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The Nature of Time

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CONTENTS

Chapter 1 1
Introduction
Chapter 2 5
Special and General Relativity
Chapter 3 8
The Nature of Time
Chapter 4 14
The Nature of God
Chapter 5 18
The Perspective of Eternity
Chapter 6 20
Conclusion

Bibliography 23

CHAPTER 1
INTRODUCTION

One of the most remarkable claims made by the Bible is that God can reveal events before they happen. Throughout Scripture, we repeatedly encounter predictions concerning people, nations, kingdoms, wars, the coming of the Messiah, and events that would not occur until years, centuries, or even thousands of years after the words were originally written. This is what we commonly refer to as prophecy. Most people have at least a basic understanding of what prophecy means. For something to be genuinely prophetic, information about an event must be given before that event occurs. But there is a deeper question that we do not often stop to consider: Why is prophecy so extraordinary in the first place?

The answer has everything to do with the peculiar dimension in which we live called "time." Think about the way you experience your own existence. You can remember yesterday. You are experiencing the present moment right now. But you cannot remember tomorrow. You can make plans for tomorrow, speculate about what might happen, or make predictions based upon what you presently know, but you cannot actually observe tomorrow before it arrives. The future remains hidden from you until you reach it. This is one of the most basic realities of human existence, yet we rarely stop to think about

how strange it actually is. We experience events sequentially. One moment follows another. We appear to be carried forward through time in only one direction.

And that is precisely what makes genuine prophecy so remarkable. If a human writer accurately describes specific events that will occur hundreds of years in the future, we immediately confront a problem. How could that writer possess information about events that had not yet occurred? The writer could not travel forward in time, observe those events, return to his own century, and record what he had seen. Like every other human being, he was confined to his own location within the progression of time. Yet the Bible repeatedly claims that God possesses precisely this kind of knowledge. He does not guess about what will happen. He declares it.

In Isaiah 46:9-10, God makes an extraordinary statement about Himself:

> **9** Remember the former things of old: for I am God, and there is none else; I am God, and there is none like me, **10** Declaring the end from the beginning, and from ancient times the things that are not yet done, saying, My counsel shall stand, and I will do all my pleasure:
>
> -Isaiah 46:9-10

Notice the significance of that statement. God identifies the ability to declare "the end from the beginning" as something connected with His unique nature. Human beings experience history as it unfolds, but God claims knowledge of events that, from our perspective, have not yet taken place. This raises an important question: What exactly is time, and what is God's relationship to it?

We normally take time for granted because it is such an intrinsic part of our existence. Seconds become minutes, minutes become hours, hours become days, and our entire lives unfold within this continual progression. Time seems so natural and absolute that we rarely question what it actually is. Modern physics, however, has forced us to think about time very differently. During the twentieth century, discoveries concerning relativity revealed that time is far

more unusual than ordinary human experience would lead us to believe. Time is connected with the physical universe in ways that earlier generations did not understand, and the rate at which time passes can even differ according to physical conditions such as motion and gravity. These discoveries do not explain God, nor will we attempt to use physics to prove everything Scripture teaches concerning His nature. They do, however, challenge the simple assumption that time must operate everywhere and under every circumstance exactly as we experience it in everyday life.

These questions have profound implications for biblical prophecy. If human beings are confined to experiencing history sequentially, then accurate knowledge of future events cannot naturally originate with us. If the Bible contains specific information about history before that history occurs, the source of that information must possess knowledge unavailable to the human writers who recorded it. In the companion study *The Basis of Our Epistemology*[1] we examine more broadly why prophecy provides evidence for the supernatural origin of the Bible. In this study, however, we are going to approach the subject from a different direction. Rather than concentrating primarily on what prophecy proves, we are going to investigate why knowledge of the future is inaccessible to us and what the nature of time may help us understand about God's ability to reveal it.

To do that, we will begin by examining what modern science has discovered about time through the theories of special and general relativity. We will then look more closely at the nature of time itself, including the way human beings experience its apparent linear progression. From there, we will consider what Scripture reveals concerning the nature of God and His relationship to the physical universe before finally bringing these concepts together and considering their implications for eternity and prophecy.

