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1

Science in the Bible

One of the most amazing evidences of the divine inspiration of the Bible is its scientific accuracy. There are many unexpected scientific truths that have lain hidden within its pages for thousands of years, only to be recognized and appreciated in recent times. These principles are not expressed in modern technical jargon, of course, but nevertheless are presented accurately and beautifully, indicating remarkable understanding of nature by these ancient authors far in advance of their “discovery” by modern scientists. Let us look at a few of these.

ASTRONOMY

Consider the field of astronomy, for example. Since ancient times, people have been fascinated by the stars, and many astronomers have tried to count them. Ptolemy counted 1,056. Tycho Brahe cataloged 777, and Johannes Kepler counted 1,005. The total number of stars visible to the naked eye is perhaps 4,000, counting all that are visible from every point on earth.

Yet the Bible had said that “the host of heaven cannot be

numbered” (Jeremiah 33:22), while also comparing “the sand which is upon the sea shore” to “the stars of the heaven” in multitude (Genesis 22:17). Before the invention of the telescope, this must have seemed like a serious scientific mistake in the Bible. Now, however, it must be recognized as a supernatural scientific insight. Astronomers estimate that there are at least 10^{26} stars (that is, a hundred-million-billion-billion stars), which reflects the same order of magnitude as the number of grains of sand on the earth. Truly, the stars cannot be numbered. If one could count 10 numbers per second, it would take him at least a thousand-million-billion years to count up to 10^{26} .

Look also at 1 Corinthians 15:41: “One star differeth from another star in glory.” This must also have once seemed like a mistake, since every star (except the sun) looks just like a point of light, even through a telescope. Now, of course, it is known that there are many different types of stars, and no two stars are alike.

As far as our solar system is concerned, consider Psalm 19, which is often cited as an example of the Bible’s “prescientific” perspective. In speaking of the sun, the psalmist says: “His going forth is from the end of the heaven, and his circuit unto the ends of it: and there is nothing hid from the heat thereof” (Psalm 19:6). It is claimed by critics that the writer of this verse must have believed in the unscientific notion that the sun revolves around the earth.

This claim is both unjust and unscientific itself, however. We still use words and phrases like “sunrise” and “sunset” simply because from our natural viewpoint, the sun does rise in the morning, move across the sky, and set in the evening. Navigators, surveyors, and astronomers commonly base their calculations on the assumption that the earth is the center of a great celestial sphere, along the surface of which, in ordered paths, move the sun, moon, planets, and stars. And as far as any practical usage is concerned, that is true. On this assump-

tion, courses can be plotted, positions can be determined, and scores of other practical applications can be made.

As a matter of fact, however, the words of the psalmist may be even more scientific than he could have known. Studies of modern galactic astronomy have indicated that the sun is indeed moving around a center in the Milky Way galaxy in a gigantic orbit that would require two million centuries to complete, even at the tremendous tangential speed of 600,000 miles per hour. Furthermore, it is well known that our own galaxy is moving with respect to other galaxies. The sun's circuit *is* from one end of the heavens to the other.

In fact, no one knows where the center of the universe is. For all we *know* to the contrary, it could even be the earth. Every object is moving with respect to this unknown center, so that all motions must be measured in terms of "relative" motion, measured with respect to some *assumed* point of zero motion. This arbitrary reference point normally should be the point that makes the calculation easiest; and, in most cases, that would be on the earth's surface at the location of the observer. Consequently, the psalmist—instead of using prescientific language—was using the *most* scientific language he *could* have used in describing the motion of the sun relative to the earth.

It is wonderful to realize that the great Astronomer and Mathematician who created the heavens, setting all the stars and galaxies in their appointed courses and who "callesth them all by their names" (Psalm 147:4), is the same loving God who calls you and me to eternal life in Jesus Christ.

GEOPHYSICS

The science of geophysics ("physics of the earth") deals with the earth's shape, structure, and force systems. In this field also the biblical perspective is surprisingly modern.

It has been only a few centuries since the scientists and teachers all believed in a flat earth, and those intellectuals may

well have thought the Bible was unscientific when it described a spherical earth. Isaiah, speaking of God, said: "It is he that sitteth upon the circle of the earth" (Isaiah 40:22). The word translated "circle" is the Hebrew *khug*, a more exact connotation of which is "sphericity" or "roundness." It is also used in Proverbs 8:27: "He set a compass upon the face of the depth [or 'deep']." The same word is here translated "compass," referring to the surface of the ocean taking on a spherical shape (the so-called "sea level") when God created it.

