatures have become extinct?
8. How is the phenomenon of "degeneration" inconsistent with the evolutionary concept of "survival of the fittest"?
9. Do the vast fossil graveyards harmonize better with the catastrophism of the biblical Flood, or with the "gradualism" of Darwin's theory?

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Chapter 9

The Amazing Human Mind

In previous chapters, we have discussed the relationship of the Bible to some of the physical sciences. Now, at least for a while, we will move into a broader area of "science" — one more abstract — which deals with the "mind" of man.

Atheism contends that man is wholly mortal; he has no "spirit" essence. But that view is not supported by the best evidence. There is more to the human being than flesh, bone, and blood. If, then, we are in a genuine quest for "knowledge" about the "science" of mankind, the "mental" or "spiritual" side of our make-up must be addressed.

The Genesis record affirms that humanity was made in the "image" of God (1:26-27). That this has no reference to a *physical* image is apparent from the fact that God is not a physical being. As to His nature, He is spirit (Jn. 4:24), and spirit is of an entirely different "essence" than flesh, bones, and blood (Lk. 24:39; Mt. 16:17; cf. Hos. 11:9). Man's reflection of Jehovah's "image," therefore, must have to do with another aspect of His makeup. Obviously, it is the human mind (soul, spirit) that has been fashioned in the divine likeness.

Man's "mind" is that part of him which has self-awareness, which contemplates, reflects, purposes, understands, and evaluates. "Mind" has to do with our intellect and emotions. It is an interesting fact that some eighteen different words in the Greek New Testament are employed to

depict different aspects of the human mind. Human beings have "mind;" animals do not.

The Amazing Mind

Think about your mind for a moment. (And we humans are the only ones who ever ponder our minds. The ape doesn't!) The "mind" operates through the brain, as an instrument. The brain houses the mind. A corpse has a brain, but no mind. So far as one's earthly existence is concerned, there is a close relationship between the brain and the mind. We must, therefore, reflect again upon some of the wonders of the human brain.

Your brain, according to the late Isaac Asimov (an atheist), is "the most complex and orderly arrangement of matter in the universe" (10). Dr. Robert Jastrow (an agnostic) authored a book titled, *The Enchanted Loom: Mind in the Universe.* In this volume he compared the memory capacity of the human brain to a computer. He suggested that if scientists were to construct a computer comparable to the human brain, it would require half the electrical output of Grand Coulee Dam to operate it, take most of the Empire State Building to house it, and would cost $10 billion to build. Still, it "would be only a clumsy imitation of the human brain" (142-43).

In his book, *Broca's Brain*, noted atheist Carl Sagan compared the human brain to a vast library containing some twenty million volumes, comparable to the world's largest libraries (275). These skeptics had one thing in common — they each believed the marvelous mind of man is but an evolutionary accident, a freak occurrence in nature. Prominent evolu-

tionist Loren Eiseley described the matter in the following language:

> "For three billion years, until an ageless watcher might have turned away in weariness, nothing had moved but the slime and its creations. In all that prehuman world there had been no animal capable of looking back or forward. No living creature had wept above another's grave. There had been nothing to comprehend the whole . . . . At the end of that time there occurred a small soundless explosion . . . in a little packet of gray matter that quite suddenly appears to have begun to multiply in the thick-walled cranium of a ground dwelling ape" (quoted by Miller & Goode, 271).

If anyone spun that sort of "yarn" (the "little bang" theory) in attempting to explain the origin of the computer, he would be laughed out of court. But in the halls of "evolutionary science," anything can pass muster.

The Dimensions of Memory

No one really has plumbed the depths of the capability and the capacity of the amazing human mind. One scholar, who has made a special study of the brain, says:

> "The dimensions of human memory have never been measured, but rough estimates indicate the general capacity of the brain's storehouses . . . . During your lifetime you can store about ten times more information than is contained in the nine million volumes of the Library of Congress" (Pfeiffer, 85).

It has been said that if one memorized material twenty-four hours a day for his entire life, he would not exhaust the phenomenal storage reservoir of the mind. History has provided us with some remarkable examples of the mind's prowess. The following unusual cases are cited from Webster's chapter, "The Mystery of Memory" (93-106).

Wolfgang Mozart once memorized an entire musical score after hearing it only once; later, he precisely reproduced it on paper. A man named

Robert H. Nutt, from North Carolina, could be introduced successively to 200 people and then walk among them, calling each by name.

