

THE NATURE OF TIME



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CHAPTER 1

INTRODUCTION

In the quest of every person who sets out to attempt to determine the validity of the Bible, they must at some point confront the subject of Bible prophecy. Bible prophecy is one of the primary evidences Christians point to that demonstrates the supernatural origin of the Bible – or, in other words, it is how we know the Bible comes from God and not man.

Most people have some awareness of the most basic meaning of the word “prophecy,” understanding it to have something to do with the foreknowledge of things or events. Obviously, for something to be truly prophetic, it must be foretold prior to the events it anticipates. But most people don’t pause to think about the subject of prophecy deeply enough to recognize that the only reason prophecy is incredible to us is because we are trapped within a peculiar dimension called “time.”

Because we are confined within the boundaries of time, we find it incredible that future events could be foretold with incredible accuracy and precision. In this study, we will undertake an investigation of this subject and seek to gain a deeper understanding regarding the scientific underpinnings of our perceptions of time itself – and how these

concepts relate to the theme of Biblical prophecy as being an evidence for the supernatural origin of the Bible.

As we begin, the first thing we need to do is examine three epistemological anchor points that form the basis of our belief in the supernatural origin of the Bible. But first, what is epistemology?

Epistemology: The theory of knowledge, its method, its scope, and its limits. Epistemology is the investigation of what distinguishes justified belief from opinion. It defines what we can actually know.¹

So, let's examine the three points that form the basis of our epistemology...

-The Basis Of Our Epistemology

1. The Bible is a highly integrated message system.
2. The Bible contains an astonishing amount of prophecy.
3. The Bible contains intricately hidden subtleties encoded into the very text itself that clearly transcend the knowledge and intent of the human authors.

Note: We can't fully describe each of the following three points here, but to better understand what we mean by each, please consult the companion study entitled "The Basis Of Our Epistemology".

One of the primary ways you can validate the Bible's extra-dimensional origin is through its continual demonstration of the above three characteristics. Let's define what we mean even more specifically...

Integration is a proof of extra-dimensional authorship because of the following reason – the Bible is one continuous story written over a period of almost 1,500 years, by many human authors who mostly didn't know each other and weren't alive at the same time, and yet, we find that the themes and events in Scripture are woven together as one unified story. This points to a common Author who is behind it all,

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influencing and inspiring the human penmen who wrote down what they were inspired to say.

In other words, imagine your favorite novel or storybook...imagine you one day found out that the chapters were written by different people who mostly didn't know each other and weren't alive at the same time, over a period of 1,500 years...yet, the storyline was flawless, or, to use our term, integrated. Obviously, this is impossible – especially when the earlier chapters predict how the later chapters would turn out with amazing precision – and its predictions align with the record of human history. This points to a common Author outside of time who was guiding and inspiring the human writers to compose this unified story. This is what we mean by integration.

Let's talk more about prophecy for a moment before continuing. What exactly do we mean by prophecy, and how exactly does this prove anything?

The Bible repeatedly demonstrates its uniqueness by making a habit of describing history before it happens. This is what we mean by prophecy. And if this statement is true, it would require then that the author knew what was going to happen ahead of time, which obviously the human writers couldn't. This characteristic of prophecy is a method of authentication that is unique to the true Author (God), because He exists outside of the dimension of time altogether and enjoys a 100% success rate. In other words, we know the Bible cannot come from man – it must come from a Being outside of time itself.

And because the information being given to the Biblical writers is through the Holy Spirit's inspiration – and not the writers' own minds – we should not be surprised to also find content (hidden subtleties) within the Scriptures that must have transcended the authors' intents and understandings of what they were writing.

All three of our epistemological anchor points involve prophecy in the sense of foreknowledge, or knowledge not intrinsic to the writer, yet we thought it would be insightful to try to separate them into three sharp points where we can appreciate the different ways prophecy appears in the Scriptures.

So, we will find that prophecy is not just an odd curiosity - it's a

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demonstration that God is real, that He cares, and that He has chosen to reveal to us in advance what His plans are for the world, and for you and I personally.

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1. -Merriam-Webster, entry "Epistemology," *Merriam-Webster.com Dictionary*. (<https://www.merriam-webster.com/dictionary/epistemology> - Retrieved 11/11/18)

CHAPTER 2

SPECIAL AND GENERAL RELATIVITY

Time is a function that we take for granted because it is so intrinsic to the reality that we live in as humans.

-Special Relativity:

As Dr. Albert Einstein was grappling with the nature of time, he developed his theory of special relativity in 1905, in which he gained some key insights...not the least of which being the fact that:

- Length, mass, velocity and time are relative to the observers measuring them.^{1 2}

The more you actually think about this, the more you discover that these are non-trivial realizations. But let's continue...