Today, of course, scientists all agree with the Bible in its teaching of a round earth. Sometimes critics claim that the Bible teaches a flat earth, but there is no such verse in the Bible.

Consider also Job 26:7: "[God] . . . hangeth the earth upon nothing." This is another example of twentieth-century science in the Bible. Even the existence of the hypothetical space substance called *ether* is rejected by most physicists and astronomers today. The force called gravity is invoked to account for the earth's affinity to the sun, but that doesn't *explain* anything, since no one knows what gravity is or why it works. How such a mysterious "action at a distance" could keep the earth attached to the sun, 93 million miles away, is quite unknown. There is no better explanation than that of Scripture: "He . . . hangeth the earth upon nothing."

HYDROLOGY

The field of hydrology ("science of water") is one with many biblical contacts, because of the major importance of water in the life of mankind. The most important and fundamental principle of this field is the water cycle—the remarkable mechanism by which water vapor is condensed and precipitated as rain or snow, then drained off through the groundwater and river system into the ocean, from which it is raised into the skies by evaporation and carried back over the continents by great atmospheric wind circulations.

The water cycle and its accompanying global atmospheric circulation have only been demonstrated scientifically in recent centuries, but they were set forth in the Bible ages ago. There are many relevant Bible references, all of which are fully in accord with scientific concepts, but one passage is especially comprehensive. This is Ecclesiastes 1:6–7, set down by Solomon three thousand years ago: “The wind goeth toward the south, and turneth about unto the north; it whirleth about continually, and the wind returneth again according to his circuits. All the rivers run into the sea; yet the sea is not full; unto the place from whence the rivers come, thither they return again.” No wonder we speak of the wisdom of Solomon! This is a succinct yet comprehensive outline of the water cycle of the earth.

As an example of the many other references to one or another phase of the hydrologic cycle, look at the words of Elihu in Job 36:27–29: “For he draweth up the drops of water, which distil in rain from his vapor, which the skies pour down and drop upon man abundantly. Yea, can any understand the spreadings of the clouds, the thunderings of his pavilion?” (ASV*).

There is still much for man to learn concerning the details of the water cycle. Each phase of the cycle is absolutely necessary for life to exist on the earth and offers abundant testimony to its origin at the hands of an infinitely wise and beneficent Creator. With so many references in the Bible to water in all its aspects, it is significant that there are none that conflict with modern hydrologic science.

BIOLOGY

The great truth revealed in Leviticus 17:11 and a number of other Scripture verses concerning the preeminent importance of blood in the biological mechanism was written thousands of years in advance of the discovery of the circulation of the blood

* *American Standard Version.*

by William Harvey in 1616: “For the life of the flesh is in the blood.”

Continuance of life is now known to depend upon the continued supply of oxygen, water, and food to the cells of the body. This essential function is accomplished in a marvelous manner by the blood as it circulates constantly throughout the body, year after year. The role of blood in combating disease-producing organisms and in repairing injured tissues is one of the most significant discoveries of medical science, and the use of blood transfusions as one of the most beneficial treatments for many medical needs further testifies to the supreme importance of the blood in the life of the flesh.

The Word of God was scientifically accurate in this great biological truth long before scientists discovered and elaborated it. Yet it was given primarily to teach an even greater spiritual truth—the necessity of the shedding of blood in sacrifice for the remission of sins. The blood, which is the channel of life, becomes also the carrier of disease and infection through the body when they gain the upper hand in the system. Physical life and death symbolize spiritual life and death, just as physical disease and injury symbolize the spiritual disease of sin.

As the infection of sin spreads throughout the soul, it will eventually, “when it is finished, bringeth forth death” (James 1:15), and this is spiritual death, eternal separation from God in hell. If spiritual life is to be created and maintained, it must come from outside. It must be life untainted with sin and containing the power to combat the sin-disease in the spiritually dying soul. Figuratively speaking, a blood transfusion is essential from a qualified donor whose blood possesses the purity and efficacy required for the cleansing and healing of the mortally sin-sick soul.

This is just a glimpse of the tremendous spiritual (and even biological) meaning in the biblical doctrine of substitutionary sacrifice. “Without shedding of blood is no remission” (Hebrews 9:22). This was the symbolism of the animal sacrifices in

the Mosaic law. Its ultimate fulfillment was in the sacrificial death of the Son of God for the sins of the world. Jesus said, "This is my blood of the new testament, which is shed for many for the remission of sins" (Matthew 26:28).