Our goal is not to turn the Bible into a physics textbook or to suggest that modern science has somehow discovered everything there is to know about God. Rather, our goal is to examine what we know about the strange nature of time and use those insights to better appreciate something Scripture has declared for thousands of years:

God is not limited in the way we are. When God describes Himself as the One who can declare "the end from the beginning," He is claiming access to knowledge that lies completely beyond ordinary human ability. This is why prophecy is far more than an interesting curiosity. It confronts us with evidence of information originating from beyond the limitations of the human writers who recorded it.

And that brings us to the central question of this study: What is time, and what can its nature help us understand about the God who declares the end from the beginning?

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1. Michael Filipek, *The Basis of Our Epistemology*, Springfield, NJ: LetUsReason Publishing, 2026.

CHAPTER 2

SPECIAL AND GENERAL RELATIVITY

Time is something we normally take for granted because it is such a basic part of our everyday experience. We naturally assume that time passes at the same rate for everyone, everywhere. But during the twentieth century, Albert Einstein's work radically changed our understanding of time and showed that this is not actually the case.

Special Relativity

In 1905, Einstein introduced his **theory of special relativity**, which dramatically changed our understanding of space and time. One of its most important discoveries was that measurements of **space and time are not absolute**, but can *differ* depending upon the **motion** of the observer. In other words, two observers moving at different velocities can actually measure different amounts of elapsed time between the same events.[1]

This effect is known as **time dilation**. At higher speeds relative to an observer, something remarkable happens: the observer measures time as passing more slowly for the moving person or object. The greater their relative speed, the greater the measured difference.

Under normal everyday conditions, the difference is far too small for us to notice, but at very high speeds it can become significant and measurable.

General Relativity

Einstein later expanded these ideas with his **theory of general relativity**, completed in 1915. General relativity showed that motion is not the only thing that can affect the passage of time. **Gravity** can affect it as well. For example, a clock located in a stronger gravitational field will run slightly slower than a clock located in a weaker gravitational field.[2]

These discoveries led to our modern understanding of what physicists call "spacetime." Rather than viewing space and time as completely separate things, they are understood as interconnected parts of the physical universe. **We experience three dimensions of space – length, width, and height – along with the dimension of time.**[3]

This may sound strange, but these effects are not simply theoretical ideas. They have been repeatedly measured and confirmed with extremely accurate atomic clocks. Scientists can actually place clocks under different conditions of motion or gravity and measure small differences in the amount of time that passes for each one.[4]

This gives us the key point we need for this study: time is not as simple or as uniform as it appears to us in everyday life. Its passage can actually vary depending upon physical properties like motion and gravity. In the next chapter, we will look at several examples that demonstrate this remarkable fact and help us better understand the strange nature of time itself.

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2. James Overduin, "Einstein's Spacetime," Nov. 2007, Gravity Probe B. (https://einstein.stanford.edu/SPACETIME/spacetime2.html - Retrieved 08/22/26)

3. Nick Strobel, "Spacetime," AstronomyNotes.com. (https://www.astronomynotes.com/relativity/s2.htm - Retrieved 11/09/18)
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CHAPTER 3

THE NATURE OF TIME

In the previous chapter, we saw that one of the remarkable discoveries of modern physics is that time is not the fixed and universal reality it appears to be from ordinary human experience. Let's now examine this idea more closely and consider some of its implications.

Time Is Relative

According to relativity, different observers can measure different amounts of elapsed time depending upon their motion and the gravitational conditions in which they are located. As mentioned, this effect is known as time dilation. Although the differences are usually far too small for us to notice in everyday life, they are real, measurable, and repeatedly confirmed by experiment.[1] Let's consider several examples.

Example #1

One of the remarkable predictions of general relativity is that gravity affects the passage of time. A clock located at a higher eleva-

tion, where the gravitational field is slightly weaker, will run slightly faster than an otherwise identical clock located at a lower elevation.

In 2010, researchers at the National Institute of Standards and Technology demonstrated this effect using two extremely precise optical atomic clocks. When one clock was raised by only about 33 centimeters, or roughly one foot, researchers were able to measure the difference in the rate at which the two clocks operated. The clock at the higher elevation actually ran slightly faster, just as general relativity predicted.[2]

The difference is extraordinarily small, but that is not the important point. The important point is that the difference exists at all. Two extremely precise clocks subjected to slightly different gravitational conditions can accumulate different amounts of elapsed time. Time does not pass at exactly the same rate under every physical condition.

