

The Art of Awe

"Art is our compass to the cosmos."¹

Awe is about our connection to the profound mysteries of existence. As Dacher Keltner, professor of psychology at UC Berkeley, puts it, "[awe is] the feeling of being in the presence of something vast that transcends your current understanding of the world."²

I want this feeling, something that can elevate my understanding, something spiritual. When I was younger, I believed religion held the answers, but the more I delved into its teachings, the less meaning I found. Religion promised the spirituality I sought, yet it seemed to demand subservience and acceptance of doctrine – the very antithesis of my desires. My search for meaning continued, and as I grew older, the fear of mortality propelled me forward. I discovered the spirituality I sought in unexpected realms – quantum physics and general relativity. Quantum physics reveals that the observer creates their own reality, that uncertainty is a constant, and relativity tells us that our perceptions of space and time are relative, not absolute.

To me this was the philosophy I was looking for. It gave me a feeling of transcendence, of being part of something that was greater than myself. I wanted to find a way not only to express this feeling, but to immerse myself in it. That's when I combined painting with science.

I began incorporating scientific imagery into my work to explore spirituality. The techniques I adopted, such as painting thousands of dots to create an image, were part of a

¹ MoMA NY, Jack Whitten: The Messenger, March 23 – August 2, 2025

² Keltner, Dacher. *Awe: The New Science Of Everyday Wonder and How it Can Transform Your Life*, Penguin Press, New York 2023, p. 7-8

contemplative process that contributed to the spiritual nature of my practice. I didn't understand why this appealed to me, why it drove me on, but I just had to keep doing it. Other subjects didn't have the same appeal as science. I felt I was seeing something fundamental. I didn't know much about philosophy or philosophers. I had heard of Kant, but didn't know anything about him, it was my mortality that drove me.

This fear of mortality was heightened when I had two major health crises, a heart attack my doctor referred to as "the widow maker" and the discovery that I had cancer. Suddenly, what I was doing in my art wasn't enough. I had to do more that creating images, I needed to think differently, explore not only images but materials, feel the concepts rather than just paint them, and I was at a loss as to how to do this.

That was my motivation for a two-year odyssey towards an MFA. I didn't know what I was looking for and didn't know if it even existed, but I had to try.

It was during this time that I was exposed to the philosophy of art. I was already familiar with the concept of awe from Dacher Keltner and was introduced Emmanuel Kant's concept of the Sublime.

These concepts seemed to be what I was looking for, the missing piece that religion claimed, but failed, to provide. I wanted to understand what causes the feeling of awe/sublime and to use it in my work. I wanted to know how other artists used this concept. So, I delved deeper into the topic and read Kant's definition of the sublime, "A feeling of . . . pain, [but] there is at the same time a pleasure thus excited."

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³ Kant, Emmanuel. The Critique of Judgment (Theory of the Aesthetic Judgment & Theory of the Teleological Judgment), 1790: e-artnow Translator J. H. Bernard, 2015, p. 149

This is what I feel when I use the scientific images in my work. There is the discomfort of trying to grasp their meaning, but there was also excitement, the thrill of discovering something fundamental about existence.

But it wasn't just the images that created the feeling of the sublime, it was what those images represented. For Kant, it is not a waterfall, or a volcano, etc. that are sublime but the way they affect us, "the sublime is not to be sought in the things of nature, but only in our ideas."

Keltner gives a similar analysis of awe, "In evoking awe, it reveals that our current knowledge is not up to the task of making sense of what we have encountered. And so, in awe, we go in search of new forms of understanding. Awe is about our relation to the vast mysteries of life."

Kant describes the imagery that can create the feeling of the sublime:

"Bold, overhanging, and as it were threatening, rocks; clouds piled up in the sky, moving with lightning flashes and thunder peals; volcanoes in all their violence of destruction; hurricanes with their track of devastation; the boundless ocean in a state of tumult; the lofty waterfall of a mighty river, and such like; these exhibit our faculty of resistance as insignificantly small in comparison with their might. But the sight of them is the more attractive, the more fearful it is, provided only that we are in security; and we readily call these objects sublime, because they raise the energies of the soul above their accustomed height, and discover in us a faculty of

⁵ Keltner, p.8

⁴ Kant. 139

resistance of a quite different kind, which gives us courage to measure ourselves against the apparent almightiness of nature."

