

“Wonder in the Rabbit Hole”

Sermon by Rev. Joan Javier-Duval

Unitarian Church of Montpelier

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The delivered sermon may have slight variations from this written manuscript. Video recordings of sermons can be found online at <https://ucmvt.org/category/whats-new/sermons-and-podcasts/>.

Reading

Selections from *Honey from Stone: A Naturalist's Search for God* by Chet Raymo

...[E]very accumulation of knowledge...is full of rabbit holes. Enter a rabbit hole – quantum physics, say, or relativity – and that Wonderland has its own rabbit holes leading to yet other exotic terrains...One doesn't have to be a Lord Kelvin or an Einstein to find a place to enter...A leaf of grass will provide ingress to Infinity. The ancients believed that the stars were pinholes in the dome of the sky, through which shone the light of an outer, more wonderful world. And it is true: Every star is a rabbit hole into another world. In the course of a lifetime of starry night I could not explore them all...I have a friend who speaks of knowledge as an island in a sea of mystery.

Let this then, be the ground of my faith: All that we know, now and forever, all scientific knowledge that we have of this world, or ever will have, is as an island in the sea...And still the mystery surrounds us.

Sermon

Hundreds of astronomers around the world watched with anticipation as the Ariane 5, the rocket carrying the 14,300 pound James Webb Space Telescope, launched from the Guiana Space Center on Christmas Day last year. This moment had been decades and several billions of dollars in the making.

The James Webb Space Telescope is an international collaboration among NASA, the European Space Agency (ESA), and the Canadian Space Agency (CSA). With its heat shield the size of a tennis court and its gold-plated mirror, it is the most complex observatory ever launched into space.

The first images from the telescope were received this past July and have been coming in ever since astounding astronomers and lay people alike with their clarity and new revelations.

From its lookout 1 million miles away from Earth, the telescope is able to peer back over 13.5 billion years to see the first stars and galaxies forming out of the darkness of the early universe. It can help us to understand how galaxies assemble over billions of years. And, it will capture images of planets beyond our solar system, and perhaps even find the building blocks of life elsewhere in the universe. [**Slide 1 - Carina Nebula**]¹

Michelle Thaller was one of the first scientists to see the first images sent back by the Webb telescope, and I want to credit her for helping me to understand what we're witnessing in this image. It's a picture of a star-forming region called NGC 3324 in the Carina Nebula, an area where thousands of new stars are forming. The image shows a landscape of shapes resembling mountains and valleys speckled with glittering stars. With infrared light the James Webb Space Telescope reveals for the first time previously invisible areas of star birth.

I, for one, find this image breath-taking. Thaller, the astronomer I mentioned earlier, shares how the image "leaves you wanting more." The image reveals more than we know now about star birth and yet there is so much mystery still out there for us to wonder about.

What compels us human beings to wonder about the world of stars and planets, the expanse of universe beyond the earth?

I think in part it has to do with the mystery in darkness. As we head into the winter months, we can acknowledge that darkness is part of our existence. Darkness seems to contain within it the unknown. It is teeming with possibility - this possibility held in darkness can seem frightening at times, but it is also a possibility that is fertile in its seeming emptiness.

The impulse to seek illumination and knowledge in the dark has been with human beings for a very long time. Our earliest ancestors, like us, tried to make sense of both the world around them and also the world beyond - the world represented by the inky, starry sky. Early cosmologies told of gods that controlled natural phenomena or of the "cosmic egg" in which the entire universe is contained or of an eternally unchanging universe with the Earth at its center.

¹ <https://www.nasa.gov/image-feature/goddard/2022/nasa-s-webb-reveals-cosmic-cliffs-glittering-landscape-of-star-birth>

Over time, human beings developed scientific methods and tools to create and test our theories and to develop an empirical knowledge of the world and universe.

And, at the same time, religions developed to produce and understand an entirely different kind of knowledge of the world and universe.

