

Chapter 1

How Can This Be?

Realizing Not Everything Needs to Be Rational

At the Last Supper, the night before He died, Jesus of Nazareth gathered with His twelve apostles for a Passover meal. During that meal, He deviated from the normal Passover ritual, took bread, blessed it, broke it, and said, “This is my body” (Mark 14:23).² Similarly, He took wine, blessed it, and said, “This is my blood.” Christians now call this ritual the Eucharist. For some, it is merely a memorial of Jesus and the Last Supper. For others, it is a source of God’s life. For Lutherans, high Anglicans, Catholics, and Orthodox, it is truly Jesus. It is, according to the Catechism of the Catholic Church, the source and summit of the Christian life, the source and summit of our ecclesial life.³ Such Christians give the Eucharist many names—Holy Communion, the bread from heaven, the most precious blood, the food of angels, the body and blood of our Lord Jesus Christ, viaticum, the medicine of immortality, the most holy mystery, and the list goes on. It is, they say, the Real Presence of our Lord Jesus Christ, confected through the words of consecration by the ordained priest, from bread

² Unless otherwise noted, scripture quotations are taken from the Revised Standard Version of the Bible, published by the National Council of Churches of Christ. It can be found online at www.biblegateway.com/versions/Revised-Standard-Version-Catholic-Edition-RSVCE-Bible/#books.

³ *Catechism of the Catholic Church*, 1324 (New York: Doubleday, 1995), 368. Future catechism quotations will be identified simply as CCC xxxx, where xxxx is the quotation number.

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and wine to His body, blood, soul, and divinity. They say this presence is above and beyond Jesus's presence in the Word, when two or more are gathered in His name or when they simply pray to Him. His presence is both spiritual and physical, human and divine—the same as when He appeared in the upper room on the day of His resurrection. They surround this Eucharist in liturgy. This liturgy also has many names—the Holy Sacrifice of the Mass, the divine liturgy, the Lord's Supper, the most holy sacrament of the altar, the breaking of the bread, the Eucharistic celebration, and many other names, I am sure.

Yet is there a problem here? The sacred host they receive looks like bread, tastes like bread, and smells like bread. The precious blood they receive looks like wine, tastes like wine, and smells like wine. Are they fooling themselves? Are they being irrational?

For Catholics particularly, this is not a miraculous one-time event; rather, it happens thousands and thousands of times, in thousands and thousands of places, *each and every day*. If this were a one-time event, we could say that such people were fooled or maybe that it was mass hysteria, that Catholics and others are just an uneducated, superstitious people or some other such sentiment. But this is not the case. The Catholic Church (from which came the other Christian churches) has proclaimed this doctrine for two thousand years. Far from being a superstitious institution, the Catholic Church, through its members, helped found the university system, was involved in the discovery of the scientific method, helped create international law, spurred the development of the arts, and has had many other cultural influences.⁴ The Catholic Church is, in fact, a highly educated, systematized organization that shepherds over 1.2 billion members. Some of its past members were certainly highly educated and have included Gregor Mendel,⁵ an Augustinian friar who is considered the father of modern genetics; Nicholas Copernicus,⁶ a lay canon of the church and the father of modern astronomy, who gave us

⁴ For a good read and to discover how Christianity has influenced the world, see Thomas Woods Jr., *How the Catholic Church Built Western Civilization* (Washington, DC: Regnery Publishing, 2005).

⁵ http://en.wikipedia.org/wiki/Gregor_mendel.

⁶ http://en.wikipedia.org/wiki/Nicolaus_Copernicus.