By virtue of the substitutionary death of the Lord Jesus Christ, each one who receives by faith His life—poured out unto death but raised up again by the power of God—receives forgiveness and cleansing of all sin and, in fact, receives Christ Himself. All this is portrayed by the shed blood of Christ. Christ said, "Whoso eateth my flesh, and drinketh my blood, hath eternal life; and I will raise him up at the last day. . . . He that eateth my flesh, and drinketh my blood, dwelleth in me, and I in him" (John 6:54, 56).

THE BASIC LAWS OF SCIENCE

Even more significant than the many specific facts of science in the Bible is the remarkable truth that the most universal principles of science are also there. These are the laws of energy conservation and deterioration. The law of energy conservation states that in a closed system, in any transformation of energy from one form of energy into another (and everything that happens involves such energy transformations), the total amount of energy in the system remains unchanged. No energy is either created or destroyed. A similar law is the law of mass conservation, which states that although matter may be changed in state, density, or form, its total mass is unchanged. In other words, these basic laws teach that no creation or destruction of matter or energy is now being accomplished anywhere in the physical universe. Since matter and energy are themselves interchangeable under certain conditions, the two laws can be combined into the principle that the total of mass-plus-energy is conserved.

These conservation laws were not demonstrated quantitatively by scientists until the nineteenth century. However, the

Bible has taught for thousands of years the same great truth—that genuine creation is no longer taking place, contrary to the evolutionary philosophy of continuing creation. For example, Hebrews 4:3 says, “The works were finished from the foundation of the world.” The account of creation concludes with the summary statement: “Thus the heavens and the earth were finished, and all the host of them. And on the seventh day God ended his work which he had made” (Genesis 2:1–2).

This law of mass-and-energy conservation, also known as the first law of thermodynamics, is generally recognized as the most important and basic law of science.

The second law of thermodynamics, almost as great in significance as the first, states the corollary principle of mass/energy deterioration. In any energy conversion, although the total amount of energy remains unchanged (Hebrews 1:3 says that Christ is “upholding all things by the word of his power”), the amount of usefulness and availability that the energy possesses is always decreased. This principle is also called the law of entropy increase; entropy being a sort of mathematical abstraction that is actually a measure of the nonavailability of the energy of a system.

Thus, in any isolated system (that is, a system from which all external sources of energy are shut off), the energy of the system is conserved in quantity but is continually being degraded in quality as long as any energy change is taking place in the system. Some of the available energy is always dissipated in nonrecoverable friction or heat energy. Since all activities of nature (including biological activities) involve such energy transfers, there must be an ever-decreasing supply of usable energy for maintaining all natural processes in the universe as a whole.

This law of entropy increase is responsible for the fact that no machine can be constructed to 100 percent efficiency and for the fact that a perpetual motion machine is impossible. Practically all the earth’s energy comes, or has come, from the sun, but most of the tremendous energy output of the sun is dissi-

pated in space in the form of unrecoverable heat energy. This prodigious waste of energy cannot last forever. Eventually, barring supernatural intervention, the sun must burn itself out, and then all activity on the earth must cease as well. The same principle applies to all the stars of the universe, so that the physical universe is, beyond any question, growing old, wearing out, and running down.

But this in turn means that the universe had a definite beginning. If it is growing old, it must once have been young; if it is wearing out, it must first have been new; if it is running down, it must originally have been “wound up.” In short, this law of energy degeneration conveys us inexorably back to the necessary truth of the existence of a Creator and a definite creation, which must have been taken place in the past but which, according to the conservation principle, is *not* continuing in the present.

Scripture frequently refers to this principle of universal deterioration. For example, “Of old hast thou laid the foundation of the earth: and the heavens are the work of thy hands. They shall perish, but thou shalt endure: yea, all of them shall wax old like a garment; as a vesture shalt thou change them, and they shall be changed: But thou art the same, and thy years shall have no end” (Psalm 102:25–27).

There are many other similar passages in the Bible (e.g., Romans 8:20–22). Thus, the Scriptures teach what science has only discovered in the past hundred years or so—namely, that in spite of an original completed creation, the universe is aging and heading inexorably toward ultimate physical death.