Chess is a particularly complex game. It is said that the first ten moves by each player in a chess match can be made in more than 169,500,000,000,000, 000,000,000,000,000 different moves. In 1941, Gideon Shahlberg played 400 games simultaneously; after a grueling 36-hour contest, he had 364 wins, 14 ties, and 22 losses. Salo Finkelstein was a "human calculator." He could add columns of four figures faster than could be done on an adding machine.

The Conscious and Subconscious

Most of the things we do on a given day we do not even consciously think about. When you get up in the morning, you give little, if any, concentration to brushing your teeth, shaving, or applying makeup. Most of the time when we are driving our automobiles, we are doing *automatically* several activities at the same time. Some have said that a person really concentrates on what he is doing about one minute out of each hour; most things we do simply by rote memory.

The mind seems to have the strange and unique ability of being able to take in vast stores of information, some of which is assembled for ready use, but much of which is stored on "back shelves" to be used later if needed. Authorities suggest that most of that which invades our brain via the senses is "forgotten" (some say as much as 90%). It has been shown, however, that much of what we think we've forgotten, actually is recorded

somewhere in the inner recesses of the mind.

As virtually everyone knows, there are experiences (memories) stored away in the mind, of which we have not been conscious for decades. How many times has a smell, a song, or some scene triggered a long-forgotten memory from childhood. If asked, most of us could recall what "Little Miss Muffit" sat on, and what "Jack Sprat" could not eat, though we've not heard these rhymes in eons! A scientist at the University of Vermont put several adult subjects under hypnosis. When these people were asked on what day of the week certain childhood birthdays or Christmases fell, they could clearly recall them. Electrical stimulation of the brain can also cause certain latent memories, seemingly long forgotten, to emerge. Two evolutionists have unwittingly given tribute to this element of divine creation: "There is nothing in the world, natural or man-made, that matches the human memory" (Miller & Goode, 294).

The Blessing of Forgetting

Perhaps we don't think about it as much, but the ability to "forget" is as great a blessing as "remembering." Suppose that everything you ever had learned was right in the forefront of your attention. You simply would not be able to function under that condition. What if the mechanic was forced to think about everything he knew about automobiles each time he saw a car? What if, each time you did a math problem, every step of learning mathematics came roaring back into your consciousness? Many of the facts and concepts recorded in the brain, therefore, are sort of "filed away"

because we do not need them immediately; more urgent matters solicit our attention. The mind has a wonderful "sorting" mechanism.

Too, think of the emotional benefits of being able to forget. What would it be like if each physical pain (and pain is a brain sensation), or each heartache, remained as vivid as the moment you first experienced it? One could not be sane under such a circumstance. While we extol the virtue of memory, we must not forget to be thankful that we can forget!

Spiritual Lessons

The consultation of a Bible concordance will reveal that there are numerous sacred passages which mention remembering, or its equivalent — not forgetting. Let us consider some of these (and this by no means exhausts the list).

(1) Human beings are admonished to remember God. We are to remember that He is our Creator (Eccl. 12:1), and that He has gloriously manifested Himself in a myriad of ways. "Seek Jehovah and his strength; seek his face evermore. Remember his marvelous works that he has done, his wonders and the judgments of his mouth" (Psa. 105:4-5).

(2) Truly remembering God means humbly submitting to His plan for your life. Moses wrote: "Beware lest you forget Jehovah your God, in not keeping his commandments, and his ordinances, and his statutes, which I command you this day" (Dt. 8:11). This corresponds with a blunt New Testament warning: "He who says, I know him [God], and keeps not his commandments, is a liar, and the truth is not in him" (1 Jn. 2:4).

(3) There is a standard of conduct that the Lord expects even of nations. "Righteousness exalts a nation; but sin is a reproach to any people" (Prov. 14:34). When a nation abandons principles of justice, God will judge it. "The wicked shall be turned back unto Sheol, even all the nations that forget God" (Psa. 9:17). When arrogant nations forget God, He remembers them! Of the vile kingdom of Israel, a prophet, speaking for Jehovah, said: "And they consider not in their hearts that I remember all their wickedness . . ." (Hos. 7:2). [Note: The Creator's dealings with humans are frequently described figuratively, in terms of divine "forgetting" and "remembering." This is a form of "anthropomorphism," symbolically depicting deity in human terms.]

(4) It has been said that those who do not remember the lessons (mistakes) of history are destined to repeat them. That surely is why the Lord repeatedly admonished Israel to reflect back on how He had delivered them when they were obedient to His will. When the children of Israel left the land of bondage, Moses enjoined:

> "Remember this day, in which you came out from Egypt, out of the house of bondage; for by strength of hand Jehovah brought you out from this place . . ." (Ex. 13:3).