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the description of our planetary motion in the solar system; and Father Georges-Henri Lemaitre, the father of the big bang theory of the origin of the universe; among many, many others. This is just the tip of the iceberg with regard to the brilliance of some of the church's members. In fact, in the United States to be a Catholic Church priest, one typically has to have four years of undergraduate philosophy, followed by four or even more years of postgraduate theology study.⁷ Other countries also have similar requirements. Jesuits, an order of priests dedicated to helping promote social justice and education, require eight to fourteen years of formation and education⁸ and are not ordained for a couple of years after that. Most of the Catholic Church priests have a master's degree in divinity or theology, or a PhD degree, or even multiple degrees. It would appear that the Catholic Church—and similarly, the Orthodox, Lutheran, Anglican, and other churches that believe in the Real Presence—are among the most educated organization in the history of the world. But why haven't any of these brilliant individuals seen that this belief in the Real Presence is irrational nonsense and subsequently gone on to correct their church's position?

So what gives? Are Catholics and other believers in the Real Presence all knuckleheads or lunatics? Wouldn't it be so much simpler to just call the Eucharist a symbol of Christ? Isn't it just foolish thinking to think that God would transform a piece of bread to become God? I mean, to our rationalistic minds, isn't it obvious? Isn't the thought of the host being the body and blood of Jesus simply irrational? On the other hand, isn't it just as irrational to believe that such a large group of educated people would hold on to such an irrational idea over a long period? Hundreds of thousands of articles and books must have been written on the topic by now. This knowledge that others have gained and proclaimed widely for such a long time cannot be arbitrarily dismissed just because, perhaps, it doesn't make sense to us. Rather, it needs to be examined, evaluated, and investigated for consistencies and inconsistencies. We must examine what the Catholic Church and other

⁷ [http://en.wikipedia.org/wiki/Priesthood_\(Catholic_Church\)#Education](http://en.wikipedia.org/wiki/Priesthood_(Catholic_Church)#Education).

⁸ http://en.wikipedia.org/wiki/Jesuit_formation.

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churches have taught about the Real Presence and why. We must be open to any truth found there; otherwise, we would fall into the trap of intellectual arrogance and perhaps end up discovering what Paul meant when he wrote to the Corinthians, saying, “but God chose what is foolish in the world to shame the wise, God chose what is weak in the world to shame the strong” (1 Corinthians 1:27).

Getting the Monkey Off Our Backs

Obviously, if we believe only that what is rational is true, then it will be impossible to ever understand the reality of the Real Presence. However, if we come to understand that our senses can truly fool us and that the real question is not whether it is rational to us but whether it is true, then we become open to understanding the real reality of the topic in question. So the question that needs to be answered is, how do we come to know the truth? What is right? What should be believed? For thirty-eight years I worked as a physicist, making measurements in a hospital setting. When I and others made measurements, we never really knew the exact result; we could determine the measurement only to within plus or minus a certain percent. However, we knew the results were close enough so that we could treat patients effectively. When working in scientific ventures, there was no absolute knowledge. We believed our readings because we trusted our equipment, at least to within that certain percent. We would send our equipment away to be calibrated and confirm that nothing had changed when it came back, yet we had no proof that the measurements were absolutely correct. We would trust the answers the equipment gave us, but we could never give the absolute answer. There always remains some wiggle room. Eventually, you have to decide when there is enough evidence to know something to be true within limits, and within limits is all you can do.

In seeking truth, we must remember, in the end, that all the knowledge we acquire is based on trust and personal experience. This really is an important concept. For instance, in school we learn about history. Why do we believe what we are taught? Why should I believe that Christopher Columbus sailed the ocean blue in 1492,

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thereby discovering (or rediscovering) America? We weren't there when Christopher stepped off the boat, yet we trust the history books and the teacher who taught us.

