

The Bible--Its History & Accuracy

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These materials demonstrate that the Bible is the historical and accurate Word of God, and that it does not run counter to valid science. To do this assumes, of course, that God does, in fact, exist. This preface provides a summary of the evidences for this assumption.

1. The History of the Bible. Page 3

The Bible is not merely a recent fabrication. In fact, it is the most well-attested historical document that exists. The Bible's history is unlike that of any other book. There are an number of evidences – both internal and external – that corroborate the historicity of the Bible.

2. The Accuracy of the Bible. Page 5

The Bible is not full of myths and errors. The miracles described in the Bible do not make it impossible to believe, but on the contrary, make it more believable.

Admittedly, there are some difficulties in the Bible, and these have been used over the centuries in attempts to discredit the Bible, but the critics have been proven wrong time and again. In fact, the scientific accuracy of the Bible despite its ancient origins provides ample demonstration of its accuracy and its divine authorship.

3. The Bible & Science. Page 7

There are a number of reputable scientists who do not believe in the Bible, because of their inconsistent and unscientific approach to the evidences for the supernatural. There are also many reputable scientists that *do* believe in the Bible as God's Word.

Rather than contradicting the Bible, true science repeatedly confirms what the Bible teaches. Faith in the Bible does not require one to abandon intellectual honesty. As a matter of fact, it is the only intellectual stance that coincides with all the evidence, and a Christian does not need to fear any new scientific inquiry or discovery.

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Preface--The Existence of God

1. Rational "Proofs."

- a. **Ontological.** Because we can conceive of a perfect being, and existence is necessary to perfection, a perfect being must exist.
- b. **Cosmological.** Every effect must have had a cause. At some point, there must be an uncaused cause.
- c. **Teleological.** The order & design evident in the universe implies that there must be a designer.
- d. **Moral.** Goodness and evil must be judged differently if life is to be fair or have ultimate meaning.
- e. **Ethnological.** Since a sense of the divine is universal in man, it must have been "built into" him.
- f. **Summary.** While these are not convincing in themselves, they demonstrate that belief in God is logically defensible, that intelligent people can believe in God.

2. "Godly" People.

- a. Someone you respect may tell you they "know" God. Further, they may credit God as their source of strength, to overcome their natural foibles and weaknesses.
- b. There are millions of people worldwide who also claim to have a relationship with God.
- c. **Summary.** Belief in God is not insanity. You don't have to "check your brains at the door" to believe in him.

3. World & Church History.

- a. Millions of people over thousands of years have believed in God. Many have suffered persecution or death in so doing.
- b. Societies with a general belief in God have generally been more civilized, more advanced, and more respectful of basic human rights, dignity and freedom.
- c. The survival of the Jewish nation matches Biblical predictions despite thousands of years of threats, and long odds.
- d. **Summary.** There is ample historical evidence that God blesses those nations that honor him.

4. Nature.

- a. The beauty and mysteries of nature still lead many to conclude that a God must have created it. They marvel at the vastness of the universe, the capacity of the human brain, the wonder of childbirth, the instincts of a simple animal.
- b. Modern scientific discoveries lead others to believe that God designed the black hole, the bottom quarks, the DNA code, the quantum leap, and the irreducibly complex cellular structure. It's a revived teleological argument.
- c. **Summary.** People are beginning to see the inherent contradiction between the theory of evolution and the basic scientific principle of entropy—that things left on their own decay and deteriorate—they don't increase in orderliness.

5. Conscience.

- a. All (sane) people have a moral sense of right and wrong. While they may not agree on all particulars, there are some minimum standards that transcend almost all people.
- b. Apart from God, how could you explain the universal feelings of motherly or brotherly love, altruism, guilt, or shame?
- c. **Summary.** Without God, who's to say that *anything* is wrong? By what standard can they do this? Does any government have a legitimate right to set laws?

6. Prayer.

- a. To pray is to communicate with God. In the process, we gain insights about ourselves, we draw strength, and we get to know him better.
- b. While not everything we ask for in prayer is granted, for many people, the repeated answers to prayer are too coincidental to be attributed to chance.
- c. **Summary.** Over time, prayerful interaction with God will lead you to a point where you could never doubt his existence again.

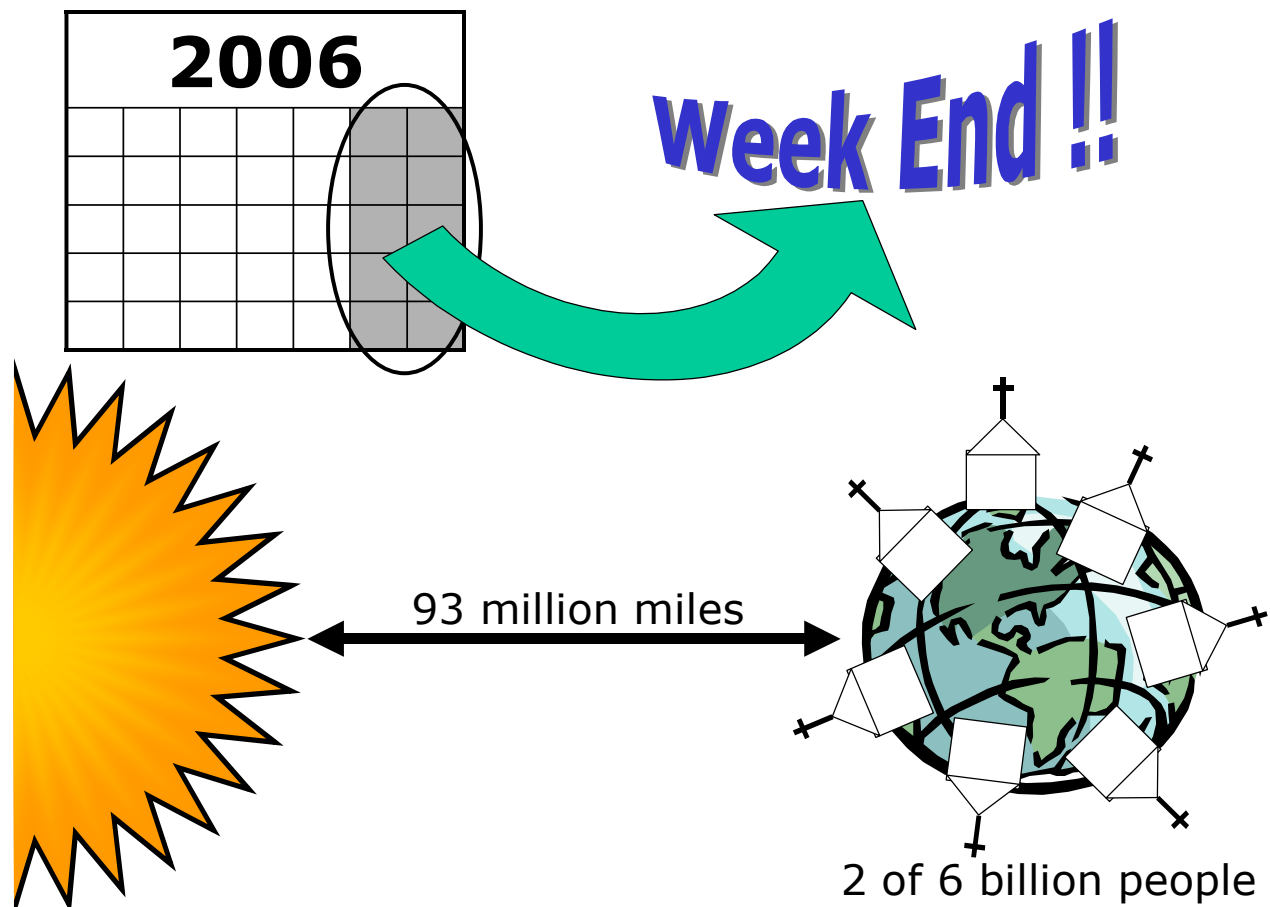
7. The Scriptures.

- a. **History.** The Bible has stood the test of time. While many have sought to discredit it, none have succeeded. Claiming to be the Word of God, it authenticates itself in these ways:
 - The Bible is rooted in history, giving names, dates, and places. Archeology and ancient studies verify its accuracy time and again.
 - 27% of the Bible was written as prophecy. These prophecies have never failed, though some are yet future.
 - Many men of the Scriptures performed miracles.
 - The miracle of Christ's resurrection is well substantiated by the witness of church history as well as other corroborating, historical evidence.
- b. **How it Reads.** If the Bible is the Word of God, it ought to read like it. It does! Try it. Many people have found God and turned their lives around just by reading God's Word.
- c. **Summary.** If you still doubt God's existence, start reading the Bible—not books about the Bible—but the Bible itself. You will not come away unaffected. But, be warned: You may be surprised at the God you meet. He may not be the God you expect him to be, or for that matter, the God you'd like him to be.

Overall Summary

The impersonal evidences (1-4 above) can buttress our belief in God and give us a general sense of what God is like. But to get to know him personally, we must learn from the Scriptures, and develop an ongoing relationship with him.

Simple Evidences for the Existence of God



1. Most of the world dates its calendar from the birth of Christ
2. The worldwide practice of a 7-day week, and resting each week comes from the Bible.
3. The perfect distance of the Earth from the Sun is either a great coincidence or it is by design.
4. Jesus said he would build his church; 2000 years later the church includes 2 billion people.

