



**From the Pulpit: July 14, 2024**

Fifteenth Sunday in Ordinary Time

**The Reverend Dr. William A. Evertsberg**

Psalm 102: 25–28

***God After... VIII: God after Heisenberg***

Georgetown’s Professor John Haught has written these books: *God After Darwin* and *God After Einstein* and that sounded like a sermon series to Christine, Katie, and me. We’ve been looking at all these revolutionary thinkers over the last 500 years who have impacted Christendom’s image. Today is *God After Heisenberg*.

called these subatomic particles *quanta*, which is Latin for “how much?” Thus quantum mechanics, or quantum theory, or quantum physics.

From Psalm 102:

*Long ago you laid the foundation  
of the earth,  
and the heavens are the work of  
your hands.*

*They will perish, but you endure;  
they will all wear out like a  
garment.*

*You change them like clothing, and  
they pass away,  
but you are the same, and your  
years have no end.*

“Werner  
Heisenberg  
...comes up  
with...The  
Uncertainty  
Principle.”

Then in 1927 German physicist Werner Heisenberg comes along and really messes things up. He comes up with what is famously known as The Uncertainty Principle. He says that you cannot measure the position and the velocity of a subatomic particle at the same time. As someone put it when it comes to a subatomic particle, if you know where it is, you cannot know where it is going, and if you know where it is going, you cannot know where it is.<sup>1</sup>

**A**t the beginning of the twentieth century, our understanding of reality itself fundamentally changed. When Albert Einstein proved the existence of atoms in 1905, we learned that matter is made up of electrons orbiting nuclei. Imagine everyone’s surprise, including our own a century later, when we learned that matter is mostly empty space. The pew you’re sitting, even this rock, mostly empty space.

You cannot really know what is precisely going on at the most fundamental level of reality. If you shine your flashlight at one of these subatomic particles to see where it is and what it’s doing, a photon from your beam of light will collide with the particle and knock it off course. An electron is elusive and inscrutable; it might show up here and it might show up there; it’s more a probability than a certainty.

About the same time, German physicist Max Planck and Danish physicist Niels Bohr discovered that energy is more like matter than we thought. Energy is not just a moving wave of electricity; energy is like matter; it exists in small packets or particles, individual discrete units. You could quantify them. So they

Werner Heisenberg was a wunderkind. When he was 25 he became the youngest professor in Germany. When the Germans started trying to build a nuclear bomb in 1939—way, way, way before the Americans—when the Germans started building an atomic bomb, they put Dr. Heisenberg in charge. He didn’t get very far, never came close to coming up with one.

<sup>1</sup>John Polkinghorn, *One World: The Interaction of Science and Theology* (Princeton University Press, 1986), p. 5.

In fact, Dr. Heisenberg was so smart that some have speculated that he might have deliberately sabotaged the entire project because he hated the Nazis; he wanted the Allies to win.



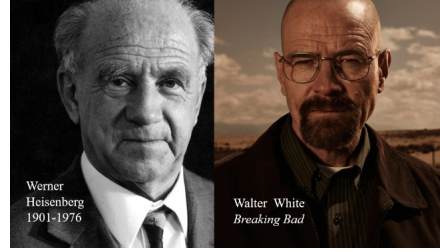
You know what's a fun book and movie? *The Catcher Was a Spy*. One of the great titles in literature and cinema too. *The Catcher Was a Spy* is the semi-true story of Boston Red Sox catcher Moe Berg, who also played shortstop for the White Sox for four years. Moe Berg was the smartest guy ever to play the game. He graduated from Princeton University and Columbia Law, spoke seven languages, read 10 newspapers a day, sometimes in the dugout, and gave signs to the pitcher in Latin.

Because he could speak such fluent German, the US Army sent him to Germany in 1944 to spy on Werner Heisenberg, with instructions to shoot him if it seemed like he was close to coming up with a nuclear bomb. Moe Berg decided Werner Heisenberg didn't have a clue about the bomb and did not shoot him. Great story, great book, great movie.

Anyway Werner Heisenberg comes up with The Uncertainty Principle. You can never know as much about the world as you **thought** you knew or **wish** you knew. People hate Uncertainty. When Dr. Heisenberg announced his theory, his fellow scientists were more panicked than the Democratic Party over Grandpa Joe.

Even though his discoveries laid a platform for quantum theory and made it possible, Albert Einstein hated the uncertainty of it. "God does not play dice with the universe," he famously said. He spent the second half of his life trying to disprove it.

If you don't know anything about *Breaking Bad*, you can tune out for the next 30 seconds.



Did you ever wonder why Walter White called himself Heisenberg? Well it was his alias of course; it cloaked

his identity so no one would know a high school chemistry teacher was cooking ginormous piles of meth. Also, Walter White might have been as smart as Heisenberg. But it's also because you just never knew where Walter White would turn up next.

"People hate Uncertainty."

Walter White was a walking, talking, cooking Uncertainty Principle.

Everybody agrees with Albert Einstein; they hate The Uncertainty Principle. They agree that God does not play dice with the universe. Dr. Heisenberg made the world seem less anchored, less solid, less stable. Dr. Heisenberg made the world seem unmoored.

And it's fun to think about how the unscientific world responds to this broken, fractured, nonlinear world around the turn of the last century, just before and during all these scientific revolutions. Dr. Einstein came up with special relativity in 1905. Just before that, in 1890, van Gogh paints a landscape like this.



This is the way we used to tell stories with pictures: Caravaggio in 1601 with *Supper at Emmaus*, a whole linear, rational sensible story plays out in a single image. Sometimes we still do tell stories like this, Norman Rockwell in 1957.