However, the Bible also reveals something that science could never predict: a future supernatural intervention of the Creator in His creation, destruction of the present system, and creation of a “new heaven and a new earth,” which “shall remain” and “wherein dwelleth righteousness” (Revelation 21:1; Isaiah 65:17; 66:22; 2 Peter 3:13).

MATTER AND ENERGY

An allied truth is also indicated in Scripture. That is the essential equivalence of matter and energy—one of the most important discoveries of twentieth-century science. According to the famous equation of Albert Einstein, energy is equal to matter multiplied by the square of the velocity of light. Thus, matter is essentially a manifestation of that form of energy known as atomic energy. The ultimate source of the tremendous energy locked in the atom is unknown and perhaps undiscoverable by science. The magnitude of this energy or power (where power is the *rate* of energy per unit of time), which maintains the terrific motions and forces associated with the various subatomic particles, is evident in the fantastic power released in atomic disintegrations. Thus, the ultimate nature of matter is power.

This basic principle of our nuclear age was suggested long ago in the proclamation of Hebrews 1:1–3, “God . . . hath in these last days spoken unto us by his Son, whom he hath appointed heir of all things, by whom also he made the worlds; who being the brightness of his glory, and the express image of his person, and upholding all things by the word of his power, when he had by himself purged our sins, sat down on the right hand of the Majesty on high.”

That is, *things* are upheld by *power*. And the source of that power is the Creator Himself, the Lord Jesus Christ. This same tremendous truth is taught in Colossians 1:17, “By him [Christ] all things consist.” The verb here is the Greek word from which we transliterate our English word *sustain* and could well be translated “hold together.”

In Hebrews 11:3 we find the following remarkable statement: “Through faith we understand that the worlds were framed by the word of God, so that things which are seen were not made of things which do appear.” The matter of the universe is not ultimately physical but is composed of something that is not

apparent. It was all “framed,” or formed, by the omnipotent word, not out of primeval matter in some chaotic form, but *ex nihilo*, “out of nothing,” except the power of God.

The Greek word for “worlds” in this verse is essentially *aeons*. It means “world-times,” or better, “space-times.” In this context, it anticipates the scientific concept of the cosmos as a *continuum* of space and time and matter.

Thus, not only is the material substance of the universe upheld by the divine Word; it was also called into existence by that same divine Word. It is significant that the marvelous faith chapter found in Hebrews 11 begins with such an eloquent assertion of the necessity of understanding—by faith—the fact of a primeval special creation. The foundation of all faith must be faith in genuine *ex nihilo* creation and in God (Christ) as personal Creator.

THE TRI-UNIVERSE

An amazing revelation of modern science is the fact that the physical universe is a *tri-universe*—a trinity of trinities—perfectly modeling the nature of the Triune God who made it. All true Christians believe in the doctrine of the Trinity: God is one God manifest in three divine Persons—Father, Son, and Holy Spirit. We do *not* believe in three gods (that would be polytheism) but *one* God. Yet each of the three distinct Persons is fully and eternally that one God.

How can that be? It seems impossible, and many people scoff at Christians’ trinitarian beliefs. It is contrary to sound mathematics, they say, for Christians to maintain that $1 + 1 + 1 = 1$ rather than 3. Since such a system is unscientific, they say, then neither the Son nor the Spirit can really be God.

However, the fact is that the universe itself manifests exactly the same type of triune character that the Bible attributes to God. In a very real way, “the invisible things of him from the creation of the world are clearly seen, being understood by

the things that are made, even his eternal power and Godhead” (Romans 1:20). That is, His “Godhead” is understood by “the things that are made,” having been “clearly seen” from the creation of the world.

The doctrine of the Trinity is nowhere set forth in the Bible as an explicit doctrine. It appears indirectly yet perfectly naturally as the Lord Jesus speaks of Himself, the Father, and the Holy Spirit. The logical order presented is: (1) God the Father—the unseen source and cause of all things, (2) God the Son—who tangibly reveals the Father to man and who executes the will of God, and (3) God the Holy Spirit—who is (like the Father) unseen and yet reveals the Son to men, especially through the holy Scriptures that He inspired, making real in the hearts and lives of men the experience of fellowship with the Son and the Father. This order, however, is not an order of importance or length of existence. All are equally eternal and equally God—one God. The Son is eternally the only begotten of the Father; the Spirit is eternally proceeding from the Father through the Son.