The apostle Peter dealt with a group of materialistic mockers who denied that Christ would return to judge the world. Their argument was this: The natural order of things has been uninterrupted for centuries. Thus, one may assume that no judgment is forthcoming. To this shallow conclusion the apostle responded: "For this they wilfully forget [sometimes it's called "suppression"!] . . . ." He then cites the case of the universal

flood in Noah's day (2 Pet. 3:5ff).

(5) Jeremiah, on behalf of the Lord, once inquired of rebellious Judah: "Can a virgin forget her ornaments, or a bride her attire? Yet my people have forgotten me days without number" (Jer. 2:32). It is a realistic truth that we are inclined to remember those things for which we have a genuine interest. Some can remember countless baseball statistics, but they cannot remember the names of the books of the Bible or the simple components of the plan of redemption.

(6) The Bible indicates that memory will be a part of the after-death experience. When the rich man of Luke 16:19ff passed from the scenes of this earth, he pled for relief from his torment. He was told, however: "Son, remember that in your lifetime . . ." (25). In the altar vision of Revelation 6, John heard the martyrs inquiring regarding the fate of their earthly brethren, recalling their unjust suffering. Earth's events had not fled their memories.

(7) Those who have surrendered to the conditions of the "new birth" (Jn. 3:3-5), and thus have refreshed their souls in the blessings of the "in Christ" relationship, have to learn to forget some things that are behind them. Paul the apostle wrote: ". . . forgetting the things which are behind, and stretching forward to the things which are before, I press on toward the goal unto the prize of the high calling of God in Christ Jesus" (Phil. 3: 13-14). We must forget past accomplishments (cf. 3:7-8; cf. Ezek. 18:24) and live each day vigorously in the service of the Lord. We should attempt to forget the blunders we have made — God has (Jer. 31:34).

(8) Some, who once served the Savior with dedication, have lapsed into a spiritual coma. Such was the state of the church in Ephesus when Jesus addressed it with a rebuke. "Remember therefore from where you have fallen, and repent and do the first works . . ." (Rev. 2:5).

(9) The weekly communion supper on the Lord's day is one of the great institutions of Christianity. The design of this rite, at least in part, is to stimulate memory. Jesus said: "This do in remembrance of me" (Lk. 22:19). What a tragedy it is that so many neglect this sacred memorial for the most trivial of reasons (e.g., weekend recreational activities, family outings, etc.).

(10) How comforting it is to know that "God is not unrighteous to forget [our] work and the love [we] show toward his name" (Heb. 6:10). We may be assured that the Lord will keep all His promises to us.

Both "remembering" and "forgetting" are valuable abilities. But we must learn to distinguish between them. Remembering the wrong things, and forgetting the right ones, can be dangerous indeed. Let us thank the Creator for our amazing minds, and attempt to use them wisely to His everlasting glory.

Questions

1. How can a study of the "mind" of man be classified as "science"?
2. What is the significance of the statement that man is made in the "image" of God?
3. Discuss the difference between animal "instinct" and human "thinking."
4. Comment on Robert Jastrow's comparison of the human brain to the mechanical computer.
5. Discuss Loren Eiseley's description of how the human intellect got "jump-started."
6. Cite several examples of amazing memory feats.

7. Cite some examples of subconscious data that are "stored" in the brain.
8. Describe some of the emotional benefits of being able to "file" memories in the "back room" of the mind.
9. How can God be described as "remembering" and "forgetting"?
10. How can "remembering" the gracious acts of God be a motivation for godly living?

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Chapter 12

The Bible and Archaeology

In the 18th year of his administration (c. 621 B.C.), Josiah, king of Judah, was having repairs done on the ancient Jewish temple in Jerusalem. During the task a most important discovery was made. A copy of the "book of the law" was found in the ruins. When this text of God's word was shown to be in glaring contrast with the practices of the day, the young king initiated a reform that had an important, if only temporary, effect (2 Chron. 34:14ff). Though this was not a formal archaeological "find;" nonetheless, it reveals how a discovery from the past can impact the future.

As a science, "archaeology" is still relatively young — about two centuries old. But thrilling discoveries have been made that continue to draw attention to the sacred writings, collectively known as the Bible.

"Archaeology" derives from *archaeios* (ancient), and *logos* (study); hence, this discipline is a "study of the ancient." This science involves the investigation of ancient sites, buildings, tools, and other objects, as a way of learning about man's history.