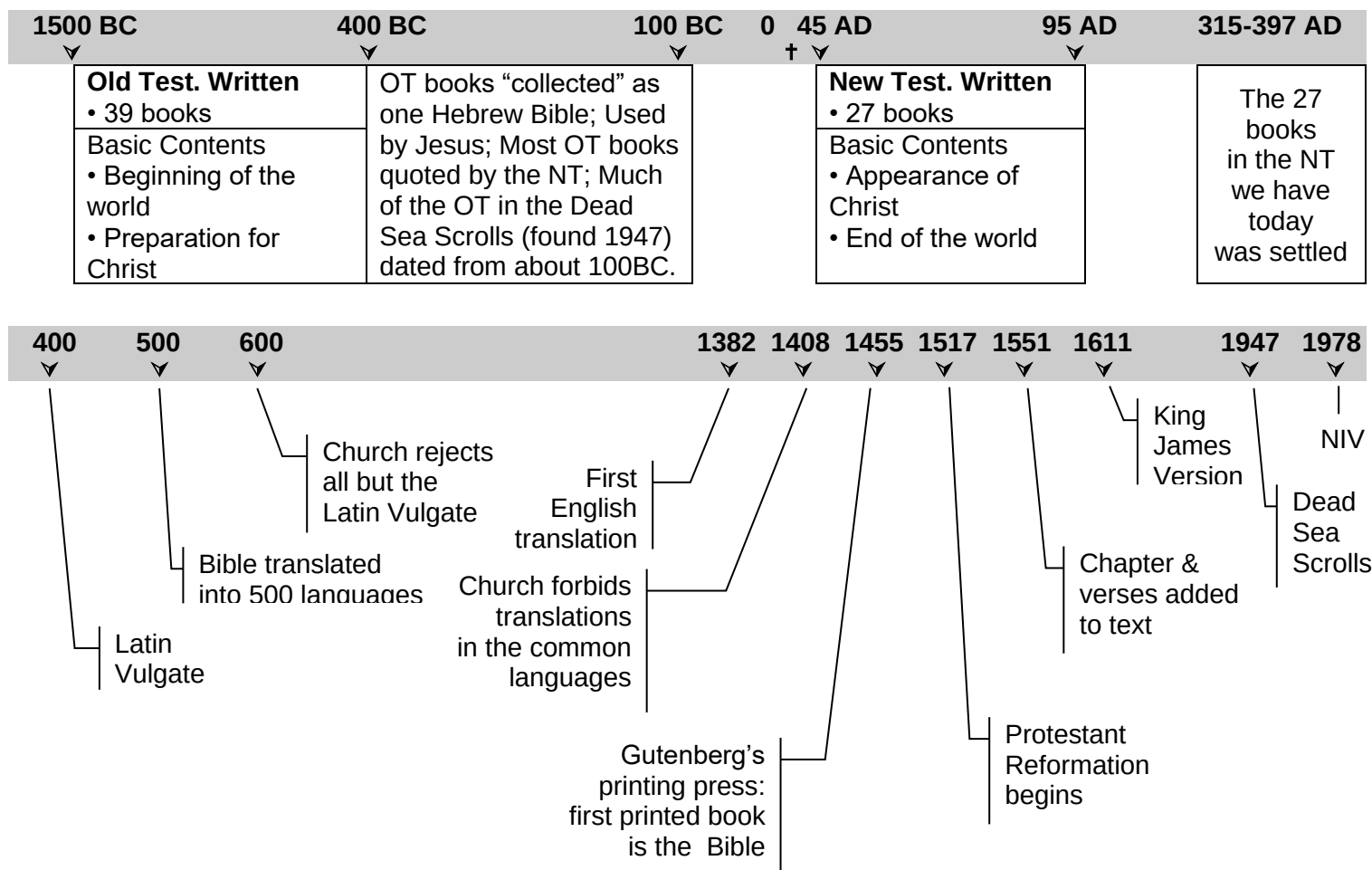
Faith **isn't** believing the impossible or the improbable.
Faith **is** being certain of a truth based on evidence instead of absolute proof.

Questions for Discussion

1. Before undergoing heart surgery, half of the people who claim that they do not believe in God will pray. Why do you think this is? Why is it that nearly everyone believes in God in some way?
2. How does the existence of the church and the Bible give evidence for the existence of God?
3. On Earth, we can experience perfect solar eclipses because the sun is 400 times further away than the moon and is 400 times larger. Do you think this is a coincidence? If not, what is it?
4. Early in his life C. S. Lewis did not believe in God because of the evil in the world. Later in his life he reasoned that if no God existed, by what standard could he call anything evil? Without a ruler, how can you tell that a line is crooked? Does this argument make sense to you?
5. Can you live without faith of any kind? Does it take faith to sit on a chair you've never used before? What evidence led you to have faith in the chair?

1. The History of the Bible

A. General Timeline of the Bible



B. An Example of the How History can Support the Biblical Record



Writing

“Until recent years, it was commonly believed that writing was unknown in the early days of Old Testament history...But now the spade of the archeologist has revealed that **written** records of important events were made from the dawn of history.”

The Hammurabi Code (Shown at left)

“One of the most important archeological discoveries ever made. Hammurabi, king of Babylon, about 2000 BC was a contemporary of Abraham. He is commonly identified as “Amraphel” of Genesis 14...He had his scribes collect and codify the laws of his kingdom; and had these engraved on stones to be set up in the principal cities...It is 8’ high...in cuneiform writing of Semitic Babylonian language.

“It has about 4000 lines, equal in subject matter to the size of the average Bible book.

“Here is a book, written on stone, not a copy, but the original autograph book itself, made in Abraham’s day. It is still in existence, bearing testimony, not only to a well-developed system of jurisprudence, but also to the fact that as early as Abraham’s time literary skill had reached a remarkably advanced stage.”

— **Halley’s Bible Commentary**
 (Moses, author of the earliest OT books, lived 500 – 600 years **after** Hammurabi’s Code was written.)

C. Evidences of the Bible's Historical Accuracy

1. The Bible is Rooted in History.

Much of scripture is pegged to historical events and personages. For example, consider the countless historical references in the book of Acts.

2. The Bible is Rooted in History for a Reason.

In John 3:12 Jesus says "I have spoken to you of earthly things and you do not believe; how then will you believe if I speak of heavenly things?" If the historical references in Scripture were frequently wrong, how much confidence would we put into its spiritual teachings?

As archeological studies continue to undergird the accuracy of the historical accounts of the Bible, we gain confidence in its supernatural authorship. (See Appendix 1: *Is the Bible true? Extraordinary insights from archaeology and history*, from US News & World Report.)

3. Historical References Open up the Scripture to Being Proven Inaccurate.

Consider how accurate a text on astronomy would be if it were 1000 years old, or a computer book that is 10 years old. How likely is a book that has not been updated for 1900 years to still be accurate? Yet people have never been able to disprove anything in it.

4. Amazingly, the Bible is Free from False Scientific Theories that Were Once Commonly Held.

Appendix 3 gives a number of examples of how the Scripture writers were kept free from writing things that were commonly (but falsely) believed in the day they wrote. As late as the 1970's college textbooks taught chemistry through a concept called "valences" which is now a debunked theory. How can a book as large as the Bible be totally free from this kind of error if not divinely authored?

5. In Fact, the Bible May Contain Advanced Scientific & Medical Insights.

Thousands of years before we discovered germs, the quarantines and advice Moses gave to the Israelites wandering in the desert made good sense. A Biblical statement such as "life is in the blood" was not fully understood until recent days (educated medical doctors performed blood-letting on George Washington, which contributed to his death). The word "coherence" of Colossians 1:17 is pretty descriptive of how atomic particles cohere to each other.

6. Noah's Flood Provides Explanations to Many Geological Mysteries.

The popular books by CSI, Morris or Ham give numerous, fascinating illustrations how the flood can explain many of the things that geologists see today.

7. The Bible is Replete with Accurate & Historical Prophecies.

With the finding of the Dead Sea Scrolls, we have copies of the book of Isaiah, that by all accounts pre-date the time of Christ by about 100 years. Yet the descriptions of Christ's life and death in chapter 53 are unbelievable if not divinely authored. Similarly the prediction of his virgin birth in 7:14.

The amazing prophecies of Daniel had caused some modern, liberal theologians to fix a late date of authorship to the book (and a different author) so they would not have to admit the book was prophetic when it was written. But later scholarship has shown that the writing is consistent with the timeframe Daniel states in the book.

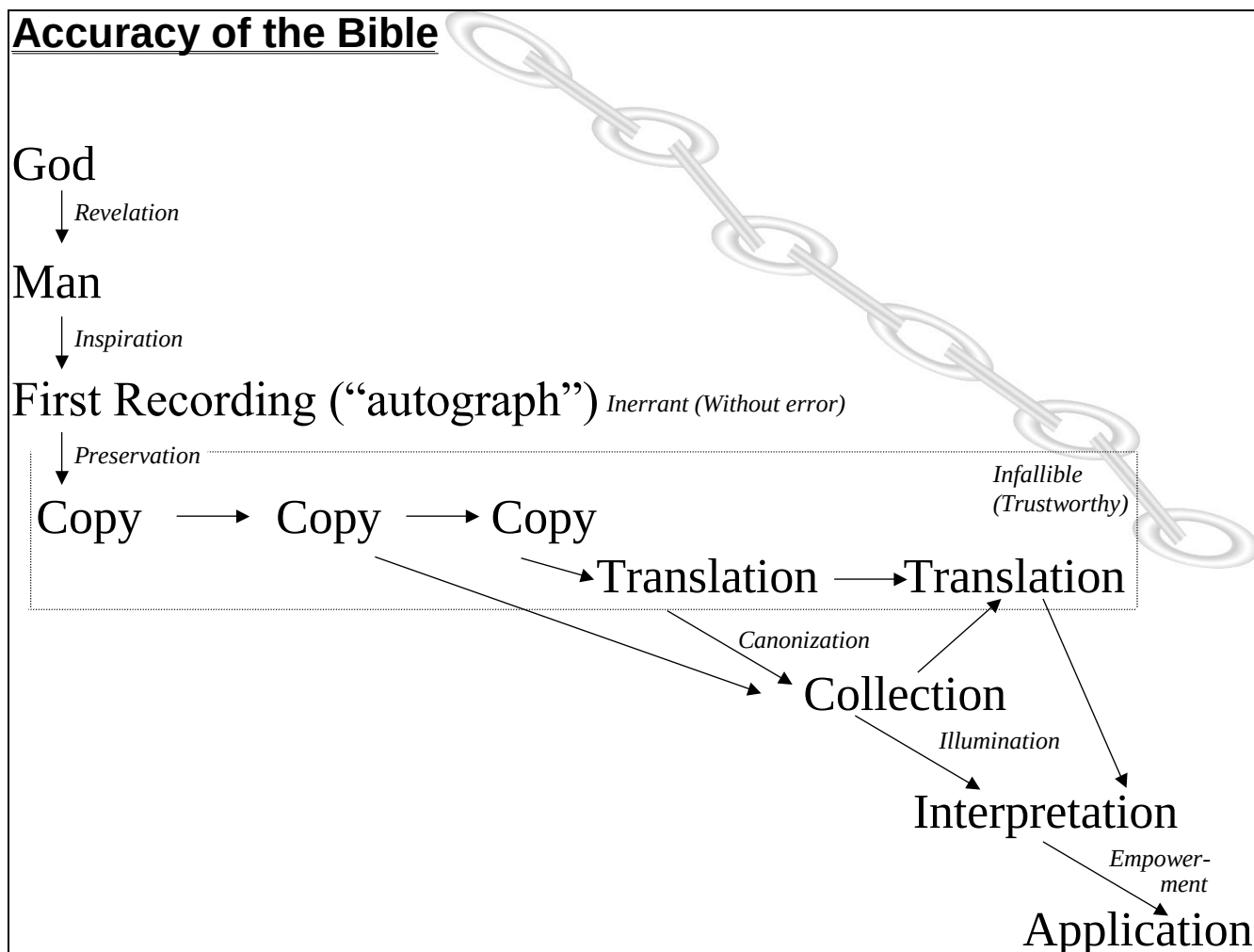
8. The Bible has a Unique Publishing History.