Example #2

Another famous demonstration occurred in 1971 in what became known as the Hafele-Keating experiment. Physicists Joseph Hafele and Richard Keating flew four cesium atomic clocks around the world aboard commercial aircraft, first eastward and then westward, and afterward compared them with the atomic time standard maintained at the U.S. Naval Observatory.[3]

The results were remarkable. Relative to the observatory's time standard, the clocks traveling eastward *lost* 59 nanoseconds, while those traveling westward *gained* 273 nanoseconds. These measured differences were in good agreement with the predictions of relativity after accounting for both the motion of the aircraft and the effects of gravity.[4]

Again, these differences were extremely small, but they were real. The clocks were not giving conflicting measurements. Each accurately recorded the amount of time that had elapsed along its own path, with differences in velocity and gravity causing time itself to pass at a slightly different rate. That is the astonishing point: the difference was

not in the clocks, but in the amount of time each one actually experienced.

Example #3

We can make this phenomenon even more dramatic by considering a hypothetical journey at a much greater velocity. Imagine identical twins, one remaining on Earth while the other travels through space. Suppose the traveling twin makes a round trip to Alpha Centauri, the nearest star system to our own, approximately 4.5 light-years away, traveling at half the speed of light.

From Earth's perspective, the journey would take about nine years each way, or roughly eighteen years for the round trip. But for the traveling twin, only about fifteen years and seven months would elapse. In other words, when the twins are reunited, the traveling twin would be *more than two years younger* than the twin who remained on Earth.[5]

While this simplified example ignores the time required for acceleration, deceleration, and turnaround, it illustrates the basic idea commonly known as the "twin paradox." Because the twins follow different paths through spacetime, they experience different amounts of elapsed time, demonstrating again that time is not absolute but relative.[6]

Time Is Not Uniform

These examples lead us to an important realization: time does not pass at exactly the same rate for everyone under every circumstance. Its passage can be affected by physical properties like motion and gravity. In other words, there is no single universal clock ticking at exactly the same rate everywhere in the universe.

This does not mean that time is imaginary or that the clocks are somehow wrong. The differences are real, predictable, and measurable. Two clocks can experience different amounts of elapsed time and both still be giving perfectly accurate measurements.

This is one of the reasons modern physics speaks of "spacetime." We experience three dimensions of space – length, width, and height – along with the dimension of time. Space and time are not the same thing, but they are connected as part of the physical universe in which we live.

The Linearity of Time

There is another characteristic of time that is especially important to our study. Whatever relativity may tell us about the rate at which time passes, human beings still experience events sequentially. One event occurs, followed by another, and then another. We remember the past, experience the present, and anticipate the future. You may think of our experience of time as a timeline extending from what has already happened toward what has not yet occurred.

From our perspective, we can move only forward through that sequence. We can remember yesterday, but we cannot remember tomorrow. We can study history because those events have already occurred, but we cannot observe future history before we arrive there. We can predict, calculate, speculate, and plan, but none of those things gives us direct knowledge of events that have not yet taken place.

This distinction is extremely important when we return to the subject of prophecy. Relativity can cause different observers to experience different amounts of elapsed time, but it does not provide ordinary human beings with the ability to look ahead and obtain information from future history.

This is why genuine prophecy presents such an extraordinary problem from a purely human standpoint. If specific information about future events can be shown to have been recorded before those events occurred, that information could not have originated through ordinary human observation. The writer somehow possessed knowledge that was unavailable from his own position within time. This is precisely why prophecy can provide evidence that the ultimate source of the information transcends the limitations of the human writer.

Eternity

This brings us to one final concept we need to consider: eternity. We commonly think of eternity as an endless extension of time, as though eternity simply means having an unlimited number of years. When we speak of God as eternal, we may picture Him as someone who has existed for an unimaginably long time and will continue existing forever.

But is that an adequate way to understand God's relationship to time? The discoveries we have examined should at least caution us against assuming that our ordinary human experience of time represents the only possible relationship to it. Modern physics has shown that time does not always pass at the same rate for everyone. Depending on factors such as motion and gravity, two people can actually experience different amounts of time.

Physics alone cannot tell us what God's relationship to time must be. That is ultimately a theological question. But what we have learned about time provides an important backdrop for asking that question. If God is the Creator of the physical universe and the One whom Scripture describes as eternal, what relationship does He have to the dimension of time in which His creation exists? That is the question we will examine next.

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1. Chou et al., pp. 1630-1633.
2. Ibid.