-General Relativity:

In 1915, Einstein generalized that understanding to the theory of general relativity. Building upon the insights of Hermann Minkowski

(1864-1909), he eventually accepted the concept of four-dimensional space-time, in which he recognized that:

- There is no distinction between time and space (physicists always speak of “space-time”).
- We live in not only 3 dimensions (length, width, and height) – but 4 – with time being the 4th dimension.³

This today is no longer a theory, but has been confirmed many different ways with great accuracy. It is today a basic insight of science.⁴

But let’s go back to the statement “time is relative to the observer.” What do we mean by this? We will examine it further in the following chapters.

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1. -Vicky Stein, “Einstein's Theory of Special Relativity,” Sept. 20, 2021, *Space.com*. (<https://www.space.com/36273-theory-special-relativity.html> - Retrieved 11/09/18)
 2. -Nick Strobels, “Spacetime,” *AstronomyNotes.com*. (<https://www.astronomynotes.com/relativity/s2.htm> - Retrieved 11/09/18)
 3. -James Overduin, “Einstein's Spacetime,” Nov. 2007, *Gravity Probe B*. (<https://einstein.stanford.edu/SPACETIME/spacetime2.html> - Retrieved 11/09/18)
 4. -Wikipedia contributors, “History of general relativity,” *Wikipedia, The Free Encyclopedia*. (https://en.wikipedia.org/wiki/History_of_general_relativity#Testing_the_theory - Retrieved 11/09/18)

CHAPTER 3

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Let's look further into the statement that "time is relative to the observer" and discover some of the implications of that statement...

-Time Is Relative:

Since Albert Einstein published his Theory of Relativity (the Special Theory in 1905, and the General Theory in 1916), our understanding of time has changed dramatically. According to Einstein, time is relative to the observer – but more specifically, to the motion of that observer. So then, time is not absolute, but relative.¹

Let's examine several examples that demonstrate this...

Example # 1: Two identical atomic clocks located at The National Institute of Standards and Technology in Boulder, Colorado, and The Royal Observatory in Greenwich, England (both accurate to better than 1 second per million years, being based on the natural resonance of the cesium atom, which can be exploited to render extremely precise time standards)

The clock in Boulder, Colorado ticks 5 microseconds/year faster than the identical clock in Greenwich, England. Which is correct?

They both are! These are extremely precise clocks and yet they differ 5 millionths of a second per year. Why?

- The clock at Boulder, Colorado = 5,400 ft. altitude
- The clock at Greenwich, England = 80 ft. altitude

It turns out that atomic clocks, if raised 1 meter, are faster by 1 part in 10^{16} . In other words, the change isn't enough to cause you to rearrange your schedule, but it is predictable and measurable. Time is relative to the observer, and varies according to the difference in gravity, and other factors.²

Example # 2: The Hafele-Keating Aircraft Experiment (1971)

Two atomic clocks were placed on two aircraft going around the world...

- Eastward Plane: this clock lost 0.059 microseconds (compared to clocks at rest at the observatory)
- Westward Plane: this clock gained 0.273 microseconds (compared to clocks at rest at the observatory)

By the time you account for all the differences in the motions, etc., you find a difference of exactly what the theory predicted, and that was exactly what was measured.³

Example # 3: Twin hypothetical astronauts, one sent out to space and one kept on earth

Alpha Centauri (the closest star to earth in the night sky) is a distance

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of about 4.5 light years away (in astronomy, a light year is the distance light will travel in one year).

If we send one of our theoretical astronauts to Alpha Centauri and back at half the speed of light, it would take him 9 years to get there and another 9 years to get back, for a total of 18 years (Keep in mind, that is in earth time! The question is, what does his clock read as he makes this trip?)

When calculated (using the Lorentz transformations⁴), his clock in the spaceship will read 15 years and 7 months. In other words, he will be 2 years and 5 months younger than his identical twin brother on earth!⁵

The key insight for us to recognize here is that time for the astronaut in space would actually be different than time for us on the earth by nature of his velocity, etc. What insight does this prove to us? It turns out that time is not uniform! Let's discuss this further...

-Time Is Not Uniform:

Time is a physical property, just like length, width, and height are, because it varies when subjected to different physical properties.

Time varies according to:

- Mass
- Acceleration
- Gravity
- Velocity

You and I exist in more than 3 dimensions (apparently 10 or more).⁶ Dr. Einstein's work proved that time is the 4th dimension.

-Linear Time:

Linear time is the concept whereby time is seen sequentially, as a series of events that are leading toward something – starting with a beginning and progressing on to an end. This is the way we as humans experience time. You may think of it as represented by a timeline:



The dimension of time is an unusual dimension because we can only move forward, never backward. We can look back (history) and move forward, but we can't look forward and move back. In other words, none of us can remember tomorrow.