It was the first book printed on Gutenberg's printing press, and it has been the best selling book ever since. It's the most translated book of all time.

2. The Accuracy of the Bible

A. What Accuracy Must Entail

If God actually did write the Bible, he did it from 2000 to 3500 years ago. How can we be sure what we read in our language today fairly represents what was recorded back then? This diagram shows the links in the chain from then until now. If any one of those links is broken or faulty, accuracy can hardly be assumed.



Each of the theological terms shown in italics in the diagram could have treatises written about them (and have had). You could get a doctorate focused solely on any one of them.

A theologian and an astronomer were talking together one day. The astronomer said that after reading widely in the field of religion, he had concluded that all religion could be summed up in a single phrase.

"Do unto others as you would have them do unto you," he said, with a bit of smugness, knowing that his field is so much more complex.

After a brief pause, the theologian replied that after reading widely in the area of astronomy he had concluded that all of it could be summed up in a single phrase also.

"Oh, and what is that?" the astronaut inquired.

"Twinkle, twinkle, little star; how I wonder what you are!"

B. Definition of Terms

At the risk of over-simplifying, let's briefly define each of these words in non-technical terms.

Revelation. God "reveals" to man things about himself.

- When God wrote the 10 Commandments on the stone tablets, this was direct revelation.
- When God appeared to or spoke to Biblical characters, this is called special revelation.
- The written Scriptures are a result of special revelation.
- God's creation reveals things about himself (Romans 1). This is called general revelation.

Inspiration. The Holy Spirit is spoken of as "bearing the authors of scripture along" as they wrote.

Inerrancy. When the author wrote under the inspiration of the Spirit, what was written was *without error*.

- The actual writings created under inspiration are called *autographs*. None of these have survived till today, probably as a result of God's design, knowing how we might treat these.
- The Scriptures declare themselves to be perfect; forever settled in heaven.

Preservation. The superintending activity of God to preserve his word as it was copied and translated.

- Utmost care was taken by Biblical copyists to be accurate, although a few minor errors did occur.
- With the findings of the Dead Sea Scrolls, copies of Isaiah were found that were 1000 years older than any we had previously, yet virtually no significant errors were found.

Infallibility. This term means that the Bible is accurate and trustworthy; it cannot fail in what it teaches.

- Inspiration implies inerrancy; Inerrancy implies infallibility.
- Because of the few "typos" that found their way into the text, and because the translation process is complex, some conservative theologians will only tout infallibility but not inerrancy. In the mid-1900's, evangelicals wrestled with this distinction, but that argument seems to have subsided.

Canonization. As the early church grew God guided it to recognize which writings comprised the Bible.

- Since the 4th century all branches of the church have the same 27 books of the New Testament.
- Catholics included a few more books in their Old Testament than Protestants do. It can be helpful to understand why, but the basic message of both Bibles is the same. (The major difference is in the way they *interpret* the Word of God.)

Illumination. When people read the Bible, the Spirit is active in convincing them that it is God's Word.

- The Spirit's illumination may lead to conviction, repentance and conversion.

Empowerment. When Christians read Scripture, the Spirit enables them to apply and obey it.

Time & space do not permit us to look at the evidence supporting each of these processes, but Appendix 2 is one short article that addresses the topic of Preservation.

3. The Bible & Science

A. Understanding the Literary Nature of the Bible

- a. The Bible is not a textbook of science; neither is it (primarily) a textbook of history
- b. It does contain elements of science & a lot of history
 - 1. None of the science or history in the Bible conflicts with what we know today from those fields of study
 - 2. This is an amazing fact given how long ago the Bible was written (see Appendix 3)
- c. The 66 books are written in various literary styles (genres), including poetry such as the Psalms
- d. It often speaks *phenomenologically*, that is, describing things as they appear
 - 1. To say the sun “rises and sets” does not mean the sun revolves around the earth
 - a. Not understanding this caused the Catholic Church to reject the accurate scientific findings of Galileo
 - 2. Even scientists today such as meteorologists (TV weatherpeople) may use this poetic language

B. Understanding the Science of Literary Interpretation

- a. Much criticism of the Bible comes from misinterpreting it (either by its critics or its defenders)
- b. “Hermeneutics” is the study of biblical interpretation; much work has been done to make this a rigorous process
 - 1. Every Christian ought to learn the basics of biblical interpretation
 - 2. Conservative evangelicals usually follow a literal, cultural, grammatical, and critical hermeneutic
 - 3. This approach recognizes the various literary genres and applies rules for interpreting each type
 - 4. This is not the “woodenly”-literal approach used by extreme fundamentalist groups (e.g. snake handlers)
 - 5. In simplest terms, it is a **normal** approach to reading literature

C. Some Critics of the Bible Use Faulty or Incomplete Reasoning

- a. The typical atheistic scientist looks at his data with an assumption that nature is all there is
 - 1. Some have admitted that they cannot let any kind of God get his foot in the door (see Appendix 8)
- b. In today’s scientific world, it is verboten to speak of God, and their studies and materials exclude him
- c. Scholarly works in the theological world, on the other hand, do carefully study what the “other side” thinks
- d. The scientific method is supposed to examine all the evidence; today’s (secular) scientists simply will not consider super-natural evidence (except for those focusing on paranormal studies, where there is ample evidence of non-material realities)

D. Some Critics Use Weak Reasoning

- a. An example: In Bertrand Russell’s book *Why I am Not a Christian*, his main argument is that the Bible teaches that Jesus believed in Hell, which was Christ’s great character defect. Russell simply could not believe in Hell.
 - 1. Russell provides no proof—nor even any evidence—that Hell does not exist. It is merely his opinion, or some would say, his wishful thinking.
- b. We often meet people like this who insist that God must be like what they think he should. A scholarly book that addresses these types of issues is *Why I Am a Christian*, by Geisler, et al.

E. Science on the Side of the Bible

- a. Appendix 4 gives an easy-to-read overview of the modern movement called Intelligent Design (ID). ID is a scholarly, scientific study of modern research (geology, astronomy, molecular physics, etc.) that demonstrates that the universe must have been designed by a designer (God). For example, the incredibly complex instructions built into every strand of DNA cannot be a matter of chance—languages are not generated at random.
- b. Appendices 5 and 6 provide scientific evidence that the universe is too finely-tuned to have just happened, and that the factors required to sustain life on a planet are too against probability to ever have just evolved. Even using the secular scientists theories of the big-bang, there simply has not been enough time since then to evolve to where we are today.
- c. Appendix 7 is a list of quotations from a number of eminent scientists who admit their believe in God.
- d. Appendices 8 and 9 are overviews of the problems with the theory of evolution.

Appendices

1. Is the Bible true? Extraordinary insights from archaeology and history US News & World Report, Cover Story 10/25/99 BY JEFFERY L. SHELTER (Extracted by Mark Dattoli)

In extraordinary ways, modern archaeology has affirmed the historical core of the Old and New Testaments—corroborating key portions of the stories of Israel's patriarchs, the Exodus, the Davidic monarchy, and the life and times of Jesus.

Kenneth A. Kitchen, an Egyptologist now retired from the University of Liverpool in England, argues that archaeology and the Bible "match remarkably well" in depicting the historical context of the patriarch narratives. In Genesis 37:28, for example, Joseph, a son of Jacob, is sold by his brothers into slavery for 20 silver shekels. That, notes Kitchen, matches precisely the going price of slaves in the region during the 19th and 18th centuries B.C., as affirmed by documents recovered from the region that is now modern Syria.

While the Bible depicts the Philistines as a frequent nemesis of the Israelites, their name does not appear in ancient nonbiblical sources before 1200 B.C. Some minimalist scholars have suggested that the biblical stories of run-ins with the dreaded Philistines were invented by priestly scribes in the middle of the first millennium B.C. to dramatize the military prowess of the mythical Davidic dynasty.

But modern archaeology has uncovered a wealth of information regarding the Philistine "sea people" thoroughly consistent with their portrayal in the Bible. For example, sources including numerous Egyptian inscriptions indicate that the Philistines most likely originated in the Aegean area, probably on the island of Crete. That fits with biblical passages (Jeremiah 47:4 and Deuteronomy 2:23, for example) linking them with Caphtor, a location most scholars identify with Crete.

Additionally, the Bible depicts the Philistines as expert metallurgists, and archaeologists have found material evidence that the Philistines were, indeed, expert metalworkers.

Compared with the earlier eras of Old Testament history, the days of Jesus are a fleeting moment. A life span of just three decades and a public career of only a few years leave a dauntingly narrow target for archaeological exploration. Yet during the past four decades, spectacular discoveries have produced a wealth of data illuminating the story of Jesus and the birth of Christianity. The picture that has emerged overall closely matches the historical backdrop of the Gospels.

In 1968, for example, explorers found the skeletal remains of a crucified man in a burial cave...never before had the remains of a crucifixion victim been recovered. An initial analysis of the remains found that their condition dramatically corroborated the Bible's description of the Roman method of execution.

His open arms had been nailed to the crossbar, in the manner similar to that shown in crucifixion paintings. The knees had been doubled up and turned sideways, and a single large iron nail had been driven through both heels...The shin bones seem to have been broken, corroborating what the Gospel of John suggests was normal practice in Roman crucifixions...With the remains of a crucified contemporary of Jesus found in a family grave, it is clear that at least on some occasions the Romans permitted proper interment consistent with the biblical account.

The discovery of the so-called Pilate Stone has been widely acclaimed as a significant affirmation of biblical history because, in short, it confirms that the man depicted in the Gospels as Judea's Roman governor had precisely the responsibilities and authority that the Gospel writers ascribed to him.

Just as archaeology has shed new light on the Bible, the Bible in turn has often proved a useful tool for archaeologists. Yigael Yadin, the Israeli archaeologist who excavated at Hazor in the 1950s, relied heavily on its guidance in finding the great gate of Solomon at the famous upper Galilee site: "We went about discovering [the gate] with Bible in one hand and spade in the other." And Trude Dothan notes that "without the Bible, we wouldn't even have known there were Philistines."

2.

Can I Really Trust the Bible: Its Protected Text

From www.gospelcom.net/rbc/ds/q0402/point2.html (Extracted by Mark Dattoli)

The supernatural protection of the text of the Bible is another reason for trusting it. This protection occurred in two forms: (a) its unity amid great diversity, and (b) the miraculous preservation of the text itself. Let's look at the two ways God has protected the text of His Word.