3. J.C. Hafele and Richard E. Keating, "Around-the-World Atomic Clocks: Observed Relativistic Time Gains," in *Science*, Vol. 177, No. 4044, July 14, 1972, pp. 168-170. (https://pubmed.ncbi.nlm.nih.gov/17779918/ - Retrieved 08/22/26)
4. Ibid.
5. Samuel J. Ling, Jeff Sanny, and William Moebs, "5.3 Time Dilation," in *University Physics Volume 3*, Houston, TX: OpenStax, 2016. (https://openstax.org/books/university-physics-volume-3/pages/5-3-time-dilation - Retrieved 08/22/26)
6. Ibid.

CHAPTER 4

THE NATURE OF GOD

In the previous chapter, we saw that time is connected with the physical universe in ways that are far more unusual than we normally realize. The amount of time that passes can vary according to relative physical conditions such as motion and gravity. We also saw that human beings experience time sequentially, moving from the past through the present and toward the future.

This raises an important question: What relationship does God have to the dimension of time in which we live? To answer that question, we first need to recognize a basic distinction between God and the universe He created.

The Key Question

Is God subject to the same physical conditions that affect us? Is He limited by mass, velocity, acceleration, gravity, or any of the other physical forces operating within the universe?

The answer, of course, is no. God is not a physical object located somewhere within the universe. He is the Creator of the universe, and therefore He is not subject to the forces that operate within it. Scripture describes Him as omnipotent, meaning all-powerful; omniscient,

meaning all-knowing; and omnipresent, meaning present everywhere. In other words, God is not limited by the physical conditions that govern created things.

Think about the logic involved. The universe, along with all of its physical laws and forces, is part of the created order. God is not simply another part of that system. He is the One who created it, and therefore He is not dependent upon the conditions He brought into existence.

This becomes especially important when we consider time. We have already seen that time is part of the physical structure of the universe and that its passage can be affected by physical properties like motion and gravity. If God created the spacetime in which the universe exists, then He is not confined by time in the way that we are. In other words, God is not bound by the dimension of time that governs the physical universe He created.

Hardware Versus Software

A simple computer illustration may help us understand the difference. A computer contains physical hardware: circuits, processors, memory chips, drives, and other physical components. You could examine every part inside the computer and learn exactly how the machine is built, but that would not necessarily tell you what information or programs are stored on it. It might contain accounting software, photographs, books, music, or a video game. The hardware and the information it carries are related, but they are not the same thing.

Consider something even simpler. Imagine a completely blank USB thumb drive. Suppose we place it on an ordinary scale and weigh it. Then we load the drive with an enormous amount of information: books, photographs, documents, music, and computer programs. Of course, if we place it back on the same scale, *it weighs exactly the same*. Yet something very significant has changed. The drive now contains an enormous amount of information that was not there before.

Why? Because the information itself is not another physical object that has been added to the drive. It does not have physical mass of its

own in the same sense as the hardware that carries it. The hardware belongs to the physical world. The information is something different.

And here is the key point for our study. The physical things within our universe are subject to physical conditions such as motion and gravity, which we have already seen can affect the passage of time. But something that is not itself a physical object is not subject to those physical conditions in the same way.

Now apply that basic idea to God. God is not made of physical matter. He has no physical mass, He is not traveling through space at some particular velocity, and He is not sitting within some gravitational field that causes time to pass at a particular rate for Him. He is the Creator of the entire physical system in which those things operate. This is what we mean when we say that God exists *outside* the restrictions of time altogether.

This also helps us better understand what we mean by eternity. We sometimes picture God as simply having existed for an incredibly long time, as though He has been watching an endless clock tick for billions upon billions of years. But eternity is far greater than simply having "lots of time." God exists beyond the limitations of time altogether. That is what we mean when we say that God is eternal. This is consistent with the way Scripture describes Him:

> For thus saith the high and lofty One **that inhabiteth eternity,** …
> -Isaiah 57:15a

That is an extraordinary statement. God "inhabits eternity." He is not restricted to our position within the passing sequence of moments that we call past, present, and future.

God's Signature

This brings us to the most important question of all: if God has the ability to communicate with us, how can He authenticate that message as truly coming from Him? 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 is this: How does He *authenticate* His message so that we know it is really from Him and 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* to Him. What attribute? The attribute we just identified – freedom from the constraints of time! This uniqueness of existing outside of time altogether is God's personal imprint. This quality is like His signature. In other words, it is an attribute He uses to authenticate His message – the Bible.