The key for us here is that looking forward in time is not possible for us because we as humans are bound by the linear constraints of time. Looking forward however, is a key element involved in what we call prophecy. What we want to do in this study is to demonstrate why looking forward in time (prophecy) would require a supernatural insight – in other words, the kind of insight humans do not have. The bottom line here is, if you can prove that the Bible required supernatural insight, then you have in essence proven that it is the Word of God – not man. Let's continue...

-Eternity:

One other concept we need to discuss is the term "eternity." When we encounter this word in church, or anywhere else, we tend to think of it in linear terms. In other words, we think of eternity as simply "having a lot of time." We tend to visualize God as being someone who has "lots of time." But it turns out that although the concept of

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God as being someone who simply has “lots of time” is very poetic, it’s actually bad physics.

What do we mean by that? Well, you may recall that earlier, we established that time is actually a physical dimension because it varies according to different physical properties. We noted that time is subject to the restrictions of mass, acceleration, gravity, velocity, etc. Therefore, in order to determine God’s relationship to time, we need to understand his nature in reference to these physical properties.

1. -“Relativistic Time,” *ExactlyWhatIsTime.com*. (<http://www.exactlywhatistime.com/physics-of-time/relativistic-time/> - Retrieved 11/09/18)
2. -Dan Falk, *In Search of Time*, Toronto: McClelland and Stewart, 2008, p. 174.
3. -Wikipedia contributors, “Hafele-Keating experiment,” *Wikipedia, The Free Encyclopedia*. (https://en.wikipedia.org/wiki/Hafele-Keating_experiment - Retrieved 11/09/18)
4. -“Lorentz Transformations,” *BYJU’S.com*. (<https://byjus.com/physics/lorentz-transformations/> - Retrieved 7/10/19)
5. -Wikipedia contributors, “Twin paradox,” *Wikipedia, The Free Encyclopedia*. (https://en.wikipedia.org/wiki/Twin_paradox - Retrieved 11/09/18)
6. -Matt Williams, “A Universe of 10 Dimensions,” Dec. 10, 2014, *Universe Today*. (<https://www.universetoday.com/48619/a-universe-of-10-dimensions/> - Retrieved 11/09/18)

CHAPTER 4

THE NATURE OF GOD

In order to understand how God interacts with the dimension of time, we need to understand His nature in reference to the various physical properties that act upon and influence time. We need to start by asking one key question that will help us understand this insight...

-The Key Question:

Is God subject to the restrictions of...

- Mass?
- Velocity?
- Acceleration?
- Gravity? ...etc.?

Is He subject to any physical properties?

....No!

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That is what being “God” means – that He is not subjected to the physical forces of the universe! Included in the Judeo-Christian understanding of God, as He describes Himself in the Scriptures, is the recognition of certain aspects and attributes of His being – aspects such as omnipotence (or all-powerful), omniscience (or all knowing), and omnipresence (being present everywhere simultaneously). These qualities that define “being God” transcend the laws, forces, and limitations of nature and the physical universe.

In fact, logic would require that since everything had a beginning (or came into being at a certain point in time), then something greater than or external to that thing must have acted upon it to cause it to come into being. In other words, nothing in the universe can create itself. Something’s origin always requires external forces.

So, when you apply this logic to the forces of the universe, the same must be true. In order to cause them to come into being, God had to be outside of them, or external to them – not subject to them. This aligns with the Biblical description of the aspects and attributes of God’s being.

-Hardware vs. Software – Does God Have Mass?:

To understand this better from the standpoint of physics, we need to examine this by taking a look at the concept of software and hardware. Since most people these days are somewhat familiar with computers, this example should be helpful.

Here is a question: If you knew everything there is to know about every mechanical component inside of a computer (circuits, microchips, etc.), could you tell me anything about its behavior?

No! And why not? Because the mechanical items we just mentioned (and others) make up its hardware. But what determines its behavior is its software! The hardware is simply the physical residence for which to run the software. But the software is what determines the computer’s behavior, characteristics – and within the limits of the hardware’s capabilities, its performance. You can know every-

thing about the computer's hardware and know nothing about its software, or its behavior!

Let's take this further in order to gain an understanding that will help us...

Picture a USB thumb drive with unlimited storage capacity. Let's assume this thumb drive is completely blank – no information is currently being stored on it. If we weigh the drive on a scale, let's say it comes out to be 0.7 ounces.

Here's the next question: If we load that thumb drive with over a trillion bytes of software, what will it then weigh? It will weigh exactly the same – 0.7 ounces – the same as it did when it was blank. Why?

Because software has no mass! It is simply codes, or information. We can even send it through the airwaves. It has no mass of its own. That is a key insight here.