4. Its Unity In Diversity

The writings of man are marked by disunity and contradiction. Books written by more than one author often contain glaring discrepancies in philosophy, facts, style, or ideas. Even those written by one author may contain contradictions in fact or logic. Those who have given their lives to a study of the Scriptures, however, are continually amazed at its unity and consistency of doctrine.

Josh McDowell, a well-known apologist for Christianity, was approached by a salesman for the Great Books of the Western World series. This set includes the writings of the leading thinkers throughout the history of Western man. McDowell challenged the representative to take 10 of the authors from the same walk of life, the same time period, the same country, and the same language and ask them about one basic subject. "Would they agree?" Josh asked. The man said, "Are you kidding? You would have a conglomeration!"

The amazing unity of the Bible, therefore, merits our trust. From Genesis to Revelation, the Bible tells a single story: the rescue of mankind from sin through the death of Jesus Christ. The Old Testament presents Him as the hope of mankind; the New Testament shows Him to be the fulfillment of that hope.

Now, if the Bible had been written by one person at one time, one could understand how it would be unified in general thoughts and specific details. But consider these diversities in its origin:

- It was written by 40 different authors.
- It was written over a period of 1,600 years.
- It was written in three languages: Hebrew, Greek, and Aramaic.
- Its writers came from many walks of life: prophet (Jeremiah), priest (Zechariah), shepherd (Amos), king (David), servant (Nehemiah), doctor (Luke), tax collector (Matthew), and Pharisee (Paul).
- It was written on three continents: Asia, Africa, and Europe.
- A gap of more than 400 years separated the writing of the Old Testament from the New Testament--equivalent to the timespan from the days of Sir Francis Drake to today.

In spite of this wide diversity, the Bible is one book. As branches, roots, trunk, and leaves are part of one tree, so the parts of the Bible make up a single unit. It agrees in doctrine, details of prophecy, what it says about Jesus Christ, and its offer of rescue to mankind. It is a unified book made up of many books. It is a book you can trust!

5. Its Textual Preservation

The Bible is also a book to be trusted because its text has been miraculously preserved. None of the original manuscripts written by the biblical authors are still in existence. All of them were either lost or destroyed centuries ago. This has caused some critics of the Bible to question the purity of the texts we now have. But we can be confident that the Bibles we hold in our hands were translated from texts that for all practical purposes are the same as the originals.

The Old Testament. The Old Testament books were written primarily in Hebrew. They were recorded either on papyrus (a grassy reed whose inner bark was dried and glued together to form a paperlike substance) or parchment (the scraped and dried skins of animals). When a copy wore out, a new copy was made and the old one destroyed.

But that was not an easy task. They did not have copy machines like we do today, so it had to be done by hand. Stringent rules were followed by the scribes to keep errors from creeping in. The methods used by the Masoretes had been followed for centuries, from AD 500-900. These dedicated Hebrew scholars had an elaborate counting system for assuring accuracy. First, they would count all

the letters on a page. Then, when they finished copying the page, they would count the letters on the copy to see if the numbers agreed. This would keep them from copying a word twice, omitting a word, skipping a line, or copying the same line twice. If the counts did not agree, they would destroy the copy they had just worked over so laboriously and start again.

Because of this system, the Hebrew texts since AD 900 are virtually free from error. But what about the years before 900? Most of the Old Testament was written centuries earlier, and the last book, Malachi, was finished nearly 400 years before Christ was born. Couldn't a lot of errors have crept in during that time?

That question could not have been answered with certainty before the discovery of the Dead Sea Scrolls. One hot, dusty day in 1947, an Arab boy threw a stone into one of the hundreds of caves that pocket the cliffs surrounding the Dead Sea. To his surprise, he heard something shatter. When he crawled in to investigate, he found a broken pottery jar and some old manuscripts, including one of the book of Isaiah. This was the first of the collection of what came to be known as the Dead Sea Scrolls.

Word of the discovery spread, and soon archeologists were excavating caves throughout the area. They found fragments of every Old Testament book and some complete manuscripts.

But how did these compare with the Masoretic text? The careful work of textual comparison began, and soon it was found that there was no difference between the text of the Dead Sea Scrolls and those of the Masoretes. Even though these scrolls were copied almost 1,000 years earlier, they were almost identical to the Masoretic text! On the basis of this astounding evidence, we can be assured that the Old Testament text has been accurately preserved and that we can read it as the reliable Word of God.

The New Testament. What has been said of the Old Testament can also be said of the New. It also has been kept from error over the centuries. Although its books were copied thousands of times and distributed widely among the early churches, it too has been protected from error.

New Testament scholars and textual experts have studied with painstaking care the thousands of manuscripts that have been discovered. They assure us that the texts from which our Bibles were translated are virtually identical to those written by Matthew, Paul, and the other New Testament writers. There are some minor variations, but none of them change the meaning of the passage in which they are found. Most of these differences are variations in spelling, like the British "labour" and the American "labor." A huge number of manuscripts or fragments of the New Testament have been discovered and compared. It is by far the most well-attested document of its era.

Document Name	Number of Manuscripts	Earliest Date
Caesar's <i>Gallic Wars</i>	10	AD 900
Livy's <i>History of Rome</i>	20	AD 400
Thucydides' <i>History</i>	8	AD 900
Herodotus' <i>History</i>	8	AD 900
The New Testament	14,000	AD 125

Two important finds have been made in recent years that have added significant evidence for the authenticity of the New Testament text. The first, the Rylands Library Papyri, contains a fragment from John 18 that has been dated at AD 125. The second, the Chester Beatty collection of papyri, contains almost all of the New Testament and dates between AD 200 and AD 275.

The meticulous work being done in textual studies of both Testaments by brilliant scholars, most of them non-Christians, has given us every reason to be confident that we know what the original manuscripts said—even though we do not have any of them. True, there are variants, but they are very minor in importance and affect no essential teaching. The protection of the text, both in unity and in preservation, is another reason we can trust the Bible.

3. Scientific Accuracy as a Proof of Bible Inspiration

Chuck Northrop (Extracted by Mark Dattoli)

The argument of the Bible's scientific accuracy is stated in two ways.

1. First, it can be stated negatively: Since the Bible does not contain the superstitions that were commonly held contemporary with its various writers, then the Bible's writers must have been inspired of God. It would be easy and common for uninspired men to include such notions as a flat earth, blood letting, or the earth resting upon the back of some man or beast. These were commonly held Scientific beliefs at various times in history and were later proven wrong. However, the Bible does not contain such notions which is an impressive evidence that the Bible is not man-made but God inspired.
2. Second, the argument of the Bible's scientific accuracy can be stated positively. Scientific accuracies are scattered within the depth of the words of the sacred text. These are like precious gems buried in the pages of Holy Writ. They are unique and special to the open minded investigator. Interestingly, these precious gems were often written hundreds or thousands of years before they were discovered by scientists.

Before we consider specific areas of science, a few words of caution are in order: The Bible is not a science book. However, if it is inspired of God, we should expect it to agree with true science. Consider these examples of the Bible's scientific accuracies beginning with general science and then to specific areas of science.

FUNDAMENTALS OF SCIENCE Though Genesis 1:1 does not concern itself with general sciences, yet much can be learned from it on this topic. This passage states, "In the beginning God created the heaven and the earth." Herbert Spencer (1820-1903), a British philosopher, after a lifetime of study said that there are basically five fundamentals of science: time, force, action (energy), space, and matter. Notice how Moses declared these fundamentals of science about 1500 years before Christ and 3300 years before Spencer. "In the beginning [*time*] God [*force*] created [*action or energy*] the heaven [*space*] and the earth [*matter*]."

MEDICINE In the area of medicine, the Bible contains many gems of scientific accuracy. Moses wrote concerning blood in Leviticus 17:14 which says, "For *it is* the life of all flesh; the blood of *it is* for the life thereof: therefore I said unto the children of Israel, Ye shall eat the blood of no manner of flesh: for the life of all flesh *is* the blood thereof: whosoever eateth it shall be cut off." Today, we know that blood is made up of white blood cells that fight off infections, red blood cells that carry oxygen to feed the cells of the body, platelets to help with clotting, and plasma to regulate water content and maintain temperature. A common practice up until recent times was "blood-letting" in which patients were bled in various ways such as with leaches and cuts. Life-giving blood was drained away, and as you would expect, many patients died. Interestingly, George Washington was one such patient who died as a result of "blood-letting."

Also associated with medicine is sanitation. Leviticus 13-15 spells out some basic sanitation rules: (1) The recognition and diagnosis of disease; (2) The separation or isolation of the diseased person; (3) The designation of anything that had been touched by a diseased person as unclean; (4) The process by which the unclean became purified; (5) The destruction of those items that could not be cleansed. Now notice what others have said about these medical principles of sanitation. Fielding Garrison in his book "History of Medicine" said that these precepts laid out in the first five books of the Bible are "remarkable chapters" of ancient medicine.

GEOGRAPHY Time magazine reported in December 30, 1974 issue, "In 100 licensed sites in Israel, archaeological digging continues to turn up new evidence that the Bible is often surprisingly accurate in historical particulars, more so than earlier generations of scholars ever suspected."

ASTRONOMY Isaiah wrote in chapter 40 and verse 22, "*It is* he that sitteth upon the circle of the earth, and the inhabitants thereof *are* as grasshoppers; that stretcheth out the heavens as a curtain, and spreadeth them out as a tent to dwell in." The word translated "circle" in this verse means round or spherical. Those living in Isaiah's day thought the earth was flat. Columbus is generally attributed

with discovering the earth is round and, yet, Isaiah wrote about it more than two thousand years before Columbus.

God asked Job, “Where *is* the way *where* light dwelleth?” (Job 38:19). The word translated “way” means traveled path or road. Jean Morton wrote, “Until the seventeenth century, it was believed that light was transmitted instantaneously. Then Sir Isaac Newton suggested that light was composed of small particles which travel in a straight line... Notice also the Bible is absent of astrology and even condemns such nonsense as superstitions.

OCEANOGRAPHY Psalm 8:8 says “The fowl of the air, and the fish of the sea, *and whatsoever* passeth through the paths of the seas.” Matthew Fontaine Maury (1806-1873) was once confined to his bed during a lengthy illness. While his son was reading Psalm 8, the phrase “paths of the sea” caught his attention and based upon this verse, Mr. Maury decided to find the “paths of the sea.” He was the first to recognize the seas were circulating systems with interaction between wind and water. The US Naval Institute issued a book in 1927 entitled, “Matthew Fontaine Maury: Pathfinder of the Seas.” Also, Maury’s home state of Virginia erected a monument in his honor after he died and inscribed upon its base was Psalm 8:8.