> 9 Remember the former things of old: **for I am God, and there is none else; I am God, and there is none like me, 10 Declaring the end from the beginning, and from ancient times the things that are not yet done**, saying, My counsel shall stand, and I will do all my pleasure:
>
> -Isaiah 46:9-10

God Himself points to this ability as one of the things that sets Him apart from everyone else. He declares "the end from the beginning." In other words, He knows what will happen before, from our point of view, those events ever take place. God alone possesses this complete knowledge of the future, and He uses this unique attribute to authenticate His Word through the phenomenon we call prophecy.

In the next chapter, we will use one final illustration to help us picture the difference between our limited view from within time and God's view from beyond it.

CHAPTER 5

THE PERSPECTIVE OF ETERNITY

Let's consider one final concept that will help us better understand the nature of time. We will use a simple but helpful analogy to illustrate the difference between the way we experience events from *within* time and the way God sees them from *beyond* it.

Consider the analogy of a parade. Imagine someone sitting on a street corner watching the parade pass by. From that position, the bands, marching units, floats, and everything else come into view one at a time and then disappear down the street. The observer experiences the parade as a sequence. One part comes first, another follows, and the rest cannot be seen until it eventually arrives.

Now imagine viewing that same parade from a helicopter high above the street. Your perspective would be completely different. You would no longer be limited to seeing only the small portion passing directly in front of you. From above, you could see the staging area where the parade begins, the route it is traveling, and the place where it will eventually end. You could see the entire procession spread out before you at once. In a very real sense, you could see the end from the beginning.

Our experience of life is much like the person sitting at street level. We experience history one moment at a time. Yesterday has already

passed, today is happening now, and tomorrow remains ahead of us. We cannot see what is coming around the corner because we are living within the linear sequence itself.

God, however, is not limited to our position within time. Because He exists outside of time altogether, the past, present, and future are, in a sense, simultaneous before Him. He can see the end from the beginning as though it has already happened because He is not waiting for history to unfold one moment at a time. For us, tomorrow has not yet arrived. For God, no part of history lies beyond His view.

This gives us another way to understand how God can know and declare future events with absolute certainty. What we call the "future" is hidden from us because of our limited position within time. But God sees the entire course of history from a perspective that is not restricted to any single point along that timeline.

Consider the following statement by Dr. Albert 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 very real distinctions to us because we experience life from within time, one moment after another. But Einstein's observation reminds us that our experience of time does not necessarily describe reality from every vantage point. What we call yesterday, today, and tomorrow reflects our limited position within the sequence of time itself.

That is the central point. We see history unfold one moment at a time. God is not confined to that sequence. He sees the whole course of history at once – the end from the beginning.

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1. Albert Einstein, letter to the family of Michele Besso, Mar. 21, 1955, qtd. in Mohammed Khan, "Member Views," *Time's News*, No. 40, Mar. 2009, p. 6. (https://studyoftime.org/wp-content/uploads/2021/11/Times-News-2009.pdf - Retrieved 10/13/26)

CHAPTER 6
CONCLUSION

After examining the nature of time, we should now have a much clearer understanding of why prophecy is such a remarkable means of authenticating God's Word. We have seen that time is not the simple, fixed reality it appears to be in everyday life. Its passage can vary according to physical conditions such as motion and gravity, while we as human beings remain bound to experiencing linear history one moment at a time.

God, however, is not bound by the physical universe He created. He is not confined to our position within time, waiting for tomorrow to arrive before He can know what it contains. He sees the entire course of history from beginning to end. This is exactly what He declares about Himself when He says that He is the One who knows "the end from the beginning."

This gives us a much deeper appreciation for the significance of Bible prophecy. Human writers cannot naturally know specific events that will take place hundreds or thousands of years in the future. Yet the Bible repeatedly contains information given in advance about events that would occur long after the human writers were gone. This is why prophecy serves as God's personal signature upon His Word,

demonstrating knowledge that could not have originated with the human writers themselves.

Using this simple exploration of the nature of time as our backdrop, we can therefore better understand why the Bible can accurately be described as a message originating from outside of time itself. God deliberately uses His knowledge of the future as a unique means of authenticating His Word. This provides evidence that the message ultimately comes not from man, but from the One who stands beyond the limitations of time and declares the end from the beginning.

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