Another perspective on the role of wonder in our lives comes from religious naturalism. Naturalism is simply a set of beliefs and attitudes that focus on the natural world. Religious naturalism encompasses many different nuanced beliefs, but the general orientation of religious naturalism is that religious meaning and feeling can be found through a focus on the natural world.

Any of you who may have felt a sense of awe witnessing a spectacular sunset or a deep feeling of connection watching a deer grazing in a field may find resonance with this orientation of religious naturalism. Some religious naturalists believe that God or some Divine Power is the Creator and is the reason the natural world exists. Other religious naturalists hold no belief in a divine, supernatural power. All religious naturalists find the religious depths of wonder, awe, gratitude, reverence, and ultimacy from nature itself.²

Within religious naturalism, religion and science are not in conflict, but go hand in hand. It is through the discoveries of science that religious and spiritual experience take place.

As Unitarian Universalists, we affirm the place of science in helping us to understand the great mysteries of the world and the universe and to help us ask even bigger questions. Our religious tradition embraces both the knowledge and the questions that science brings to light.

Though they may seem at odds to some, religion and science share this in common: they are both vehicles for exploring the unknown. The mystery of the unknown continues to draw us human beings into both religious and scientific ways of studying, explaining, and celebrating the larger world.

Albert Einstein spoke to the connection between religion and science when he said: “It was the experience of mystery – even if mixed with fear – that engendered religion. A knowledge of the existence of something we cannot penetrate, of the manifestations of the profoundest reason and

² <https://uurn.weebly.com/index.html>

the most radiant beauty, which are only accessible to our reason in their most elementary forms – it is this knowledge and this emotion that constitute the truly religious attitude; in this sense, and in this alone, I am a deeply religious man.”

When taken together, religion and science can work in tandem to answer the question, “where do we come from?”

This larger story, sometimes called the Great Story, the Universe Story, and the Epic of Evolution is a story of intricate and interdependent connection amongst the human story, the life story, the earth story, and the story of the cosmos wrapped into a sacred whole.

The Unitarian Universalist minister David Bumbaugh writes of this connection this way, “Our beings are intimately related to every living thing that creeps, or crawls or flies, to every living thing that is rooted in the earth and reaches for the sun, to every living thing that inhabits the dark depths of the oceans. We are but one form life has taken, one expression of Gaia’s living process... The heat of our bodies is the heat of stars, tempered to the uses of life. The salt in our blood and in our tears is the salt of ancient oceans... The past is not dead. It lives in us even now. The evolutionary universe, the ancient environment, the emergence of complex life—all are recapitulated in every moment of our existence.”

[Slide 2 - Southern Ring Nebula]³ Here is another image that was among the first images sent back to Earth by the James Webb Space Telescope this past July. Instead of star birth, these two images set side-by-side show the death of a star. We are seeing a star unraveling into space billions of years ago after the main nuclear reactions go off inside of it. The infrared technology of the telescope allow us to see within the cloud of dust surrounding what at first appears to be one central star and to see that there are two stars here. They are shedding their material out into space. And, this is quite literally, where the chemistry of life begins. The heavy elements that are the building blocks of life - carbon, iron, sulphur - were formed in these stars and others when they died. This is the place where many of the atoms in your body and in mine were formed, in the dying star. Reflecting on this image, the astronomer Michelle Thaller says, “We are looking back to the beginning of us.” We are seeing the very atoms of our own bodies right here in the dying, shedding star.

Again, the words of David Bumbaugh: “We are not encapsulated, separated, isolated beings. Whatever we are, the universe is. The reality inside of us and the reality outside of us are

³ <https://www.nasa.gov/image-feature/goddard/2022/nasa-s-webb-captures-dying-star-s-final-performance-in-fine-detail>

ultimately one reality. In us the universe dreams its dreams. In us the universe struggles for a moral vision. In us the universe hopes for new possibilities. In us the universe strives for self-understanding. In us the universe seeks the meaning of existence.”⁴

Of course, we aren't the only way the universe has found expression. But, if we consider even the fact that we are one way it has and does, well, for me that is mysterious and awe-inspiring enough.