The remarkable fact is that these relationships are beautifully patterned in the physical universe. Everything in this universe can be understood as functioning as a continuum of space, matter, and time. Space is the invisible, omnipresent background of all things, manifesting itself always and everywhere in phenomena of matter and/or energy, which are then interpreted and experienced through time. These are analogous to the relationships in the Godhead between Father, Son, and Spirit; the one is a perfect model of the other.

Note that the universe is a tri-universe. It is not part space, part time, and part matter (that would be a triad) but *all* space, *all* time and *all* matter (where matter includes energy, with matter/energy permeating all space and time). This is a true trinity.

Furthermore, each component of this tri-universe is also a trinity. Space consists of three dimensions, each of which is

equally important and occupies all space. There could be no space—no reality—if there were only two dimensions. All dimensions are necessary, yet there is just one space, and each dimension comprises the whole of space. Note that to calculate the amount of a given space, one does not *add* its three dimensions but *multiplies* them. Analogously, the mathematics of the divine Trinity is not $1 + 1 + 1 = 1$ but rather $1 \times 1 \times 1 = 1$. Space is always identified in terms of one dimension but is only seen in two dimensions and experienced in three dimensions.

Similarly, time is one entity but can also be conceptualized as future, present, and past time. Each involves the whole of time, yet each is distinct—though each is meaningless without the other two. The future is the unseen, unexperienced source of time; the present is time being “seen,” or manifested; the past is time experienced but no longer seen. The unseen future becomes manifest in the present; the past proceeds from the future through the present into the realm of past experience. Again, the same interrelationships apply as for the Persons of the Godhead.

The central entity in the tri-universe is *matter*, which is essentially unseen energy manifesting itself in motion and experienced in various phenomena. These phenomena all occur in space through time. Unseen but omnipresent energy generates motion, the magnitude of which (velocity) is the ratio of the space to the time. Depending on the rates and types of motion, various phenomena (e.g., light, sound, texture, hardness) are experienced. For example, light energy generates light waves that are experienced in seeing light. It is always thus: unseen energy generating motion that is experienced in phenomena—this is matter, and each of its three components again comprises the whole.

Thus the physical universe is actually a trinity of trinities, a true tri-universe in the fullest sense. But this same remarkable phenomenon can be seen in the realm of human life as well.

The Bible says that men and women were created in God's image.

Note that each individual is a person with a body that can be physically heard, seen, and touched. But inside that body is the person's nature, which is unseen and yet is the source of all that he embodies. On the other hand, the person is known to others only through his personality, which is unseen and intangible, yet is the means by which he and his nature exert influence on others. Human life thus consists of three entities—nature, person, and personality—each of which pervades the whole of his life and yet is distinct from the other two. The nature is the unseen source, revealed and embodied in the person. The personality proceeds from the person, invisible yet influencing the lives of others in regard to the person. Nature, person, and personality (or, perhaps equivalently, soul, body, and spirit) thus constitute a true trinity, reflecting in minute detail the Triuneness of the God who created the human trinity.

This same three-in-one character seems to pervade everything in life. Every moral action consists of (1) the motive, (2) the act, and (3) the consequence and meaning. Similarly, all forms of thought or reason proceed logically from the universal to the particular to the relationship of the particular thing to other things. Everything that happens proceeds from the cause to the event to its effects—from the source to its manifestation to its meaning. Always the same types of interrelatedness and of triune wholeness in three exist everywhere.¹

Although these remarkable facts cannot be held to *prove* that the Creator of the universe and life is a Triune Being, it is difficult to conceive of any other cause that could account for such effects. If the universe is intelligible and the principle of cause and effect (no effect greater than its cause) really is valid

1. Many of these trinitarian relationships were first pointed out by Nathan Wood in his book *The Secret of the Universe* (1936), later reprinted under the title *The Trinity in the Universe* (Grand Rapids: Kregel, 1978).

(and all science is based on this assumption), then there is certainly overwhelming reason to believe in the Triune God of the Bible. The doctrine of the Trinity is not a logical absurdity, as some would claim, but a scientific living reality. God was manifested and revealed by and in His Son, who as a man was Jesus Christ. There can, therefore, be nothing in life more important for any individual than to become rightly related to this tri-universe and its Triune God. This means unreserved acceptance of the Lord Jesus Christ, for “in him dwelleth all the fulness of the Godhead bodily” (Colossians 2:9).