Again God asked Job “Hast thou entered into the springs of the sea?” (38:16; also note Proverbs 8:28). The earliest secular reference to sub-surface springs in the ocean was by Strabo (63 BC - AD 21), a Roman geographer. Today, we know that such springs are located off the coasts of Greece, Italy, Israel, Syria, and Australia. In 1976, the US Geological Survey discovered fresh water spring along the Atlantic coast from New England to Georgia.

In the same verse, God asked Job, “Or hast thou walked in the search of the depth?” (“recesses of the deep” - ASV). Also 2 Samuel 22:16 mentions “the channels of the sea.” For a long time, man thought the ocean was shallow and the floor was flat and sandy like a desert. However, during the H.M.S. Challenger expedition (1873-1876), the first scientific exploration of the ocean floor, a canyon was discovered in the Pacific five and a half miles deep. Since that time another channel or recess was discovered near the Philippines almost seven miles deep.

METEOROLOGY The weather cycle is spoken of in the Bible in such passages as Ecclesiastes 1:7; 11:3; and Amos 9:6. However, the concept of a complete water cycle was not fully understood nor accepted until the sixteenth and seventeenth centuries AD as a result of the work of Pierre Perrault, Edme Mariotte, and Edmund Halley. These men lived well over two thousand years after Solomon and Amos.

BIOLOGY Moses declared that all things produce “after their kind” (Genesis 1:11,12,21,24). This simple law is what is now known as the laws of genetics and heredity based upon the theory of biogenesis which is accredited to the French chemist Louis Pasteur (1822-1895). Until as recent as the last century, people thought that maggots were spontaneously generated. Interestingly, today some evolutionists teach “Punctuated Equilibriaism” which says that the evolutionary process was not gradual but was stable for long periods of time, and then during relatively short periods of thousands of years, we have major evolutionary jumps (leaps and bounds). The fact, however, remains just as Moses declared, all things produce “after their kind.” 1 Corinthians 15:39 says, “All flesh *is* not the same flesh: but *there is one kind of* flesh of men, another flesh of beasts, another of fishes, *and* another of birds.” Today, we know that there are four fleshes which evolutionists acknowledge. These are different in their biochemical makeup.

Again, the Bible is scientifically accurate.

Though we have not advanced all the arguments that could be advanced, we have said enough to show any reasonable person that the Bible is scientifically accurate. Its truths are often far ahead of their time. Its truths do not contain the normal inaccurate beliefs of contemporary writers of the Biblical scribes. There is only one way the Biblical scribes could have known these truths — God revealed these truths unto them. “For the prophecy came not in old time by the will of man: but holy men of God spake *as they were* moved by the Holy Ghost” (2 Peter 1:21).

4 Things unseen

Which is less likely: life after death or life after the Big Bang?

■ By Marvin Olasky, World Magazine, April 14, 2001 (worldmag.com/world/issue/04-14-01/closing_3.asp)

The NCAA basketball tournament ended on April 2 with a hardly surprising result: Players from No. 1 seed Duke cut down the net in the now-traditional victory celebration, with each player keeping a strand or two. I was cheering for No. 15 seed Hampton (the college that educated Booker T. Washington 130 years ago) to go all the way, but that's something for fantasy films.

Is the Resurrection that many of us will celebrate on Sunday a fantasy? It's a surprising occurrence, sure, but other events are far more improbable. To name a few: that an orderly universe exists at all, that earth is a place where life can exist, that complex organs such as eyes would emerge.

From a materialist perspective, the odds against our being here are enormous. John Blanchard's *Does God Believe in Atheists?* provides some of the numbers: He notes that Roger Penrose, who helped to develop Black Hole theories, estimated as one in one hundred billion to the 123rd power the odds of a Big Bang producing by accident an orderly universe as opposed to chaos.

Big Bang theorists argue that the universe one second after its purported start had to expand at a rate rapid enough to keep in check the gravitational attraction of galaxies. Stephen Hawking has noted that if the rate of expansion had been smaller by an infinitesimal amount, the universe would have collapsed.

Mr. Blanchard quotes useful analogies about the likelihood of the universe allowing for the existence of life: hitting a target an inch wide on the other side of the observable universe, or expecting a pole vaulter's pole to remain standing, poised on its tip, for centuries following his vault.

Of course, even if the universe by chance came out right for human purposes, we would need a livable home in space. Earth's size, distance from the sun, and rotational speed had to be just right. We need the air above not only for breathing but to protect us from cosmic rays and meteorites. We need light (but not much ultraviolet), heat (but not too much), and so on.

Does Christ's resurrection seem incredible? What about the origin of life? A chance of one out of 1,000,000,000,000,000 is considered a virtual impossibility, but when DNA co-discoverer Francis Crick calculated the possibility of a simple protein sequence of 200 amino-acids (much simpler than a DNA molecule) originating spontaneously, his figure was 10 with 260 zeroes after it.

Those who remember one past fad will appreciate British scientist Fred Hoyle's view of the odds against evolved life. "Anyone with even a nodding acquaintance with the Rubik cube," he wrote, "will concede the near impossibility of a solution being obtained by a blind person moving the cube faces at random. Now imagine 10 to the fiftieth blind persons (standing shoulder to shoulder, these would more than fill our entire planetary system) each with a scrambled Rubik cube ... simultaneously arriving at the solved form."

Mr. Hoyle's best-known analogy has a tornado in a junkyard taking all the pieces of metal lying there and turning them into a Boeing 747. It would be amazing but possible for two pieces to be naturally welded together, and then two pieces more in a later whirlwind, but production of even a simple organic molecule would require all of the pieces to come together at one time.

Three decades ago Frank Salisbury of Utah State described the odds this way: Imagine one hundred million trillion planets, each with an ocean with lots of DNA fragments that reproduce one million times per second, with a mutation occurring each time. In four billion years it would still take trillions of universes to produce a single gene-if they got lucky.

During these recent decades, however, the odds have not inhibited the true believers in evolution-or are they true believers in avoiding at all costs the alternative? The late science fiction writer Isaac Asimov acknowledged that he did not "have the information to prove that God doesn't exist," but "emotionally, I'm an atheist." Aldous Huxley wrote of the philosopher trying "to prove that there is no valid reason why he personally should not do as he wants to do.... We don't know because we don't want to know."

Do we want to know whether Christ rose from the dead? God provides the grace to believe in that, but note: Such belief requires less faith in things unseen than believing in atheistic macroevolution. Resurrection is an easy task for a God who created the entire world out of nothing. But believing in time-plus-chance explanations is like believing that the now-scattered strands of the championship basketball net will suddenly fly together and form a pristine net for the next tournament.

So, congratulations to NCAA champion Duke, but cheer the ascent of the King. He is risen, indeed.

5. Evidence for the Fine Tuning of the Universe

From: Big Bang Refined by Fire, by Dr. Hugh Ross

The constants of the laws of physics have been finely tuned to a degree not possible through human engineering.

Fine Tuning of the Physical Constants of the Universe

Parameter	Max. Deviation
Ratio of Electrons:Protons (#6 below)	1:10 ³⁷
Ratio of Electromagnetic Force:Gravity (#5 below)	1:10 ⁴⁰
Expansion Rate of Universe (#8 below)	1:10 ⁵⁵
Mass of Universe (#10 below)	1:10 ⁵⁹
Cosmological Constant	1:10 ¹²⁰

These numbers represent the maximum deviation from the accepted values, that would either prevent the universe from existing now, not having matter, or be unsuitable for any form of life.

Recent Studies have confirmed the fine tuning of the cosmological constant. This cosmological constant is a force that increases with the increasing size of the universe. First hypothesized by Albert Einstein, the cosmological constant was rejected by him, because of lack of real world data. However, recent supernova 1A data demonstrated the existence of a cosmological constant that probably made up for the lack of light and dark matter in the universe. However, the data was tentative, since there was some variability among observations. Recent cosmic microwave background (CMB) measurement not only demonstrate the existence of the cosmological constant, but the value of the constant. It turns out that the value of the cosmological constant exactly makes up for the lack of matter in the universe.

The degree of fine-tuning is difficult to imagine. Dr. Ross gives an example of the least fine-tuned of the above four examples in his book, The Creator and the Cosmos, which is reproduced here:

One part in 10³⁷ is such an incredibly sensitive balance that it is hard to visualize. The following analogy might help: Cover the entire North American continent in dimes all the way up to the moon, a height of about 239,000 miles (In comparison, the money to pay for the U.S. federal government debt would cover one square mile less than two feet deep with dimes.). Next, pile dimes from here to the moon on a billion other continents the same size as North America. Paint one dime red and mix it into the billion of piles of dimes. Blindfold a friend and ask him to pick out one dime. The odds that he will pick the red dime are one in 10³⁷.

1. strong nuclear force constant
 - a. if larger: no hydrogen would form; atomic nuclei for most life-essential elements would be unstable; thus, no life chemistry
 - b. if smaller: no elements heavier than hydrogen would form; again, no life chemistry
2. weak nuclear force constant
 - a. if larger: too much hydrogen would convert to helium in big bang; hence, stars would convert too much matter into heavy elements making life chemistry impossible
 - b. if smaller: too little helium would be produced from big bang; hence, stars would convert too little matter into heavy elements making life chemistry impossible
3. gravitational force constant
 - a. if larger: stars would be too hot and would burn too rapidly and too unevenly for life chemistry
 - b. if smaller: stars would be too cool to ignite nuclear fusion; thus, many of the elements needed for life chemistry would never form
4. electromagnetic force constant
 - a. if greater: chemical bonding would be disrupted; elements more massive than boron would be unstable to fission
 - b. if lesser: chemical bonding would be insufficient for life chemistry
5. ratio of electromagnetic force constant to gravitational force constant
 - a. if larger: all stars would be at least 40% more massive than the sun; hence, stellar burning would be too brief and too uneven for life support
 - b. if smaller: all stars would be at least 20% less massive than the sun, thus incapable of producing heavy elements
6. ratio of electron to proton mass
 - a. if larger: chemical bonding would be insufficient for life chemistry
 - b. if smaller: same as above
7. ratio of number of protons to number of electrons
 - a. if larger: electromagnetism would dominate gravity, preventing galaxy, star, and planet formation
 - b. if smaller: same as above
8. expansion rate of the universe
 - a. if larger: no galaxies would form
 - b. if smaller: universe would collapse, even before stars formed
9. entropy level of the universe
 - a. if larger: stars would not form within proto-galaxies
 - b. if smaller: no proto-galaxies would form
10. mass density of the universe
 - a. if larger: overabundance of deuterium from big bang would cause stars to burn rapidly, too rapidly for life to form
 - b. if smaller: insufficient helium from big bang would result in a shortage of heavy elements