The images Kant describes are powerful ones, as are the ones of science. They "raise the energies of our soul" and "Give us courage to measure ourselves against the apparent almightiness of nature." I found it interesting that Kant uses "almightiness" in his description of the sublime, conjuring up a religious experience.

This is what I was looking for, the "vast mysteries." I realized that these are the questions posed by science. Brian Greene, Professor of physics at Columbia University talks about some of the mysteries science is trying to unravel:

"Space and time capture the imagination like no other scientific subject. For good reason. They form the arena of reality, the very fabric of the cosmos. Our entire existence – everything we do, think, and experience takes place in some region of space during some interval of time. Yet science is still struggling to understand what space and time actually are. Are they real physical entities or simply useful ideas. . .Does time have a beginning? Does it have an arrow, flowing inexorably to the future? . . . [We] seek answers, or at least glimpses of answers, to such basic but deep questions about the nature of the universe."

Awe is what I was after. As Keltner states "Awe. . .seems to orient us to devote ourselves to things outside our individual selves. . . When people talk about experiences of awe, they often mention things like finding their soul."

⁶ Kant, 154

⁷ Greene, Brian; The Fabric of the Cosmos-Space, Time and the Texture of Reality

⁸ Keltner, p. 6

Awe, to me, is an all-encompassing concept. It includes not only feeling the wonder of the world, but also its pain. My work became about unification, healing. It encompassed identity, grievance, religion. If not to others at least for me.

I use scientific images to explore the concept of awe. While the images themselves are beautiful, it is not their beauty that attracts me but what they represent.

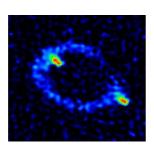
I feel a kinship with Wassily Kandinsky and the impact science had on his art. He describes how his work was influenced by science: "The collapse of the atom was equated, in my soul, with the collapse of the whole world. Suddenly, the stoutest wall crumbled. Everything became uncertain, precarious, and insubstantial."

I had a revelation like Kandinsky's when reading about science. For me, the revelation was related to relativity and quantum physics initially and then expanded to other areas of science such as astronomy, biology, chaos theory and light spectra. The nature of time, or more specifically space/time, tells us that as something moves faster in space it moves slower in time. This is, of course, non-sensical in our macro world, yet it is how the universe operates. What does this mean? First, everything is relative. How one observer perceives an event will not necessarily be the same as another. This, to me, was more philosophy, almost metaphysics, yet it has been proven time and again. One of the images I keep coming back to in my work is the gravity lens (sometimes called Einstein's Ring or Einstein's Cross). It is a proof of the theory of relativity. Einstein predicted the warping of space/time. A gravity lens is an image of a bright object, such as a galaxy, whose light passes near a massive object, such as a black hole.

Space/time is so warped near these object that it acts like a lens and breaks the one image into

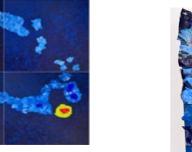
⁹ Kandinsky, Wassily, *Complete Writings* (Berlin: Der Sturn 1913), translated by Peter Vergo

two. This is called gravity lensing. The physicist Arthur Eddington first showed this on May 29, 1919 when he photographed a shift in the position of a star whose light passed near the sun that he observed during a solar eclipse in West Africa.



Gravity Lensing – Einstein's Ring From the VLA (Very Large Array) in New Mexico





Einsteins Ring – collage acrylic and paper on board 80" x 80" - 2021



Einstein's Ring Acrylic, oil and aluminum mesh on board 30" x 30"- 2025

But, as Keltner and Kant say, it is not the image itself that provokes the of awe/sublime but the concepts they make us grapple with. The gravity lens makes us grapple with the nature of space/time. As for quantum physics, these were the first images I used when I switched from landscape and still-life painting to science themes. The early images were from bubble chambers

where sub-atomic particles collide. The particles disturb the mist and create intricate line diagrams. Each line represents a different sub-atomic particle. I combine the images with words to try to unlock meaning.



Quantum Reality Acrylic on canvas, 1996 50" x 50"

The Search for Spiritual Partners

I started looking at other artists' whose work was also spiritual. I have already mentioned Kandinsky and his spiritual revelation, but I also felt a spirituality when I stood close to one of the works of Mark Rothko. In establishing the Rothko Chapel, Mark Rothko wanted to instill this feeling in the observer. "In the austere, still place of the chapel, Rothko's paintings contribute powerfully to producing an atmosphere of intensity that attunes our disposition towards contemplation and that conjures proximity to the transcendent." ¹⁰

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¹⁰ Smart, Pamela; Rothko Chapel, An Oasis for Refelction; p.28

Rothko did not use scientific imagery in his work, but color fields and Kandinsky, although inspired by science, did not use scientific imagery until the 1930's. But for me, the scientific imagery is the key to unlocking the spiritual.