The Past Considered; the Process Pursued

Ancient civilization is a story of decay and destruction. Cities were destroyed by invading armies. New communities were built upon the ruins of the old, until, in many cases, several levels of occupation were

layered, one on top of the other. The archaeologist probes down through these strata looking for treasures of antiquity.

In making these explorations, a variety of scientific studies may be a part of the process. The zoologist could be needed to identify bones, the botanist will study the remains of seeds or plants to determine food sources or clothing fibers, while the mineralogist may be sought for metal analysis. Language experts will be needed, of course, to decipher ancient texts. It really is a rather complicated process.

The Vast Range of Evidence

A number of dramatic archaeological discoveries have been made since the early 1800's. More than half a million cuneiform (tiny, wedge-shaped letters) clay tablets have been found in the region extending to the east of the Mediterranean Sea. Hundreds of inscriptions have been discovered in Asia Minor and Europe. Papyri (ancient "paper" made from the papyrus plant) manuscripts have been uncovered in Palestine and in Egypt. The amount of material has been staggering — and there is more to come. It is estimated that of the 5,000 possible sites for excavation in Palestine alone, less than 200 have been explored. Of the several hundred thousand clay tablets that lie collecting dust in museum basements, only about 10% have yet been translated (Yamauchi, 155).

The importance of archaeological study has been manifold. (1) This science has aided us in locating many biblical locations that were once lost in the obscurity of antiquity. (2) Archaeological study has thrown a

floodlight on the customs of the biblical world, thus illuminating many scripture texts. (3) The meanings of many of the biblical words have been clarified by their use in ancient documents. (4) Archaeological investigation has helped with establishing biblical chronology, and the relationship of the Scriptures to secular history. (5) Archaeology has enhanced our confidence in the accuracy of the biblical records, supporting their claims of divine inspiration. The charges of the critics have been increasingly silenced.

Some Important Discoveries

We have space in this brief chapter for only a few references to some of the remarkable discoveries that have been made during the past two centuries.

(1) In 1843, French explorer Paul Botta discovered Khorsabad (in Assyria). The palace of Sargon II, the conqueror of Samaria and destroyer of the kingdom of Israel, was uncovered. When fully excavated, the ruins of the palace compound covered an area of 25 acres. Two years later, Henry Layard, an English archaeologist, uncovered Nineveh. Its walls were 32 feet thick and 76 feet high. The remains of Ashurbanipal's library were found. He was the grandson of Sennacherib, who is mentioned in the Old Testament (2 Kgs. 18; Isa. 36). This depository of data contained fragments of some 26,000 clay tablets, including historic, scientific, and religious literature (Pfeiffer, 101).

(2) Between 1925 and 1931, some 20,000 tablets were exhumed in

northern Iraq (at Nuzi). These Babylonian documents provided information about the culture in 15th-14th centuries B.C. They greatly support the historicity of the patriarchal period in Genesis, as D.J. Wiseman of the University of London has shown (Douglas, 69).

(3) At Mari, in southeast Syria, some 20,000 clay tablets were discovered between 1933 and 1960. They date to the 18th century B.C., and are in a Semitic dialect that is "virtually identical" to that spoken by the Hebrew patriarchs.

(4) Beginning in 1947, in the region just west of the Dead Sea, some 500 documents, collectively known as the Dead Sea Scrolls, were found. They contain both biblical and non-biblical writings. About 100 of the scrolls are Old Testament books, written in Hebrew. At least portions of all Old Testament books (except Esther) were found. This was one of the most significant archaeological discoveries ever made. This discovery, which pushed our knowledge of the Old Testament text back about 1,000 years earlier than copies previously possessed, established how very accurately the sacred Scriptures had been transmitted across the centuries.

(5) Since 1929 there have been intermittent excavations at Ras Shamra (on the Syrian coast opposite Cyprus). Several hundred texts were uncovered which shed an amazing amount of light on the Canaanite religion in the 15th-14th centuries before Christ. A study of these texts has demonstrated that the earlier liberal claims, that Israel's religion was borrowed from the Canaanites, was utterly false. One scholar says that the Ras Shamra evidence reveals that Canaanite mythology and Israelite theology

"are as far apart as east and west" (Kelso, 1444).

For a more extensive discussion of these, and other fascinating discoveries, see our book, *Biblical Studies in the Light of Archaeology*. Let us now give consideration to some of the contributions that the science of archaeology has made to the study of the Holy Scriptures.