THE QUESTION OF MIRACLES

Most of the scientific “errors” that critics claim to have found in the Bible involve its alleged miracles. The virgin birth of Christ, for example, is rejected because it is said to be unscientific. His resurrection must have been a spiritual resurrection, because a bodily resurrection from the dead is scientifically impossible. In fact, it is claimed that real miracles never happen because they are scientifically impossible, so any report of a miracle must be mistaken or false according to naturalistic scientists and other skeptics.

But all such claims are beside the point. Miracles, indeed, are scientifically impossible—in fact, that is the very definition of a miracle. The question is not whether a miracle is possible but whether it happens. To deny that miracles are possible is to deny that God exists.

It is a question of evidence. Miracles are certainly possible, though they are bound to be rare since God’s created laws of nature are good laws, and He is not capricious. He will only intervene in His established laws if there is good reason to do so, in accordance with His great purposes in creation and redemption. In the case of the biblical miracles, there is always good reason for every miracle reported, as well as good evidence that they all really happened.

Since a miracle is, by definition, an event that sets aside or modifies one or more laws or processes of nature, it is helpful to remember that the two basic laws of science (i.e., known laws of nature) are the first and second laws of thermodynamics—the law of conservation and the law of deterioration discussed previously. The first says that in any isolated, natural system, the matter/energy of the system is neither created nor destroyed. The second says that the entropy (or disorganization) of the system must increase.

Therefore, any event in which the energy or matter or organization is suddenly increased in a isolated system would require an act of special creation and would be a miracle. Both the virgin birth and the resurrection are examples, as are Christ's multiplication of the loaves and fish, the handwriting on Belshazzar's wall, and many other biblical miracles. These are miracles of creation, or "Grade-A" miracles.

There is a second type of miracle—one that does not require the intervention of special creation in a natural process—but which does involve an unusual statistical deviation from the normal rate and circumstance at which the process functions. Every natural process is affected by many factors; a change in any one will change its rate or location or time of occurrence. Thus, every process operates statistically around an average—sometimes more, sometimes less. If a particular occurrence involves an unusual rate or time, it could be recognized as a miracle of providence, or a "Grade-B" miracle. An example would be the feeding of Elijah by the ravens; another would be the abnormal catch of fish by the disciples when the Lord told them to cast their nets.

If my count is reasonably correct, the Bible describes about 89 Grade-A miracles and about 127 Grade-B miracles.² The

2. Henry M. Morris, *The Biblical Basis for Modern Science* (Grand Rapids: Baker, 1984), pp. 75–101, 466–74. About sixteen satanic or demonic miracles are described in the Bible.

latter often involve the special agency of angels, who evidently have the knowledge and power to control the rate and timing of natural processes to some degree.

In any case, there is no scientific justification for anyone to doubt any of the miracles of the Bible. Each miracle can be defended both on the basis of need and actual evidence of the miracle. For example, let us consider two of the miracles that have been objects of the greatest skepticism.

JONAH'S WHALE

The record of Jonah and the whale has been difficult for many to believe. Some have claimed that no whale possesses a gullet large enough to admit a man. However, it is now known that the sperm whale, which inhabits the Mediterranean, is quite capable of swallowing an object much larger than a man, and the same is true of the whale shark and other great marine animals. Both the Hebrew and Greek words used in reference to Jonah's "whale" could actually apply to any great marine monster.

As a matter of fact, there have been in modern times a number of evidently well-verified instances of whales and sharks swallowing men alive and even one or two cases of men's actually surviving such an experience. Even if they are true, however, these cases are beside the point, since the Bible clearly sets forth Jonah's experience as a miracle. The great fish was both prepared by God and controlled by God throughout (Jonah 1:17; 2:10). The miracle may even have involved restoring Jonah to life after he had died (Jonah 2:6) and his soul gone to "hell" (Heb., *sheol*; Jonah 2:2), which is the place of departed spirits.

The question simply is, Is the story of Jonah history or merely an allegory (as liberals allege)? The account itself is presented as authentic history, detailing the conversion of multitudes of inhabitants of a real city—the great Assyrian city of

Nineveh (Jonah 3:5). Jonah is mentioned as a real prophet in 2 Kings 14:25, and the entire record of Jonah was accepted as historical by all ancient Jewish historians and commentators. It is hard to believe these could all have been mistaken, having been much closer geographically and chronologically to the events than the modern liberals are.