Let's now take that concept and apply it to ourselves – and to God. The real you – your personality, your life force – call it whatever you want, your soul, spirit, whatever – is not visible. It is software, not hardware. It's constrained within your body, which acts as the hardware. But the real you is all software, and has no mass. But while we are in this physical existence on earth, we trapped are in a physical body. God however, is not trapped in a physical body. He, unlike us, has no mass. Where are we going with this?

If we apply the great insights of Dr. Einstein, which, as we have already discussed, included the realization that time is a physical property, and time varies with mass, acceleration, gravity, etc., then we arrive at a profound insight.

That which has no mass has no time! The true “you” (the software) is eternal, and will live on after your body (the hardware) dies. But all humans are constrained within a physical body, bordering them within the time dimension while alive on earth. But God on the other hand – not being constrained within a physical body – has no mass and therefore has no time. He is eternal. That is what the Bible has

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declared all along. And that, apparently, is the conclusion deducible from modern physics.

So, here is the key: God is not simply one with “lots of time,” but rather, He is outside the restrictions of time itself!

What are the implications of that statement of God being “outside the restrictions of time itself?” Consider the following conclusion:

This uniqueness of being outside of time altogether is God’s personal imprint! This quality is like His signature. In other words, it’s an attribute that He exploits to authenticate His messages (the Bible).

“For thus saith the high and lofty One that inhabiteth eternity...”

-Isaiah 57:15a

But here’s the next logical step to consider... since God has the ability to create us in the first place, He certainly has the means to get a message to us...

...but the key question here is how does He authenticate His message so that we know it is really from Him, and is not a fraud or a contrivance of men?

Well, one of the ways He can do this, is by relying on an attribute that is unique only to Him, in order to authenticate His message. What attribute? The attribute we just identified – freedom from the constraints of time!

“...for I am God, and there is none else;

I am God, and there is none like me,

Declaring the end from the beginning, and from ancient times the things that are not yet done...”

-Isaiah 46:9-10

God alone knows the end from the beginning, and He uses this unique attribute to authenticate His Word by utilizing a function called prophecy.

CHAPTER 5

THE GEOMETRY OF ETERNITY

Let's discuss one last concept that will help us anchor our perceptions of time. We will use a very crude but helpful analogy in order to gain insight into the difference between the way we perceive events and the way God perceives them in relation to this issue of the linearity of time (linear time: past, present, and future).

Consider the analogy of a parade:

Let's say someone sits on the street corner and watches a parade going by. For that person sitting there, they see the bands, the marching units, the parade floats, etc., coming one at a time and passing them by. They see it in linear form, like a timeline – as we discussed before.

But for someone who is outside the physical plane of that existence, they are no longer restricted to watching the parade in that same sequence. For instance, if you were to go up in a helicopter over the parade, your viewpoint would be quite different. Being outside of that parade's plane of existence (the street level), you can now see everything simultaneously. You can see the staging area where the parade is beginning from, you can see the area the parade will pass

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through, and you can see the area where the parade will end. You can literally see the end from the beginning.

Life is very much like a parade in this way. We see events pass us by in sequence, like a linear timeline. We encounter events in this sequence because we are bound by the constraints of time since we are physical beings having mass. But for God, who is outside of time altogether, the past, present, and future in a sense are simultaneous. He can see the end from the beginning, as if it's already happened – and as far as He's concerned, it already has. He is outside of our time domain.

Consider the following quote by Dr. Einstein:

“People like us, who believe in physics, know that the distinction between the past, the present, and the future, is only a stubbornly persistent illusion.”¹

Past, present, and future are concepts we know as humans only because we are bound within the time dimension – but in actuality, in a sense, its just an illusion. There is a reality that exists outside of it.

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1. -Wikipedia contributors, “Michele Besso,” *Wikipedia, The Free Encyclopedia*. (https://en.wikipedia.org/wiki/Michele_Besso - Retrieved 11/09/18)

CHAPTER 6

CONCLUSION

After examining what we now know about time itself, we should be able to establish a firmer grasp on why and how God is able to utilize His unique quality of being “outside of time” as a supernatural verification of His Word. Because humans are bound by the physical constraints of time, we recognize that the Bible’s strategic use of prophecy is an evidence of its extra-dimensional origin. God deliberately uses prophecy to authenticate His Word to us so that we know for sure it is from Him.

Using this simple exploration of the nature of time as our backdrop, we can begin to recognize how the use of prophecy demonstrates that the Bible can accurately be described as a message system originating from outside of time itself, pointing to its authenticity as being God’s Word.¹

1. For further information on this subject, see: Chuck Missler, *Beyond Time and Space*, C’oeur d’Alene, ID: Koinonia House, 2016.

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