Let me give you a personal example: A few years ago, my wife and I went to Melbourne, Australia. We flew from Los Angeles, and after a sixteen-hour flight, we landed at the Melbourne airport. But how did I know it was Melbourne? We slept most of the way, and even if we hadn't, flying over water doesn't exactly give you landmarks to go by. When I got there, I soon discovered that the people spoke a funny version of English and that they drove on the wrong side of the road. I thought we were in England! But soon I discovered that the names on the street signs matched the street names on my maps, which I had printed out ahead of time. We soon found ourselves at our lodging, and not wanting to profess that a major conspiracy designed to fool me was in the works (remember those who believed landing on the moon was a hoax?), I took the leap of faith and said that we really were in Australia. I had found a *preponderance of evidence* that I could trust, which was far greater than the evidence of some great hoax. This allowed me to accept as a fact the knowledge that I was in Australia. But what if I hadn't? If I still had maintained that we weren't in Australia, someone could rightfully have said that I had lost my mind. The point I am making is, information I acquired by people, books, and the Internet led me to the knowledge that I really was in Australia. I trusted in my sources. I came to that knowledge.

So we can't know truth absolutely. We need sources that we can trust. But with the Real Presence in the Eucharist, we are talking about a concept that some feel is perhaps absurd to begin with. We admit that the Real Presence in the Eucharist is irrational, according to our experience and our senses, yet we say it is true. But would this be the only thing in our experience that is irrational yet still true? Are there other truths that we commonly believe that also are not truly rational? Is rationality really a requirement for truth? Here are a few examples where apparently rationality and truth do not truly coexist: Love, we know, is real, but is it rational? We can sense sexual feelings between couples, but that may have nothing to do with love. Poets have been writing about love for years, trying to express its essence, but there is no complete, definitive

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answer. We can try to play matchmaker and pick people out of the crowd, but can we guarantee they will love each other? No, of course not. Love cannot be dissected in a scientific manner, nor can it be completely explained. People fall in love with others sometimes just “because.”

The concept of beauty also shows no connection between rationality and truth. We have all seen objects that we consider beautiful, yet another person may just yawn at the same sight, not seeing any beauty at all. There is no rational test that will guarantee that something or someone exhibits beauty. Similarly, justice and injustice are also real but not truly rational in the sense that we can't see, hear, feel, or touch. Yet who has not been in a circumstance where they “felt” injustice? What is just in some cases seems unjust in others. However, some things are always unjust and absolute, such as the raping of a three-year-old. Who could defend that? So once again, the question in all cases is “Is it true?” not “Is it rational?”

So far, I have talked about the irrationality of realities such as love, but love is not physical like the Eucharist. Perhaps the idea that the Eucharistic host is real flesh would be easier to swallow (pun intended) if there were other areas of knowledge—rational areas of knowledge—where people believe that irrational things are true, just because they are. Fortunately, we can call on science to help us out.

Physics to the Rescue

Certain concepts in physics really are beyond rational comprehension. Even simple, classical concepts are not what they appear. We think that a tabletop is solid, but it is not solid, as our classical minds think. It is really a big void, as 99.9 percent of the tabletop is empty space, with atoms positioned here and there. When we consider that the protons and neutrons are actually composed of subatomic particles, some of which have no radius, we see how really big that void is. The only reason the lamp on the table doesn't fall through the table is because of electric fields generated by the charged particles within both the lamp and the table. We must always remember that, unlike chemists' models of molecules, there are no wooden sticks that attach to atoms that would prevent other molecules from passing through. Instead, we have an invisible, mass-less

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thing we call an electric field, which extends out to infinity and which keeps other molecules out. Doesn't sound rational when we think about it, because the table looks solid to us. I guess solid really means holey—filled with holes, not that other kind of holy. Our senses are fooled, yet we believe all this because it is true, not because it is rational.