11. velocity of light
 - a. if faster: stars would be too luminous for life support
 - b. if slower: stars would be insufficiently luminous for life support
12. age of the universe
 - a. if older: no solar-type stars in a stable burning phase would exist in the right (for life) part of the galaxy
 - b. if younger: solar-type stars in a stable burning phase would not yet have formed
13. initial uniformity of radiation
 - a. if more uniform: stars, star clusters, and galaxies would not have formed
 - b. if less uniform: universe by now would be mostly black holes and empty space
14. average distance between galaxies
 - a. if larger: star formation late enough in the history of the universe would be hampered by lack of material
 - b. if smaller: gravitational tug-of-wars would destabilize the sun's orbit
15. density of galaxy cluster
 - a. if denser: galaxy collisions and mergers would disrupt the sun's orbit
 - b. if less dense: star formation late enough in the history of the universe would be hampered by lack of material
16. average distance between stars
 - a. if larger: heavy element density would be too sparse for rocky planets to form
 - b. if smaller: planetary orbits would be too unstable for life
17. fine structure constant (describing the fine-structure splitting of spectral lines)
 - a. if larger: all stars would be at least 30% less massive than the sun
 - b. if larger than 0.06: matter would be unstable in large magnetic fields
 - c. if smaller: all stars would be at least 80% more massive than the sun
18. decay rate of protons
 - a. if greater: life would be exterminated by the release of radiation
 - b. if smaller: universe would contain insufficient matter for life
19. ^{12}C to ^{16}O nuclear energy level ratio
 - a. if larger: universe would contain insufficient oxygen for life
 - b. if smaller: universe would contain insufficient carbon for life
20. ground state energy level for ^4He
 - a. if larger: universe would contain insufficient carbon and oxygen for life
 - b. if smaller: same as above
21. decay rate of ^8Be
 - a. if slower: heavy element fusion would generate catastrophic explosions in all the stars
 - b. if faster: no element heavier than beryllium would form; thus, no life chemistry
22. ratio of neutron mass to proton mass
 - a. if higher: neutron decay would yield too few neutrons for the formation of many life-essential elements
 - b. if lower: neutron decay would produce so many neutrons as to collapse all stars into neutron stars or black holes
23. initial excess of nucleons over anti-nucleons
 - a. if greater: radiation would prohibit planet formation
 - b. if lesser: matter would be insufficient for galaxy or star formation
24. polarity of the water molecule
 - a. if greater: heat of fusion and vaporization would be too high for life
 - b. if smaller: heat of fusion and vaporization would be too low for life; liquid water would not work as a solvent for life chemistry; ice would not float, and a runaway freeze-up would result
25. supernovae eruptions
 - a. if too close, too frequent, or too late: radiation would exterminate life on the planet
 - b. if too distant, too infrequent, or too soon: heavy elements would be too sparse for rocky planets to form
26. white dwarf binaries
 - a. if too few: insufficient fluorine would exist for life chemistry
 - b. if too many: planetary orbits would be too unstable for life
 - c. if formed too soon: insufficient fluorine production
 - d. if formed too late: fluorine would arrive too late for life chemistry
27. ratio of exotic matter mass to ordinary matter mass
 - a. if larger: universe would collapse before solar-type stars could form
 - b. if smaller: no galaxies would form
28. number of effective dimensions in the early universe
 - a. if larger: quantum mechanics, gravity, and relativity could not coexist; thus, life would be impossible
 - b. if smaller: same result
29. number of effective dimensions in the present universe
 - a. if smaller: electron, planet, and star orbits would become unstable
 - b. if larger: same result
30. mass of the neutrino
 - a. if smaller: galaxy clusters, galaxies, and stars would not form
 - b. if larger: galaxy clusters and galaxies would be too dense
31. big bang ripples
 - a. if smaller: galaxies would not form; universe would expand too rapidly
 - b. if larger: galaxies/galaxy clusters would be too dense for life; black holes would dominate; universe would collapse before life-site could form
32. size of the relativistic dilation factor
 - a. if smaller: certain life-essential chemical reactions will not function properly
 - b. if larger: same result
33. uncertainty magnitude in the Heisenberg uncertainty principle
 - a. if smaller: oxygen transport to body cells would be too small and certain life-essential elements would be unstable
 - b. if larger: oxygen transport to body cells would be too great and certain life-essential elements would be unstable
34. cosmological constant
 - a. if larger: universe would expand too quickly to form solar-type stars

6. Probability for a Life Support Body

by Hugh Ross, © Reasons To Believe, 2001

An Estimate of the Probability for Attaining the Necessary Parameters for Life Support

Parameter	Probability that feature will fall in the required range for physical life
local abundance and distribution of dark matter	0.1
relative abundances of different exotic mass particles	0.1
decay rates of different exotic mass particles	0.1
galaxy cluster size	0.1
galaxy cluster location	0.1
galaxy size	0.1
galaxy type	0.1
galaxy mass distribution	0.2
galaxy location	0.1
variability of local dwarf galaxy absorption rate	0.1
quantity of galactic dust	0.1
star location relative to galactic center	0.2
star distance from corotation circle of galaxy	0.005
star distance from closest spiral arm	0.1
z-axis extremes of star's orbit	0.02
proximity of solar nebula to a type I supernova eruption	0.01
timing of solar nebula formation relative to type I supernova eruption	0.01
proximity of solar nebula to a type II supernova eruption	0.01
timing of solar nebula formation relative to type II supernova eruption	0.01
timing of hypernovae eruptions	0.2
number of hypernovae eruptions	0.1
flux of cosmic ray protons	0.1
variability of cosmic ray proton flux	0.1
number of stars in birthing cluster	0.01
star formation history in parent star vicinity	0.1
birth date of the star-planetary system	0.01
number of stars in system	0.7
number and timing of close encounters by nearby stars	0.01
proximity of close stellar encounters	0.1
masses of close stellar encounters	0.1
star age	0.4
star metallicity	0.05
ratio of 40K, 235,238U, 232Th to iron in star-planetary system	0.02
star orbital eccentricity	0.1
star mass	0.001
star luminosity change relative to speciation types & rates	0.00001
star color	0.4
star magnetic field	0.1
star magnetic field variability	0.1
stellar wind strength and variability	0.1
short period variation in parent star diameter	0.1
star's carbon to oxygen ratio	0.01
star's space velocity relative to Local Standard of Rest	0.05
star's short term luminosity variability	0.05
star's long term luminosity variability	0.05
amplitude and duration of star spot cycle	0.1
number & timing of solar system encounters with interstellar gas clouds	0.1
galactic tidal forces on planetary system	0.2
H3+ production	0.1
supernovae rates & locations	0.01
white dwarf binary types, rates, & locations	0.01
structure of comet cloud surrounding planetary system	0.3
planetary distance from star	0.001
inclination of planetary orbit	0.5
axis tilt of planet	0.3
rate of change of axial tilt	0.01
period and size of axis tilt variation	0.1
planetary rotation period	0.1
rate of change in planetary rotation period	0.05
planetary revolution period	0.2
planetary orbit eccentricity	0.3
rate of change of planetary orbital eccentricity	0.1
rate of change of planetary inclination	0.5
period and size of eccentricity variation	0.1
period and size of inclination variation	0.1
number of moons	0.2
mass and distance of moon	0.01
surface gravity (escape velocity)	0.001
tidal force from sun and moon	0.1
magnetic field	0.01
rate of change & character of change in magnetic field	0.1
albedo (planet reflectivity)	0.1
density	0.1
reducing strength of planet's primordial mantle	0.3
thickness of crust	0.01
timing of birth of continent formation	0.1
oceans-to-continents ratio	0.2
rate of change in oceans to continents ratio	0.1
global distribution of continents	0.3
frequency, timing, & extent of ice ages	0.1
frequency, timing, & extent of global snowball events	0.1
asteroidal & cometary collision rate	0.1
change in asteroidal & cometary collision rates	0.1
rate of change in asteroidal & cometary collision rates	0.1
mass of body colliding with primordial Earth	0.002
timing of body colliding with primordial Earth	0.05
location of body's collision with primordial Earth	0.05
position & mass of Jupiter relative to Earth	0.01
major planet eccentricities	0.1
major planet orbital instabilities	0.05
drift and rate of drift in major planet distances	0.05
number & distribution of planets	0.01
distance of gas giant planets from mean motion resonances	0.02
orbital separation distances among inner planets	0.01
mass of Neptune	0.1
total mass of Kuiper Belt asteroids	0.1
atmospheric transparency	0.01
atmospheric pressure	0.01
atmospheric viscosity	0.1
atmospheric electric discharge rate	0.01
atmospheric temperature gradient	0.01

7.

Quotes from Scientists Regarding Design of the Universe

<http://www.godandscience.org/apologetics/quotes.html>

Does science lead us down a road that ends in the naturalistic explanation of everything we see? In the nineteenth century, it certainly looked as though science was going in that direction. The "God of the gaps" was finding himself in a narrower and narrower niche. However, 20th century and now 21st century science is leading us back down the road of design - not from a *lack* of scientific explanation, but from scientific explanation that requires an appeal to the extremely unlikely - something that science does not deal well with. As a result of the recent evidence in support of design, many scientists now believe in God. According to a recent article:

"I was reminded of this a few months ago when I saw a survey in the journal *Nature*. It revealed that 40% of American physicists, biologists and mathematicians believe in God--and not just some metaphysical abstraction, but a deity who takes an active interest in our affairs and hears our prayers: the God of Abraham, Isaac and Jacob."

The degree to which the constants of physics must match a precise criteria is such that a number of agnostic scientists have concluded that there is some sort of "supernatural plan" or "Agency" behind it. Here is what they say:

Fred Hoyle (British astrophysicist): "A common sense interpretation of the facts suggests that a superintellect has monkeyed with physics, as well as with chemistry and biology, and that there are no blind forces worth speaking about in nature. The numbers one calculates from the facts seem to me so overwhelming as to put this conclusion almost beyond question."

George Ellis (British astrophysicist): "Amazing fine tuning occurs in the laws that make this [complexity] possible. Realization of the complexity of what is accomplished makes it very difficult not to use the word 'miraculous' without taking a stand as to the ontological status of the word."

Paul Davies (British astrophysicist): "There is for me powerful evidence that there is something going on behind it all....It seems as though somebody has fine-tuned nature's numbers to make the Universe....The impression of design is overwhelming".

Paul Davies: "The laws [of physics] ... seem to be the product of exceedingly ingenious design... The universe must have a purpose".