Chronology

One of the benefits of archaeological study has been the correlation of Bible events with secular history, thus establishing the historical context of certain biblical records. One example from the New Testament relates to Paul's labor in Corinth. According to Luke's record, the Jews in Corinth rose up against Paul and brought him before Gallio's judgment seat (Acts 18:12). Near the commencement of this century, in the city of Delphi (on the northern side of the Gulf of Corinth, six miles inland), a mutilated inscription was discovered that mentions Gallio (with his official title, "proconsul"), and dates the time of his administration. Based upon this information, and that in Acts, scholars argue with fairly strong confidence that the apostle arrived in Corinth in about December of A.D. 49 (Finegan, 282).

Obscure Passages

For years Bible students were puzzled about the meaning of some obscure passages in the divine Book. Sometimes they had to simply guess at the meanings, since there was no parallel information to illuminate the

enigmatic texts. Happily, though, archaeological enlightenment has been of some assistance.

At the age of 120 years, it was said of Moses that "his eye was not dim, nor his natural force abated" (Dt. 34:7). But what does the expression "natural force" mean? Since the Hebrew term was similar to a word for "jaw," some (e.g., Jerome) assumed the prophet's teeth was the focus of the passage. In the Ras Shamra tablets, though, the word was twice used of manly vigor (Free, 62).

The point is this: Moses' death was due to his disobedience in the wilderness, and not because he was a worn-out old man who just could not go on. The passage stresses the importance of being obedient to Jehovah.

Historical Accuracy

If the Bible is the inspired word of God, one has every right to expect it to be accurate in its historical information. Down through the years, though, unfriendly critics have been quick and sharp in criticizing the sacred narrative. It has been alleged on numerous occasions that the Bible is characterized by historical blunders. The patient work of the archaeologist, however, has evaporated these charges like mist in the morning sun. Several of these examples of "mistakes" will now be cited.

(1) While the patriarch Abraham sojourned in Egypt, he was given "camels" by the ruling Pharaoh (Gen. 12:16). Camels are also mentioned as some of the victims of one of the plagues visited upon the Egyptians during the days of Moses. Liberals once classified these references as "obvi-

ous error." As a consequence of archaeological studies, it is now known that the camel was present in Egypt as early as 3,000 B.C. — centuries before the time of Abraham, as Professor Kenneth Kitchen has clearly shown (Douglas, 182).

(2) The first mention of "writing" in the Bible is in Exodus 17:14. Numerous other references follow this one. Again, hostile critics charged that no alphabetic script existed in the days of Moses — in spite of the fact that Jesus referred to Moses' "writings" (Jn. 5:46-47). T.K. Cheyne contended that the Tora (law) was not written until 1,000 years *after* Moses (II.2055). No one would dream of making that statement today. The fact is, samples of a Proto-Semitic alphabet have been found in the Sinaitic Peninsula that date back centuries before Moses (see Finegan, 126).

(3) For some time, skeptics have questioned the historicity of David, Israel's greatest king. A writer in *The Anchor Bible Dictionary* says that "many scholars are skeptical about the possibility of ever recovering a true picture of the 'historical' David" (in: Freedman, 2:48). But astounding archaeological data, confirming the biblical narrative, have come to light in recent years. David's name, on an inscription dating to the 9th century B.C., has been found near the city of Dan (close to the source of the Jordan River). Dr. Bryant Wood calls this "one of the most important discoveries in the annals of Biblical archaeology" (121).

(4) Isaiah tells of Sargon, king of Assyria, sending his forces against Ashdod (a Philistine city in SW Palestine) (Isa. 20:1). Prior to the year 1843, Sargon's name was not found in any piece of ancient literature

— save Isaiah's record. And so, in typical fashion, Isaiah was charged with an historical error. In the aforementioned year, however, P.E. Botta discovered Sargon's palace about a dozen miles north of Nineveh. The prophet Isaiah was thus fully vindicated.

(5) Liberal critics of the Bible have frequently alleged that Acts is not a reliable document from the standpoint of history. F.C. Baur (1792-1860) of Germany popularized this view more than a century ago. This notion, however, has been thoroughly discredited.

Sir William Ramsay (1851-1939), a British scholar, initially questioned the historicity of Acts, but after years of literally digging up the evidence in archaeological explorations, Ramsay became convinced that Acts was so remarkably accurate in its details, that the whole of it must be considered trustworthy.