What about another area of physics, relativity? Remember Albert Einstein, the man with the bad hairdo? He (and others) told us that time, distance, and mass are not fixed, constant quantities. For instance, if we travel very fast—say at 87 percent of the speed of light, time would go by very slowly, about half as fast. Consider my version of what is called the “twin paradox”⁹—a set of twins (who, by the way, also jointly own a pet dog) choose two different career paths. One twin chooses to be an astronaut and at the age of twenty is sent into space, travelling at 87 percent of the speed of light. The other twin remains home to take care of the dog. Both wear a watch that has a calendar function showing month, days, and years, while also having a super-duper battery that lasts a lifetime. In forty earth years, the spaceship returns. The twin who stayed on earth now has gray hair and is, according to his watch's time, sixty years old, and of course, the dog has long since passed away. When the astronaut twin gets off the ship, his hair color hasn't changed, and his watch tells him that he is only forty years old. In the real world, the astronaut would throw his watch away and spend the rest of his life doing commercials for beauty products, implying that the beauty products help him to stay so young. But we know better. Biologically, he really is twenty years younger than his twin brother. According to physicists, then, time is not necessarily consistent from one interval to another, flowing like a river, as the song says. Time can be variable in duration, depending on the frame of reference and other features of the universe, such as gravity, which apparently can warp time. Does this sound reasonable? Isaac Newton would have thought Albert Einstein was crazy.

What if I also told you that the astronaut twin's mass would double during his flight, while his body thickness would shrink in half in the direction he was traveling, returning to normal when the ship slowed

⁹ http://en.wikipedia.org/wiki/Twin_paradox.

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down? One can only say that this sounds most irrational. However, I believe it to be true, because experiments have shown that mass, distance, and time are not what we think. This implies that I also trust that physicists have told the truth about their experiments. Well, you might say, while the concepts are really not rational to the average Joe and Jolene on the street, the experiments should be repeatable. Therefore, you trust them. Apparently, irrationality based on the past personal experience of billions of people is not a big concern when it comes to time and space! After all, everyone's personal daily experience tells us that time is the same for everyone. In fact, according to Einstein, our understanding of reality, simply put, is that "Reality is merely an illusion, albeit a very persistent one."¹⁰

What about another area of physics you may have heard of—quantum theory? Quantum physics is that part of physics that discusses the reality of light and of tiny, tiny particles that make up our larger world and how they all interact. As a starting point, let's just note that quantum physics covers the interactions that enable transistors to work, which then were used in making the computer I am using to write this book. (I am so glad quantum theory works so I didn't have to type or handwrite this book.) Apparently, quantum theory is a true enough theory of reality to make things.

So let's discuss some parts of quantum theory. As you remember from above, in relativistic physics, we found that rational concepts of time, distance, and mass did not obey the rational concepts in everyday Newtonian physics. In quantum physics, we find even more bizarre behavior. For instance, in quantum physics, the very nature of certain objects can change. For example, light can seem to act as both a wave when a beam of visible light reflects off a mirror, or as a particle when an X-ray (a light beam of higher energy) is absorbed or scattered, as in a medical exam in a radiology department. Thus, light exhibits a dual nature depending on circumstances. Not only does light show a dual nature, but particles, such as electrons, also show the same dual nature, being both a wave and a particle. The electron seems to "choose" to be a

¹⁰ <http://rescomp.stanford.edu/~cheshire/EinsteinQuotes.html>.

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wave or a particle, depending on the situation and the way it is observed. Not only that, but in addition, electrons can move from here to there without traversing the distance in between. How bizarre.

In another oddity, energy and motion are not continuous, as we normally expect. For instance, according to Newtonian physics—the physics that describes motion in everyday life, such as at what angle you shoot a cannonball so that it will go the maximum distance—when you are bicycling, you normally start by gradually building up speed and moving forward in a continuous, smooth manner. Not so in quantum physics. Only certain energy levels are allowed, and movement occurs in discrete steps. As a result, it is somewhat like living as if you are in a series of movie frames. In an old-time movie, the motion seemed somewhat jerky. However, if you have enough movie frames, and the frame speed is high enough, you would have the appearance of moving smoothly. Yet the movement produced on the screen in reality is just a series of discontinuous steps, and we are fooled at the cinema. If quantum physics is true—and indeed, our lives are not truly continuous but rather a series of almost infinitely small, herky-jerky movements—we have to acknowledge that Newtonian physics has obscured our view of the real reality of life and that we are always fooled by our senses. Our senses are fooled as to the real reality, just as believers in the Real Presence say of the Eucharist.