Alan Sandage (winner of the Crawford prize in astronomy): "I find it quite improbable that such order came out of chaos. There has to be some organizing principle. God to me is a mystery but is the explanation for the miracle of existence, why there is something instead of nothing."

John O'Keefe (astronomer at NASA): "We are, by astronomical standards, a pampered, cosseted, cherished group of creatures... If the Universe had not been made with the most exacting precision we could never have come into existence. It is my view that these circumstances indicate the universe was created for man to live in."

George Greenstein (astronomer): "As we survey all the evidence, the thought insistently arises that some supernatural agency - or, rather, Agency - must be involved. Is it possible that suddenly, without intending to, we have stumbled upon scientific proof of the existence of a Supreme Being? Was it God who stepped in and so providentially crafted the cosmos for our benefit?"

Arthur Eddington (astrophysicist): "The idea of a universal mind or Logos would be, I think, a fairly plausible inference from the present state of scientific theory."

Arno Penzias (Nobel prize in physics): "Astronomy leads us to a unique event, a universe which was created out of nothing, one with the very delicate balance needed to provide exactly the conditions required to permit life, and one which has an underlying (one might say 'supernatural') plan."

Roger Penrose (mathematician and author): "I would say the universe has a purpose. It's not there just somehow by chance."

Tony Rothman (physicist): "When confronted with the order and beauty of the universe and the strange coincidences of nature, it's very tempting to take the leap of faith from science into religion. I am sure many physicists want to. I only wish they would admit it."

Vera Kistiakowsky (MIT physicist): "The exquisite order displayed by our scientific understanding of the physical world calls for the divine."

Robert Jastrow (self-proclaimed agnostic): "For the scientist who has lived by his faith in the power of reason, the story ends like a bad dream. He has scaled the mountains of ignorance; he is about to conquer the highest peak; as he pulls himself over the final rock, he is greeted by a band of theologians who have been sitting there for centuries."

Frank Tipler (Professor of Mathematical Physics): "When I began my career as a cosmologist some twenty years ago, I was a convinced atheist. I never in my wildest dreams imagined that one day I would be writing a book purporting to show that the central claims of Judeo-Christian theology are in fact true, that these claims are straightforward deductions of the laws of physics as we now understand them. I have been forced into these conclusions by the inexorable logic of my own special branch of physics."

Alexander Polyakov (Soviet mathematician): "We know that nature is described by the best of all possible mathematics because God created it."

Ed Harrison (cosmologist): "Here is the cosmological proof of the existence of God – the design argument of Paley – updated and refurbished. The fine tuning of the universe provides prima facie evidence of deistic design. Take your choice: blind chance that requires multitudes of universes or design that requires only one.... Many scientists, when they admit their views, incline toward the teleological or design argument."

Edward Milne (British cosmologist): "As to the cause of the Universe, in context of expansion, that is left for the reader to insert, but our picture is incomplete without Him [God]."

Barry Parker (cosmologist): "Who created these laws? There is no question but that a God will always be needed."

Drs. Zehavi, and Dekel (cosmologists): "This type of universe, however, seems to require a degree of fine tuning of the initial conditions that is in apparent conflict with 'common wisdom'."

Arthur L. Schawlow (Professor of Physics at Stanford University, 1981 Nobel Prize in physics): "It seems to me that when confronted with the marvels of life and the universe, one must ask why and not just how. The only possible answers are religious. . . . I find a need for God in the universe and in my own life."

Henry "Fritz" Schaefer (Graham Perdue Professor of Chemistry and director of the Center for Computational Quantum Chemistry at the University of Georgia): "The significance and joy in my science comes in those occasional moments of discovering something new and saying to myself, 'So that's how God did it.' My goal is to understand a little corner of God's plan."

Wernher von Braun (Pioneer rocket engineer) "I find it as difficult to understand a scientist who does not acknowledge the presence of a superior rationality behind the existence of the universe as it is to comprehend a theologian who would deny the advances of science."

Carl Woese (microbiologist from the University of Illinois) "Life in Universe - rare or unique? I walk both sides of that street. One day I can say that given the 100 billion stars in our galaxy and the 100 billion or more galaxies, there have to be some planets that formed and evolved in ways very, very like the Earth has, and so would contain microbial life at least. There are other days when I say that the anthropic principal, which makes this universe a special one out of an uncountably large number of universes, may not apply only to that aspect of nature we define in the realm of physics, but may extend to chemistry and biology. In that case life on Earth could be entirely unique."

8 **Just the facts, please**

Plenty of scientific evidence against Darwinism exists, but Darwinists tenaciously defend their dogma
By J. Budziszewski, World Magazine, 2/26/2000 (worldmag.com/world/issue/02-26-00/national_2.asp)

Across the country, writers continue to lambaste the Kansas Board of Education for its last August decision-to do what?

Some say to "strip evolution from the curriculum." Others say to "omit evolution from the state assessment test." Still others say to "eliminate all mention of evolution from all science texts used in the public schools."

Guess what. None of that happened.

Here's what did happen. The Board did adopt new statewide science testing standards. Curriculum was left where it had been, in the hands of local districts. Contrary to press reports, the new standards actually require students to know more about evolution than the old ones did; biologist Jonathan Wells points out that they increase the space devoted to the subject fivefold. However, they omit mention of "macroevolution" and shift the emphasis to the "micro" kind. Both terms refer to change by natural selection, but microevolution means change within species, while macroevolution means change from one species to another.

The reason for the shift is that although microevolution is not controversial, macroevolution is. Everyone agrees that natural selection can turn short finch beaks into long ones; not everyone agrees with Darwin that it can turn fish into frogs. The fossil record shows only when frogs appeared, not where they came from. By dropping the requirement that students must follow the Darwinist party line to do well on the statewide test, the Kansas Board of Education made it easier for local districts to teach the controversy as they think best.

...

Responding to such efforts at thought control, Berkeley law professor and Darwin critic Phillip E. Johnson quotes a Chinese paleontologist who told him, "In China we can criticize Darwin but not the government. In America you can criticize the government but not Darwin."

A great obstacle to clarity is the persistence of the Inherit the Wind stereotype that portrays the Darwinism controversy as a fight between facts and faith. Scientists supposedly follow the evidence wherever it leads; religionists are supposedly blinded to evidence by faith commitments. The fight really is about faith vs. facts. However, the faith that gets in the way of the facts is the faith of the Darwinists themselves.

You don't have to take it from me. Take it from them.

Writing for himself and his fellow Darwinists in the Jan. 9, 1996, issue of The New York Review of Books, Harvard biologist Richard Lewontin said that he is a materialist not because of the facts, but despite them. Even while admitting the "patent absurdity" of some of the theories that result from this materialist commitment, he insisted that "we cannot allow a divine foot in the door."

Kansas State University immunologist Scott C. Todd struck precisely the same note, writing shortly after the Board of Education made its decision. In a letter published in the Sept. 30 issue of Nature, he declared that "Even if all the data point to an intelligent designer, such an hypothesis is excluded from science because it is not naturalistic."

Though Mr. Lewontin calls his dogma materialism while Mr. Todd calls it naturalism, they are speaking of the same thing: the atheistic faith that nature means matter, and nature is all there is.

...

Darwinists would have you believe that the debate is about whether to teach a literal interpretation of Genesis as science, forbidding teachers from presenting scientific evidence for the Darwinist position. A better description of the question under debate is whether to teach materialist philosophy as science, forbidding teachers from presenting scientific evidence against the Darwinist position.

There are at least six major problems with Darwin's theory.

First, the predictions of Darwin's theory are contradicted by the fossil evidence. If the Darwinist theory were correct, then species ought to appear and die out gradually. Each species should change slowly but continuously, and the history of life on earth should reveal accumulating improvements in "fitness." What the fossil record actually shows is that species appear and die out suddenly. Each species tends to remain the same until it disappears, and the history of life on earth shows small variations among a small set of basic designs.

As the Harvard Darwinist Stephen Jay Gould admitted in 1977, "The extreme rarity of transitional forms in the fossil record persists as the trade secret of paleontology."

Moreover, natural selection is not dynamic but conservative. One reason for the patterns evident in the fossil record is that the overwhelming majority of mutations are harmful rather than beneficial. Natural selection-the weeding out of imperfectly adapted organisms-turns out to work against radical change, not for it.

A fatal difficulty for Darwinism is that it cannot explain irreducible complexity. Natural selection cannot produce "irreducible" complexity-in which every part of a system must be present for the system to work at all-because in natural selection, the parts of living systems must evolve one by one, with each new part making the system work a little better. Yet irreducible complexity turns up throughout the machinery of life, for example, in the clotting system for blood, the light-detecting system for cells in the retina of the eye, and the repair and transcription systems for DNA.

Even if Darwinism could explain irreducible complexity, it could not explain preadaptation. Adaptation can work only if there is something to adapt to. For example, insect mouths couldn't adapt to flowers unless there were flowers. Guess what: There weren't. Writes Massimo Piattelli-Palmarini, "insects had evolved at least ten elaborate forms of mouthpieces, uniquely 'adapted' (one would say) to their feeding upon flowers, one hundred million years before there were any flowers on Earth." Examples of such "preadaptation" turn out to be easy to find.

Yet another problem is that Darwinism cannot explain how life arises from nonlife. Natural selection kicks in only after things that live and reproduce exist; it cannot explain how they come to be. Scientists do know a number of ways to get organic from inorganic molecules, but none of them could have produced compounds like DNA under the conditions now believed to have existed in the years before life appeared.

Finally, there hasn't been enough time for the "impossible" to occur. In 1954, Harvard biochemist George Wald admitted that the chance development of life from nonlife was fantastically improbable, but argued that given enough time, "the 'impossible' becomes possible, the possible probable, and the probable virtually certain." Few biochemists take this view today, largely because the time available for life to have arisen is getting shorter and shorter. Mr. Wald himself thought two billion years had passed between the time the oceans stopped boiling and the time life appeared. New estimates suggest that his guess was forty times too long.

Is there any scientific reason to shut out the evidence that living things have been designed? Not one. Scientists sift evidence of intelligent design in numerous fields: For example, archaeologists consider whether the objects they dig up are rocks or tools, and forensic pathologists figure out whether the marks on bodies are better explained by sickness or violence. Is biology somehow different than the other sciences? Science should mean finding the explanation that best fits the evidence—not finding the explanation that best fits the dogma that "nature is all there is."