While Rothko was not directly influenced by the metaphors of science, Jack Whitten was. According to Richard Shiff at the University of Texas, Austin "Whitten had a quantum mind, in which thoughts, like subatomic particles, passed from here to there in no time at all and without the need of ever having been in between"¹¹

In his 2025 exhibit at MoMA, Michelle Kuo, the show's curator states, "Whitten thought of his art as a "portal" to other worlds. Fascinated by science and technology he hoped his work might bend space, light and even time to create new sensations" 12

Whitten described how his work relates to the concepts of science and, particularly quantum mechanics in describing his piece "Quantum Wall," "there is no beginning + there is no end. Nothing is static." ¹³



Quantum Wall VIII

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¹¹ Whitten, Jack, Cosmic Soul, Hauser & Wirth, December 2022 p. 29

¹² MoMA NY, Jack Whitten: The Messenger, Cosmos, March 23 – August 2, 2025

¹³ MoMA NY, "Quantum Wall VIII, 2025

The Medium

I grew frustrated using traditional media for my work. It didn't seem enough to create the tension I was looking for. So I started looking for other inspirations, something different, at least different from what I had been doing. On a trip to the Whitney 2024 biennial, I discovered the work of Suzanne Jackson. She had freed herself from the canvas, freed herself from the walls. I started thinking in three dimensions rather than two. The universe isn't two dimensional, so why should my art be? I started experimenting more with materials, aluminum mesh, wires, poured paint. While similar in some ways to Suzanne Jackson, it was also different. There was a common element of experimentation, of letting the materials tell a story, but her work was still abstract and told a different story than mine.

She describes how she uses her materials:

"I'm using acrylic, a material that's malleable and can become something else, not just a flat surface. And I'm really proud that I'm making these paintings that hang double-sided in space, that are all paint, with light moving through them. It's the strength of the acrylic that really interests me, and the sculptural forms it may take."

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¹⁴ Wei, Lily



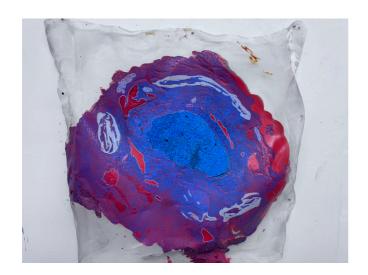
Suzanne Jackson - Whitney Museum 2024 biennial





Installation View – Rasch 2025

The various techniques and materials I started using added an element of chance and unpredictability to the works, which mirrors the "uncertainty" principle in science. When the acrylic paint is poured it takes on the characteristics and flaws of what it is poured onto. The pour flows into a shape that is not possible to totally control and the side of the pour that is in contact with an underlying plastic sheet is even more random. However, the two sides work together and influence each other - are in some way entangled. In physics, entanglement is two particles influencing each other at a distance, immediately, which Einstein called "spooky action at a distance." Even though the two sides of my paintings are separate, they still influence the other.





Abyss – 2 sides Acrylic on Aluminum Mesh 2025

One of the "Abyss" works is a poured acrylic piece. The image is that of a black hole and, while two dimensional, being two sided begs the question, like with a black hole, is anything on the other side? In a black hole we wonder if all information is lost, or does it emerge

in some way, such as in a white hole. In a white hole, no matter can enter, which is the opposite of the black hole. It is just a theoretical construct for now, especially because, though different, the black hole and white hole look the same to an observer. In making this piece I explore these concepts; I touch the sublime.

In other pieces, I combine techniques using pointillism and spray painting to mirror the way many of the images are created by scientific devices. The pointillist techniques and the fine aerosol spray from the spray can mirror the process used by telescopes which build images dot by dot.



Dust – Acrylic and spray paint on aluminum mesh - 2025

The work "Dust" is based on the snake nebula, which blocks all visible light behind it.

Without science it first appeared to be a rip in our cosmos, but our modern technology was able to make sense of something that was beyond our initial understanding.

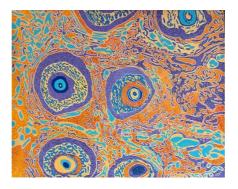
The nature of electron microscopy is captured in many of my works, and specifically in my recent hand painted wood block prints and painted handmade paper. The images can be seen as slides where I decide what the observer will see, and I select the colors to "stain" the image.