The meaning that we make of our existence ultimately goes back to this greater mystery. The mystery of who we are is part and parcel of the mystery of the universe. We cannot be separated.

If we, Unitarian Universalists, have any gospel, or good news at all, it has to be this. That mysteriously and through no doing of our own, we are intimate and intricate parts of a large and wondrous universe.

It is through this cosmically-bound existence that we seek knowledge, create beauty, express love, and cling to hope. And, if the mystery of that doesn't fill you with wonder, awe, and reverence, well, I'm not sure what would.

To feel reverence is to recognize with humility our place within the larger story of the universe. This is what keeps us connected to the vastness without losing ourselves in it.

Especially when our our lives start to take on a feeling of narrowness and confinement, I think it's worth taking a moment to revel in the mystery. To take a cosmic view. To remember that the arc of the universe is long.

The trials and tribulations of our human existence matter greatly. Doing what we can to make our world more humane, just, sustainable, and peaceful matters greatly.

And, we can remember that the forces surrounding us are greater than we can imagine. We are a part of that mysterious whole.

Our response to this truth is what shapes the character of our day to day existence, and so we can continue to ask ourselves, how do we respond to this mystery that surrounds us?

⁴ “Toward a Humanist Vocabulary of Reference,” David Bumbaugh, http://www.uua.org/documents/bumbaughdavid/humanist_reverence.pdf

Ursula Goodenough, a religious naturalist and cell biologist, offers this response. She says, “I revert to my covenant with Mystery and respond to the emergence of Life not with a search for its Design or Purpose, but instead with outrageous celebration that it occurred at all.”⁵

What if we could respond with outrageous celebration to the mystery that the emergence of life occurred at all?

This celebration takes shape in the rituals we develop to honor the natural world and to take part in its rhythms and cycles. And, it takes shape in how we care for all of life.

In engaging with the mystery that surrounds us and embracing our wonder and awe, we feel what it means to be fully human.

Whatever we might believe is the source of the emergence of life, we can all respond with outrageous celebration and gratitude at the continuing and evolving emergence that has brought us to this moment and the mysterious miracle and blessing that we are even here.

Just about fifty-four years ago, on December 21, 1968, NASA sent out Apollo 8 with a mission to complete a full orbit around the moon and back to Earth. The three astronauts who were aboard the spacecraft - Bill Anders, Frank Borman, and Jim Lovell - were interviewed by The New York Times about their experience as part of that mission.⁶

They describe what it was like to be on the “dark side” of the moon. The side on which the sun was completely blocked out. How gray and colorless it was. One of the astronauts said it felt like they were back at the beginning of time. And then as their orbit continued, they could see the horizon of the moon opening up to the endless darkness of space.

And as they continued their orbit, a small bluish orb began to appear glowing bright amidst the vast, black expanse. They hurried to get the camera out feeling instinctively that this was a moment to capture on film. [**Slide 3 - The earthrise**]⁷

⁵ Ursula Goodenough, *The Sacred Depths of Nature*, pp. 29-30 (Oxford University Press, 1998). <https://books.google.com/books?id=5KHmCwAAQBAJ&lpg=PP1&dq=ursula%20goodenough%20sacred%20depths%20of%20nature&pg=PP1#v=onepage&q&f=false>

⁶ <https://www.nytimes.com/2018/10/02/opinion/earthrise-moon-space-nasa.html>

⁷ <https://www.nasa.gov/image-feature/apollo-8-earthrise>

This is the now famous photo taken by Bill Anders 54 years ago.

They were taken aback by the awesome-ness of the moment. It put into perspective our place amidst the vast cosmos.

One of the astronauts put it this way: “We’re just a small piece of an almost infinite universe.”

May the mystery of which we are a part inspire our wonder, our awe, our reverence, our humility, and our gratitude.

May we know that in the darkness lies the possibility of discovery and the promise of illumination shining brightly.

May we find comfort and inspiration in the knowledge that we are an inextricable and sacred part of a vast and wondrous universe.

So may it be.