In one of his famous books, he honestly admitted his earlier skepticism:

> "I had read a good deal of modern criticism about the book, and dutifully accepted the current opinion that it was written during the second half of the second century by an author who wished to influence the minds of people in his own time by a highly wrought and imaginative description of the early Church. His object was not to present a trustworthy picture of facts in the period about A.D. 50, but to produce a certain effect on his own time by setting forth a carefully coloured account of events and persons of that older period. He wrote for his contemporaries, not for truth" (37-38).

After much investigation, though, Ramsay continued:

> "The present writer takes the view that Luke's history is unsurpassed in respect of its trustworthiness. At this point we are describing what reasons and arguments changed the mind of one who began under the impression that the history was written long after the events and that it was untrustworthy as a whole" (81).

J.B. Lightfoot (1828-1889) was one of the greatest scholars of his day.

Fluent in seven languages, he made vast contributions to the literature of the New Testament. In one of his works defending the supernatural character of the New Testament, he said of the book of Acts: ". . . [N]o ancient work affords so many tests of veracity; for no other has such numerous points of contact in all directions with contemporary history, politics, and topography, whether Jewish, Greek, or Roman" (19-20).

In more recent times, Henry J. Cadbury, the liberal scholar of Harvard University, authored a volume titled, *The Book of Acts In History*, in which he introduced many examples of the amazing accuracy of Luke's second letter to Theophilus.

Luke records an abundance of details, and this allows the careful student to check the ancient historian for credibility. For instance, the physician-historian mentions thirty-two countries, fifty-four cities, and nine Mediterranean islands. In addition, he alludes to ninety-five different people, sixty-two of which are not mentioned by any other New Testament writer. Twenty-seven of these are unbelievers, chiefly civil or military officials (Metzger, 171-172). The book of Acts will definitely stand the test of historical examination.

The Integrity of the Biblical Text

Do we really know that the text of our English Bible is essentially that of the original Hebrew and Greek manuscripts? Yes indeed. Again, the science of archaeology has been a willing witness for the integrity of the biblical text.

Robert Dick Wilson was a renowned Bible scholar who taught at Princeton University. A master linguist (familiar with 45 languages), Professor Wilson spent 15 years carefully examining the Hebrew text of the Old Testament, comparing it with inscriptions taken from the ancient monuments (e.g., the names of rulers, etc.). He published the cream of his research in a book titled, *A Scientific Investigation of the Old Testament*. Here is what he concluded: ". . . [I]t is my endeavor to show from the evidence of manuscripts, versions, and the inscriptions, that we are scientifically certain that we have substantially the same text that was in the possession of Christ and the apostles and, so far as anybody knows, the same as that written by the original composers of the Old Testament documents" (8).

The same sort of compelling evidence exists for the New Testament as well. There are more than 5,000 Greek manuscripts (in part or in whole) of the New Testament text. Some of these extend to the very shadows of the first century. There are some 10,000 ancient translations from the Greek into other languages; some of these reach back to the 2nd and 3rd centuries A.D. Then there are hundreds of quotations from the New Testament in the writings of the Greek and Latin fathers. It has been said that the text of the New Testament could be reproduced almost entirely from these writings alone.

In fact, it has been shown that there is much greater credibility for the New Testament — though it has been in existence for nineteen centuries — than there is for the writings of William Shakespeare — produced just

four centuries ago (Hastings, 13)!

Conclusion

We are thankful indeed for the work of skilled archaeologists over the years. Though many of them today are far from being conscientious Bible believers, they have, nonetheless unwittingly assisted in enhancing our understanding of, and confidence in, the Holy Scriptures as the inspired word of God.

Truly, dead men have told tales!

Questions

1. Define "archaeology," and discuss what the goal of this branch of science is.
2. List several different scientific disciplines that may be needed as companions in the examination of archaeological data.
3. Discuss the range of evidence that has been explored thus far, and compare it with what is yet to be done.
4. List five values of pursuing the study of biblical archaeology.
5. Rehearse the findings at both Khorsabad and Nineveh. What is the significance of Nineveh in biblical history?
6. State a major importance of the Dead Sea scrolls find.
7. What is the importance of understanding the significance of Moses' health (Dt. 34:7) at the time of his death?
8. How did early critical claims — that writing was unknown in the time of Moses — reflect upon the integrity of Christ?
9. Discuss the significance of Botta's discovery of Sargon's palace.
10. What caused Sir William Ramsay to alter his views of Luke's credibility as an historian?
11. Cite some instances of Luke's careful details in the book of Acts.
12. Discuss the range of evidence for the integrity of the New Testament text.

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