Linking this back to physics, I create the image that is observed. The images captured are a cosmos of their own, they relate to what makes us what we are. Some play on the duality of the beauty of the image and the deadly disease they represent, such as "Sweet" which is a representation of diabetes.



Sweet – Acrylic on handmade paper 2025

Others show us what we are made from, such as "Beauty" which is of a skin cell. The skin is our largest sensory organ and it's one way we take in outside information. Skin characteristics are also how we judge one another.



Beauty Acrylic on paper 22 x 45 2022

In the woodcut images I hand colored about two dozen prints then arranged them in a grid so the small and large scales were combined, in an attempt to immerse myself in the imagery. As Mark Rothko said, "[When] you paint the larger picture, you are in it. It isn't something you command."¹⁵ By painting large I become immersed in the image.

Even the repetitive nature of working on the same image is a contemplative process and allows me to touch the sublime. But the painting process is also linked to the scientific process. Scientists will not only attempt an experiment one time but keep trying variations until they can prove a hypothesis. The process of repeating the woodcut images, but trying different variations mirrors the process of scientists.

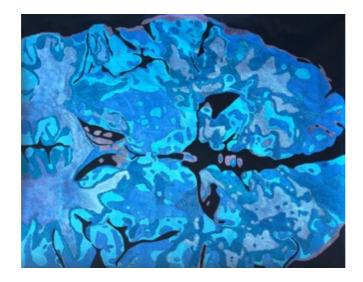
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¹⁵ Rothko Chapel, An Oasis for Reflection, Rizzoli Electa; March 2021 p.27



Installation – Various titles, including "Beauty" – Woodcut, oil pastel, oil paint on paper – Installation approximately 140" x 65" 2025

In the work from the series "Thought" the painting is 84" x 105" and enfolds the viewer, as Rothko says it makes the image come alive. The image is designed to question how we take in information, why we think the way we do.



Thought 84" x 105" Acrylic on canvas 2020

Materials

Materials have become more important to me in creating work. I don't always know where they lead, but I enjoy their unpredictability. I found a kinship with Lynda Beglis in this pursuit, as Lily Wei described Lynda Benglis's work, "material. . . is treated as an active collaborator, with Benglis working with and accepting its moments of willful obstinance; she cedes a degree of authorial control to its unpredictable movements and behaviors." ¹⁶

In my floor pieces, Observer Created Reality, I have broken away from the imagery of science, but even though there is no explicit image the connection is still there, at least to me. The images could be black holes or stalagmites growing from the bottom of a cave or just malleable forms that draw you into its depths. The material is the feature, the viewer brings their own interpretation to the work.

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¹⁶ Vogel, Rachel; Lynda Benglis's Materials; Art Journal; Volume 81, 2022 – Issue 2 page 113





Observer Created Reality –
Acrylic paint and wire - 2025

My motivation for switching from strictly painting to adding pouring and spray paints and removing the image was similar to Lynda Benglis when she claimed, "I wasn't breaking away from painting but trying to redefine what it was." ¹⁷



Whirlpool Galaxy 30 x 30 Acrylic, aluminum mesh and spray paint on board 2025



Abyss 40 x 22 Acrylic, aluminum mesh and spray paint on board 2025

¹⁷ Walsh, Taylor; Moma Exhibition 2016 (https://www.moma.org/artists/471-lynda-benglis)

Conclusion

Awe, like beauty, is in the eye of the beholder. I cannot claim that my work will create the feeling of awe in others, but the images and metaphors of science are my inspiration. It reminds me that I am part of the larger cosmos. It reanimates my connection to 'the big picture' and creates a portal for me to experience both the knowledge and the mystery at the heart of it all. As Albert Einstein said, "Try and penetrate with our limited means the secrets of nature and you will find that . . . there remains something subtle, intangible and inexplicable." 18

Hopefully, others will connect with my work and understand the awe that I feel. As Einstein told us, "Look deep into nature, and you will understand everything better." ¹⁹

¹⁸ Kessler, Charles; The Diaries of Count Harry Kessler (New York: Grove Press, 2002), 322

¹⁹ To Margot Einstein, after his sister's Maja's death, 1951; quote by Hanna Loewy in A&E Television Einstein Biography, VPI International, 1991.

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