Special Relativity is 1905. Just about the same time, 1911, Georges Braque and Marc Chagall paint pictures like this—fractured, broken, nonlinear, cubist images.

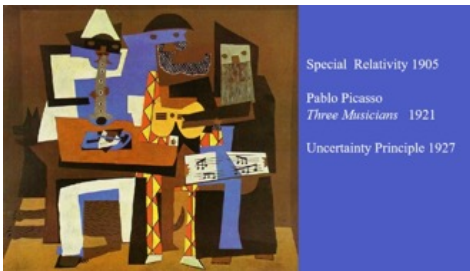


Arnold Schoenberg wrote this in 1913. Use the QR code to go to the Kenilworth Union YouTube to watch and hear Eun Joo Ju play about a minute of music from *Six Piano Pieces*.



This all might be a reflection of our different understanding of reality itself. It's kind of fun to think about.

The Uncertainty Principle is 1927. About the same time, 1921, Pablo Picasso paints this.



*“So when we are afraid and anxious, we revisit the ancient promises”*

In the encyclopedia under The Uncertainty Principle, it says, “See the United States of America, 2024.” Gaza, Ukraine, Putin, Xi Jinping, a chaotic presidential election. It’s going to be tense and fraught and broken and fractured and cubist like Picasso until at least November and probably beyond.

So when we are afraid and anxious, we revisit the ancient promises: “Long ago you laid the foundation of the earth, and the heavens are the work of your hands. They will perish, but you endure; they will all

Nothing fits. It tells a story, but the story is all twisted and illogical.

Some art historians say that artists are reflecting the brokenness of the world during that time—industrialization, migration, World War I is just past. And also the uncertainty in the subatomic world. That’s a theory. Look it up.

wear out like a garment. You change them like clothing, and they pass away; but you are the same, and your years have no end.”

The same thing is happening in the world of music. Special relativity is 1905. About the same time, 1913, Arnold Schoenberg abandons keys in his music and goes completely to atonal music, a phrase he hated, but nothing else comes close.

The world is uncertain. From electrons to elections, the Uncertainty Principle prevails. But God knows both where the electrons are, and where they’re going. Einstein was right: God does **not** play dice with the universe.

You know how when you’re listening to Mozart’s 40th Symphony, or Beethoven’s Ninth, you just know what note is coming next? You could never have written it yourself, but you can predict it; you expect it; you’re delighted, but you’re not surprised.

The Good News is that “we do not flail in a void. The universe has a final floor. We are upheld by sheer grace. We stand on the Rock of our Salvation. All other ground is sinking sand.”<sup>2</sup>

<sup>2</sup>Adapted from Ralph C. Wood, *The Comedy of Redemption* (University of Notre Dame Press, 1988), p. 285.

## —Prayers of the People— The Reverend Christine V. Hides

Almighty God, Creator, Redeemer and Spirit of life that unites us, ignites us and reminds us of our shared humanity,[1] you knit us together, one body made of cells and atoms, flesh and bone. Just as a symphony is made of a hundred thousand notes, we are eight billion people created to live in harmony.[2]

We come to you with heavy hearts after the events at yesterday's rally in Pennsylvania. We give you thanks that former President Trump is safe and ask for your continued protection for him and all candidates. Make a way for healing for those victims who are recovering in the hospital. Be with the family that mourns the loss of their loved one. Make space for them to grieve.

Turn us O God from every violent inclination. Open our hearts and ears and minds that we might find ways to be civil, to sow seeds of peace, and to build bridges across widening chasms. Every life is sacred to you and so hasten us to do as Jesus commanded his disciples; make us to put our swords away.

Holy God, make a way for belonging in this world, this nation, this community, and this church. We give you thanks, for we belong to you, the one in whom we live and move and have our being. [3] You alone are God. You alone deserve our praise and worship.

In this season of travel, we give you thanks for those places of belonging. With tender hearts we note the homecomings and reunions, the places where our roots run deep. Walk with us to places familiar and unfamiliar.

In the ordinary tasks of daily life, make sacred what we often see as a chore. As we peruse the grocery aisles filled with every option, as we fold the crisp sheet into the bed corner, as we immerse our hands elbow deep in the dishwasher, let our hearts be filled with thanks for each and every gift.

Just as soil and sunlight have become the taste of the first green beans plucked from the garden and the peaches arriving at the market, make something out of the turned soil of our lives and the dust that swirls chaotically in every corner of this planet.

Be with those recovering from hurricanes and flooding, fires and severe weather. Let your peace hover over the warring places where too many precious lives have been lost. Turn the hearts of those who rule by fear and domination.

Bring hope to those seeking a new job; sustain their searching. Be with those starting something new. Let goodness flourish in the vocations you intend for us.

Collect the tears of those who are grieving. Be a balm for the heartbroken. Be a beacon for those who have lost their way.

As we mark the post-solstice days of summer with joy, slow us down that we might be present to each moment. Keep us from rushing into the next season.

Lord gather up each prayer, each piece and part of our lives. Shape and form each particle and speck of dust into a collage of hope and promise. When we feel discouraged, help us to remember "we belong to the grand communion of those who sometimes feel alone." Weave our lives together. Weave our small voices into "one big conversation" with you. Let our actions be part of your "infinite story of what it is to be alive" as pray as the one who walked into the dusty reality of this world to enfold us in divine love and belonging.

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[1] This prayer was inspired by the poem, "Belonging," by Rosemary Wahtola Trommer. Exact turns of phrase from her work are in quotations while general themes are threaded throughout.

[2] Approximate population of the earth on July 14, 2024, see <https://www.worldometers.info/world-population/>

[3] Acts 17:28

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