The compelling reason for accepting the record of Jonah as historical, of course, is because it was so accepted by the Lord Jesus Christ Himself. "The men of Nineveh," He said, "repented at the preaching of Jonas" (Luke 11:32). With respect to the miracle of the great fish, He said: "For as Jonas was three days and three nights in the whale's belly; so shall the Son of man be three days and three nights in the heart of the earth" (Matthew 12:40). Thus He appropriated Jonah's miraculous preservation and restoration as a type and prophecy of His own soon-coming death, burial, and bodily resurrection. It is far easier to believe in the story of Jonah and the whale than it is to believe that the Lord was either lying or mistaken. The evidences for His own resurrection, which will be discussed later in this book, are irrefutable, and there can be no legitimate doubt of the fact that He both knows the truth and tells the truth.

THE LONG DAY

Perhaps the most tremendous miracle recorded in the Bible, except for the resurrection of Christ and the original creation itself, is the long day of Joshua, described in Joshua 10:11-14. This incredible story tells that, in the battle between the Israelites and the Amorite confederation, "the Lord fought for Israel" (v. 14) by two related miracles: (1) causing the sun to stand still in the midst of heaven, so that it "hasted not to go down about a whole day" (v. 13) in order to give the children of Israel time to defeat the Amorites completely before they could escape and regroup under cover of darkness; and (2) sending a devastating hailstorm, which probably served the

twofold purpose of giving Joshua's army relief from the heat and of slaying large numbers of the enemy (Joshua 10:11).

Since the sun and moon both "stood still" for an extra day (note the discussion of relative motion on pp. 12-13), it seems clear that the earth stopped rotating on its axis, and the moon also stopped its motion about the earth. This might even mean that the entire solar system stopped its various motions for a day.

In any case, it was a mighty miracle, and even many Christians have been reluctant to accept it at face value. Some have suggested that there was a sort of prolonged "looming mirage" effect, or a lengthened and intensified atmospheric refraction of some kind that made the sun just *seem* to stay in the midst of the sky for a day. Others have said that God gave the Israelite army supernatural strength that enabled them to accomplish in one day what ordinarily would have required two days.

Such explanations would still require a Grade-A miracle of *some* kind, and they would have to be at the expense of accusing Joshua (and the Holy Spirit) of confusing the account of the miracle by using misleading language to describe it. It is far better to take God's words at face value. He is able to say what He means. A miracle is a miracle, and one is no more difficult than another for the Creator.

The question is not, Could it occur? but, Did it occur? What is the historical evidence? A related question would have to do with God's reason for causing such a tremendous interruption in His created laws for the solar system. Further, what was the significance of the accompanying hailstorm?

Another frequent objection is that if the earth suddenly stopped rotating on its axis, everything on the surface would be violently dislocated and probably destroyed. But why infer restrictions on God's ability to accomplish the miracle in whatever way would best fulfill His purpose? The Bible does not suggest that the stoppage was sudden. If an automobile traveling at high

speed is instantaneously stopped, great damage ensues to its occupants; but if it gradually slows down to a halt, they feel no disturbance.

It is true, of course, that when the earth was slowing down, the circulation of the atmosphere would be drastically affected, since it is controlled to a great extent by the earth's rotation. That fact may well account for the tremendous hailstorm that accompanied the miracle.

Furthermore, even though the account in Joshua doesn't mention it specifically, there are evidences that the land surfaces may indeed have been profoundly disturbed at this time. A vision of the prophet Habakkuk reflects back on the time that "the sun and moon stood still in their habitation," and in the context, Habakkuk also refers to such phenomena as: "the everlasting mountains were scattered"; "thou didst cleave the earth with rivers"; "the deep uttered his voice"; and others (Habakkuk 3:11, 6, 9, 10). The "hailstones" accompanying the long day may not have been the same as the "great stones from heaven" (Joshua 10:11) that also fell, since the word for "stones" in this case is normally used specifically for rocks.

In any case, the main question is whether a long day ever occurred in world history. Such an event was also recorded in an ancient book called "the book of Jasher" (Joshua 10:13). Apart from the biblical record, of course, such an event would now have to be preserved mainly in the form of semimythical recollections handed down in the folklore of various tribes and nations. Written records from that period (about 1400 B.C.) are scarce and fragmentary.