Enough examples? Many more examples could be given. So what's the point? The point is that science—great tool that it is—cannot explain everything. There are basic mysteries and irrationalities to the mind of man, which science just accepts and then goes about using those principles to understand the physical world. Dr. Richard Feynman, one of the most noted twentieth-century physicists, said it best in discussing quantum theory: “I think I can safely say that nobody understands quantum mechanics.” And again in a separate document: “The theory of quantum electrodynamics describes Nature as absurd from the point of view of common sense. And it agrees fully with experiment. So I hope you accept Nature as She is—*absurd*” (italics mine).¹¹

¹¹ Richard Phillips Feynmann, *QED: The Strange Theory of Light and Matter* (Penguin Books Limited, 1990), 10.

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All these concepts are irrational to our senses and to our experience and are certainly mysterious. Why do we accept these irrationalities? Because we trust science, and we have enough evidence to believe, not because the concept itself is rational. Did you notice that I put the word absurd in italics? Go back a few pages and you will the same word, *absurd*, used in relation to the Real Presence. Keep that mind open to the possibility of truth.

We have seen that physics contains many mysteries—irrational mysteries to our senses—that are to be believed because physicists tell us they are true. Sounds a lot like theology. I am not alone in this thought. John Polkinghorne, an elementary particle physicist turned Anglican priest, has noted and written about the many similarities between quantum theory and theology.¹² Of course, we know that theology, like physics, also accepts certain mysteries as a basis for belief. Science works with its mysteries and establishes theories that help explain the physical world. Theology works with its mysteries and establishes doctrines that help explain the spiritual world. In Christian doctrine, there are a number of mysteries, irrational in nature, that the Christian simply believes. Among these are the Trinity—three persons in one being, the Incarnation—God taking on human nature while retaining his divine nature; the Resurrection—a person raised from the dead, never to die again. Christian believers accept these and other irrational concepts without batting an eye. But as with science, the various mysteries in theology that defy complete (and perhaps sometimes even partial) understanding and that sometimes just seem irrational do not negate the truth of doctrines, anymore than the absurdity of quantum mechanics negates the theories of quantum mechanics. Science accepts its mysteries because of the evidence of their effects. Theology also has its own evidence—evidence we see in the historical evidence of prophecies fulfilled, the reality of Jesus, the occurrence of miracles in both past and present times, and the change in people's lives. In evaluating these mysteries, it is always useful to remember the advice of St. Augustine:

¹² John Polkinghorne, *Quantum Theory and Theology, An Unexpected Kinship* (New Haven and London: Yale University Press, 2007).

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“Seek not to understand so you may believe, but believe so you may understand.”¹³ At this point, I hope you are in the mind-set to consider not the irrationality of the concept of the Real Presence in the Eucharist but rather whether there is evidence of its truth.

So far, I have shown that

- science professes beliefs that are irrational to our senses;
- our senses sometimes fail to show us the truth; and
- the church’s teachings—by virtue of the church’s longevity, its education, and its consistency—deserve to be fully evaluated.

The purpose, then, of the rest of this book is to look at the evidence with regard to the Eucharist and the Real Presence. Is it consistent, both historically (couldn’t have been true for a thousand years but now is false) and in concept? Does scripture support the concept? Was there a development of doctrine similar to the development of other doctrines held to be true, such as the Trinity or the dual nature of Christ? Is there any physical evidence that might apply (which by its nature would have to be miraculous)? Can there be a preponderance of evidence that allows us to say, “I believe in the Real Presence”?

Let’s look at why the Catholic and other churches have proclaimed the Real Presence of Christ—body, blood, soul, and divinity—for two thousand years and look at it in a reasonably systematic way. We will begin with Old Testament foreshadowing of the Eucharist.



¹³ *Ten Homilies on the First Epistle of John Tractate XXIX on John 7:14–18, §6.* A Select Library of the Nicene and Post-Nicene Fathers of the Christian Church, Volume VII by St. Augustine, chapter VII (1888), as translated by Philip Schaff.