9. The Bible and Evolution (Summary)

Birth & Growth of the Universe

Birth	God or not	Time & Chance or Design & Creation	Cosmology; Astrophysics
Growth	Little (micro) or Big (macro) Evolution	Changes <u>within</u> species or <u>of</u> species	Biology; Chemistry; Paleontology

- As a watermelon grows all the seeds get further apart from each other. Likewise, the “red-shift” implies the stars are getting further apart. Working backward in time, scientist postulate the:
 - Big Bang: 15-17B years ago, the universe “exploded” into being. Everything that exists today began as a dot (called the “point of singularity”).
- Macro-evolution. All life forms began from a common ancestry; men evolved from lower life forms. Began as a Theory of Charles Darwin, mid 1800's, ~150 years ago; For years has become a widely-accepted “fact” with fanatical arguments on both sides; Has recently has come under question with new discoveries; Many believe it will soon fall as a discredited theory.

Six Major Problems with Darwin's Theory

By J. Budziszewski, World Magazine, 2/26/2000 (worldmag.com/world/issue/02-26-00/national_2.asp)

1. the predictions of Darwin's theory are contradicted by the fossil evidence
2. the overwhelming majority of mutations are harmful rather than beneficial
3. A fatal difficulty for Darwinism is that it cannot explain irreducible complexity
4. [Darwinism cannot] explain preadaptation; Adaptation can work only if there is something to adapt to
5. Darwinism cannot explain how life arises from nonlife
6. There hasn't been enough time for the "impossible" to occur

15 ways to refute materialistic bigotry: A point by point response to Scientific American

By Jonathan Sarfati (http://www.answersingenesis.org/news/scientific_american.asp)

1. Evolution is only a theory. It is not a fact or a scientific law.
2. Natural selection is based on circular reasoning.
3. Evolution is unscientific, because it is not testable or falsifiable.
4. Increasingly, scientists doubt the truth of evolution.
5. The disagreements among even evolutionary biologists show how little solid science supports evolution.
6. If humans descended from monkeys, why are there still monkeys?
7. Evolution cannot explain how life first appeared on earth.
8. Mathematical impossibility.
9. The Second Law of Thermodynamics (“entropy”).
10. Mutations are essential to evolution theory, but mutations can only eliminate traits.
11. Natural selection limits.
12. Nobody has ever seen a new species evolve.
13. Evolutionists cannot point to any transitional fossils.
14. Living things have fantastically intricate features.
15. Life is too complex.

Mark's Questions for the Evolutionist

1. If there was a big bang, what caused the explosion?
2. If there was a point of singularity, where did the dot come from?
3. Where did intelligence come from? Is it physical?
4. How could physical change give rise to a spiritual dimension – a trait universal in man?
5. How could physical change give rise to a sense of conscience or morality?
6. If the universe is a product of time and chance, where did time come from?
7. Who gave chance the properties of action; the ability to do anything?
8. If there was ever a “time” when nothing existed, what could exist now?
9. Are these questions even of such a nature that science can answer?
10. What evidence is there for uniformitarianism since the dawn of time?
11. What empirical evidence could there be regarding the origins of the universe?
12. How much extrapolation can one do and remain in the bounds of legitimate science?

10. The New Evidence that Demands a Verdict

by Josh McDowell, 1999

Part 1: The Case for the Bible

- The Uniqueness of the Bible
- How we got the Bible
- Is the New Testament Historically Reliable?
- Is the Old Testament Historically Reliable?

Part 2: The Case for Jesus

- Jesus, a Man of History
- If Jesus wasn't God, He deserves an Oscar
- Significance of Deity: The 'trilemma' - Lord, Liar, or Lunatic?
- Support of Deity: Old Testament Prophecies fulfilled in Jesus Christ.
- Support of Deity: The Resurrection - Hoax or History?
- Support of Deity: The Great Proposition ('If God became a man, what would He be like?')

Part 3: The Case For and Against Christianity

Section 1: Introduction

- Is the Bible from God?
- The Presupposition of Anti-supernaturalism
- Archaeology and Biblical Criticism

Section 2: The Documentary Hypothesis & Biblical criticism

- Introduction to the Documentary Hypothesis
- Introduction to Biblical Criticism
- Introduction to the Pentateuch
- Development of the Documentary Hypothesis
- Ground Rules
- Documentary Presuppositions
- Consequences of Radical Higher Criticism
- Evidence for Mosaic Authorship
- The Phenomenon of Divine Names
- The Repetition of Accounts and Alleged Contradictions
- Incongruities
- Internal Diversity
- Conclusion to the Documentary Hypothesis

Section 3: Biblical Criticism and the New Testament

- Introduction to New Testament Form Criticism
- Historical Skepticism
- Jesus under Fire
- Conclusion to Form Criticism
- Modern Theology and Biblical Criticism

Part 4: Truth or Consequences

- The Nature of Truth
- The Knowability of Truth
- Answering Postmodernism
- Answering Skepticism
- Answering Agnosticism
- Answering Mysticism
- Certainty vs. Certitude
- Defending Miracles
- Is History Knowable?

An Observation

McDowell's book is a very scholarly defense of the history and accuracy of Scripture, as these chapter headings would indicate.

In some ways, this single book can be thought of as a college course in itself on the topic. McDowell is conservative in his theology, which I am also, so I agree with his arguments (not that I'm capable of critiquing him).

I suggest that you begin your research in this book any time you're challenged to defend your belief in the Bible.

Can We Really Know If The Bible Is God's Word?

By Craig T. Owens, source: <https://www.josh.org/can-really-know-bible-gods-word/>

Have you ever been stumped by someone's argument against Christianity or the Bible? Has anyone ever made fun of you because the Bible sounds like a fairy tale? Over 100 years ago Oswald Chambers described how our post-Christian world was beginning to treat Christianity and the Bible on which it's based—

"We have made ambition and competition the very essence of civilized life. No wonder there is no room for Jesus Christ, and no room for the Bible. We are all so scientifically orthodox nowadays, so materialistic and certain that rationalism is the basis of things, that **we make the Bible out to be the most revolutionary, unorthodox and heretical of books.**"

It's that "rationalism" that we need to address. We need to ask scoffers and seekers alike, "What makes you so sure of your beliefs? How did you come to that conclusion?"

Every human being exercises some sort of faith—that the chair will hold them when they sit down, that their spouse will honor their marriage vows, and that their worldview is correct. We need to explore *what kind of faith* they (and we) have:

- **Unreasonable faith**—believing in something *in spite of* the evidence.
- **Blind faith**—believing in something *without any* evidence.
- **Reasonable faith**—believing in something *because of* the evidence.

I want to show evidence that makes it *reasonable* to believe in the Bible.

Empirical evidence—

1. *The bibliographical test*: determining whether the text of the historical record has been transmitted accurately.

Josh McDowell states, "No other work in all literature has been so carefully and accurately copied as the Old Testament." He can make this claim because the profession of "scribe" was one of the most professional and exacting of all professions. The rigorous standards employed to prove the accuracy of a copy of a biblical manuscript was higher than for any other literature.

Most of our modern-day Bibles are based on a 1000-year-old manuscript. But after the Dead Sea scrolls were discovered, we found biblical manuscripts going back to 250 B.C. that confirmed the accuracy of the manuscripts we already had. This led Dr. Peter Flint to conclude: "The biblical Dead Sea Scrolls are up to 1,250 years older than the traditional Hebrew Bible, the Masoretic text. We have been using a one-thousand-year-old manuscript to make our Bibles. We've now got scrolls going back to 250 BC. ... **Our conclusion is simply this—the scrolls confirm the accuracy of the biblical text by 99 percent.**"

Author	Work	Date written by or between	Earliest manuscript	Time gap in years	Manuscript copies
Homer	<i>Iliad</i>	800 BC	c. 400 BC	400	1800+
Herodotus	<i>Histories</i>	480-425 BC	AD 900	1,350	109
Plato	<i>Tetralogies</i>	400 BC	AD 895	1,300	210
Caesar	<i>Gaullic Wars</i>	58-44 BC	AD 900	950	250+
Livy	<i>History of Rome</i>	59 BC - AD 17	early 5th century	400+	90 partial 60 full
Tacitus	<i>Annals</i>	AD 100	AD 850	750	31
Thucydides	<i>History of Peloponnesian War</i>	480-400 BC	3rd century BC	200	96
	New Testament	AD 50-100	AD 130	50	5,838
	Greek New Testament		AD 400-500	300-400	18,520+

Then regarding the New Testament, Josh McDowell says, “I believe there is more evidence for the reliability of the New Testament than for any other ten pieces of classical literature put together.” Check out this chart reproduced from McDowell’s book *God-Breathed* to see by comparison to other literature, how close in dating the earliest biblical manuscripts are, and how many of those manuscripts have been discovered!

2. *The external evidence test*: determining whether the historical record has been verified or affirmed by data outside of itself.

Over one-fourth of the Bible is prophetic, and two-thirds of its prophecies have already been fulfilled. For example, 700 years before His birth, the city in which Jesus was to be born was identified by a man named Micah.

Time and time again archeologists discover articles that verify the claims in the Bible. This led archeologist Nelson Glueck to conclude, “It may be stated categorically that **no archeological discovery has ever controverted a single biblical reference**. Scores of archeological findings have been made which confirm in clear outline or in exact detail historical statements in the Bible.”

3. *The internal evidence test*: determining how of the historical record stands up to the test of internal validity.

The Bible was written by 45 different authors, over a span of 1500 years, on 3 different continents, and in 3 different languages. Yet there are no contradictions!

Anecdotal evidence—

1. *Changed lives*. My life is one that has been amazingly impacted by the God of the Bible, as was a man named Saul, who had a total about-face after encountering Jesus. As a result, Christianity was spread far and fast through his writings and world travels.

2. *Changed societies*. Wherever the Christian faith of the Bible has been put into practice, societies improve. Leonard Sweet notes—

“Before Christianity, there were cults that practiced all sorts of human sacrifice as well as self-mutilation and self-castration. Before Christianity, the weak were despised, the poor maligned, the handicapped abandoned. Before Christianity, infanticide was rampant, slavery run-of-the-mill, and gladiatorial combat a form of entertainment. In Jesus’ day, Corinth was famous for its temple prostitutes, continuing a long-standing tradition symbolized by the Corinthian athlete Xenophon.... Aristotle...not only condoned institutionalized slavery but provided an elaborate argument in favor of it. As if that weren’t enough, Aristotle called man ‘begotten’ and woman ‘misbegotten,’ and because a woman’s reasoning was ‘without authority’ accepted no female students.

“Only Jesus and His followers known as the church insisted on the concept of human dignity and the value of every human soul. Only the church built hospitals and took care of the abandoned and disabled. Only the church celebrated charity and selflessness as the highest virtue and elevated the status of women.”

Is all of this “proof positive” that the Bible is God’s Word? No, it’s not. But I think the evidence is compelling enough that it is certainly reasonable to reach this conclusion.