However, it is significant that suggestions of a long day (or long night, in the Western Hemisphere) are, indeed, noted in the mythologies of many peoples from various parts of the earth. So frequently do these occur, in fact, that atheists have even used that fact to argue that the Joshua account was based on such traditions. For example, T. W. Doane, in his book *Bible Myths* (New York: Truth Seeker, 1882, p. 91), describes

accounts of a long day or long night in the Orphic hymns and in the legends of the Hindus, the Buddhists, the Chinese, the ancient Mexicans, and others, and then strangely argues that that fact proves the biblical record to be merely a myth.

In a 1945 report to the Smithsonian Institution, M. W. Stirling notes that many American Indian tribes have a legend about the theft of the sun for a day. A similar legend is found among the Polynesians. The Greek legend of Phaeton, who disrupted the sun's course for a day, could easily have been derived from this event. The Greek historian Herodotus states that the priests of Egypt showed him records of such a day.

The widely publicized ideas of Immanuel Velikovsky should also be noted here. In this book *Worlds in Collision* (first published by Macmillan in 1950 and later by Doubleday, when a threatened boycott by the scientific establishment forced Macmillan to withdraw it), Dr. Velikovsky argued strongly for the historicity of Joshua's long day, supporting his case by an impressive list of testimonies from legends, inscriptions, and other ancient records from many places. He did not try to defend the Bible, since he himself was an atheist, but rather tried to explain the long day as having been caused by the gravitational and electromagnetic forces caused by a near-miss collision of the planet Venus with the earth at the time of Joshua. Other subsequent writers have tried to defend and extend similar ideas, including some Christian writers (e.g., Donald Patten, Ronald Hatch, and Loren Steinhauer in their book *The Long Day of Joshua and Six Other Catastrophes*, published by Baker in 1973).

Most scientists including myself feel that such an astral catastrophe is highly questionable and involves numerous difficulties if developed on a naturalistic premise. On the other hand, if God were going to use His miraculous power to produce the long day, it would certainly not be necessary to invoke Venus or some other astral body to do it for Him.

In any case, the question before us is simply: Did such an amazing event as the long day really happen? The answer, based on the statistical abundance of historical evidence, even ignoring the divinely inspired account in Scripture, has to be affirmative.

There have been some Christian writers who have argued that astronomical records have actually turned up a missing day in ancient history. Charles Totten in the nineteenth century maintained that this could be shown by counting backward from the present and forward from the date of creation (the latter being based on a chronology developed among the so-called British-Israelites, of which he was a leader), with their intersections showing a missing day of the week. In recent decades, some writers have alleged that the same result had been obtained by a NASA computer study (the latter, however, has never been documented and has been denied by NASA officials). Any such calculation would obviously have to be based on a known beginning point sometime earlier in history than the long day and, therefore, would involve one or more completely arbitrary assumptions. It is, therefore, quite unwise (as well as unnecessary) for Christians to cite this particular type of study as proof of the long day.

As far as God's reasons for such a miracle are concerned, the strategic importance of complete victory over the Amorites in Israel's conquest of Canaan is the basic reason. The success of Joshua's entire campaign depended on victory in this battle, and thus, also, the fulfillment of God's promises to the world through the nation of Israel. A second reason may well have been the fact that the Canaanites, the Egyptians, and other ancient peoples were all evolutionary pantheists who placed special emphasis on worshiping the sun as the source of all life and power on earth. It may have been that God chose to control the sun in such a way as to show all these nations that He, not the sun, was supreme. In that way, He both demonstrated the

futility of their cruel and immoral religious systems and the fact that He had commissioned the Israelites, who worshiped the true God of creation, to remove that false religion from His specially chosen land of witness.

CONCLUSION

There are many other miracles in the Bible, which space in a small book will not permit us to discuss. A careful analysis of each, however, would show that each is supported by both adequate theological justification and also by adequate historical evidence.

Furthermore, there are many more points of scientific contact with the Bible than we have been able to discuss here.³ In every case, the Bible can be shown to be scientifically accurate, often far in advance of its time.

There are, of course, two significant points of serious conflict between the biblical record and the standard position of the scientific establishment. These are the accounts in Genesis of the six-day period of special creation and the Noahic worldwide Flood, both of which are explicitly repudiated by most modern scientists and intellectuals. The truth is, however, that the facts of science support the Bible in these cases also, as will be shown in the next two chapters.

3. For an extensive discussion of all relevant fields of science in their relations to the Bible, please see my book *The Biblical Basis for Modern Science* (Grand Rapids: Baker, 1984).