The all-knowing cloud and the cloud of unknowing

Clouds evoke the sublime. What about the cloud that stores our data and mediates its flow?

by Arthur Aghajanian in the August 2024 issue
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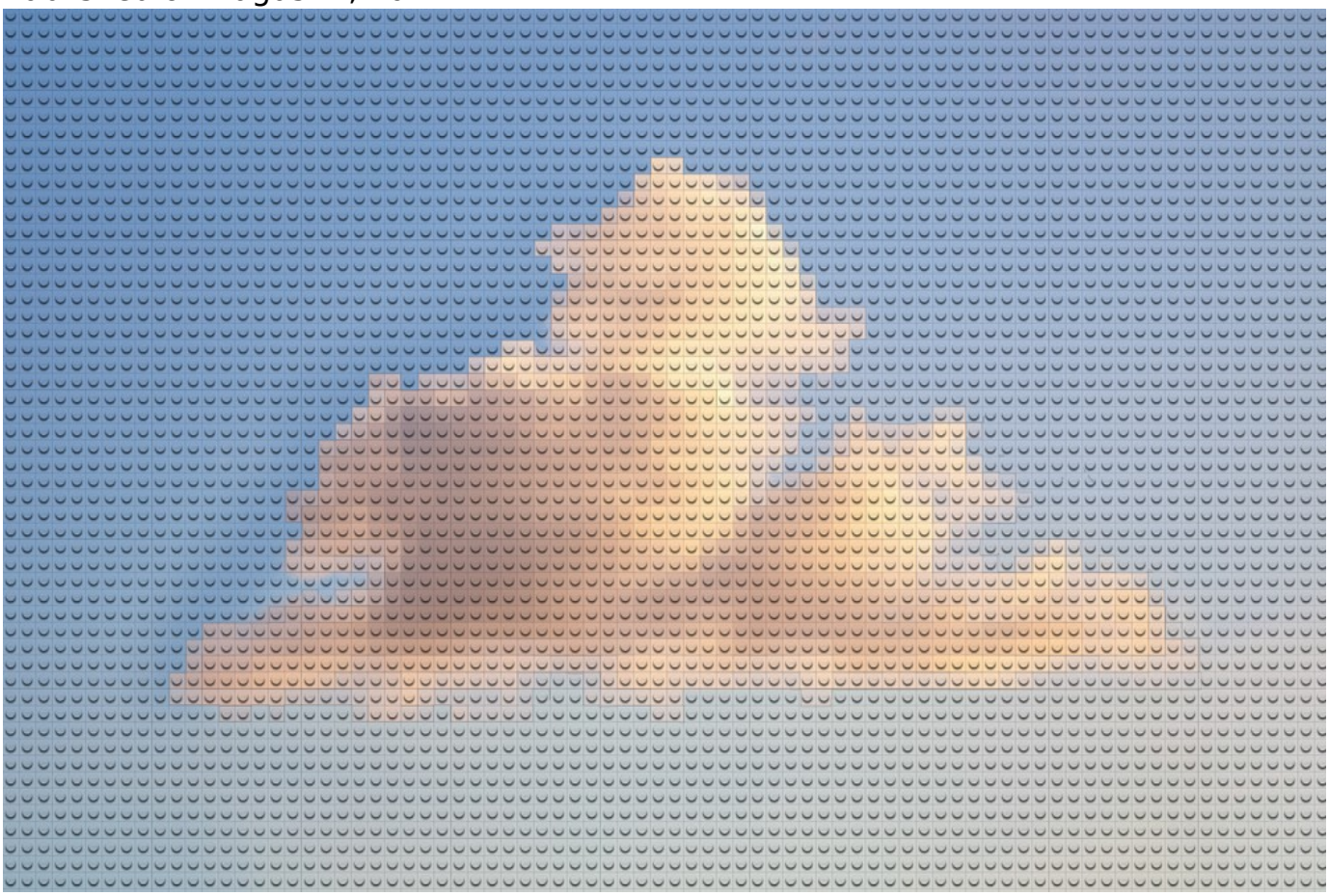

(Century illustration)

As a young adult I enrolled in an introductory astronomy course. I worried that it would require a lot of advanced math, but the challenge proved to be more of a conceptual nature. No matter how I tried, I couldn’t seem to wrap my head around what was being taught about the incomprehensible sizes and distances of stars, nebulas, galaxies, and light-years.

The images from the James Webb Space Telescope have rekindled that sense of wonder in me. The official website displays these images in high definition, providing an immersive experience that was once impossible. Viewing those radiant hues, ethereal glows, and swirls of cosmic dust brings to mind all the symbolic and spiritual associations that clouds inspire: transience, change, unpredictability, mystery, inspiration, and dreamlike states. In scripture, clouds signify divine presence: God guides the Israelites in a pillar of cloud or makes the clouds his chariot, and it's certainly something to imagine Jesus being received by a cloud after appearing to his disciples following his resurrection.

Georgia O'Keeffe was in her 70s when she traveled by plane for the first time. Looking out her window, the painter was astounded by the vast expanse of cloud-filled sky, its horizon extending boundlessly into the distance. Returning to her studio in New Mexico, she began translating this experience into a series of paintings unlike any she had made before.

As a college student, I drove to Washington, DC, to see the centennial exhibition of O'Keeffe's work at the National Gallery of Art. Navigating the galleries of the East Building at a measured pace, I spent several hours soaked in pulsing hues, unfolding petals, and canyons stretching into the infinite. O'Keeffe's abstractions of the natural world are intimate, like whispers of the desert wind, inviting the viewer to lose themselves in the rhythm of the unseen and the beauty of the overlooked.

In the exhibition's final room, I discovered her cloud paintings. Having become accustomed to the modest scale of the work in the preceding galleries, I was startled to find myself surrounded by a panorama of skies and clouds, including a mural-sized canvas that filled the breadth of an entire wall. The gallery had been transformed into an azure realm, suspended and floating in immense silence, as it might have felt on the day God placed a rainbow in the clouds to signify the new covenant. O'Keeffe's cloud paintings evoke a sense of boundlessness, weightless suspension, and transcendence. They are minimalist in design, existing in a liminal space between abstraction and representation, mirroring the ever-changing nature of real clouds.

The awkward, stylized clouds marching toward the horizon in *Sky above Clouds IV*, which at 8 feet by 24 feet is O'Keeffe's largest painting, have a fragility that contradicts the bold scale and execution of the painting. O'Keeffe simplifies details, shaping each unique cloud like pressed dough, with a sweetness reminiscent of

gummies or children’s illustrations. In their orderly rows, the clouds appear at once flat and deep, leaving the viewer disoriented. Fusing broad fields of softly rendered blue and white, O’Keeffe imparts a sense of timeless stillness and tranquility amid perpetual movement. She invites us to meditate on the infinity of space.

O’Keeffe could not have made her cloud paintings without the science that made air travel possible. In them, science and spirituality fuse. The cloud paintings embody paradox, where opposing qualities (flatness and depth, monumentality and intimacy, fullness and emptiness) converge in a harmonious whole.

I can now view all these images by way of a digital cloud, a global network of servers that connects us across a virtual expanse. The Webb telescope’s clouds and O’Keeffe’s clouds both evoke the sublime, but what of the cloud that stores our data and mediates its flow? Since cloud computing creates a large carbon footprint and cedes the control of data (along with the profits it yields) to a few large corporations, its power over us has deep economic, environmental, and social implications. There’s no question that the technology that supports cloud computing is here to stay, and it’s important to be cautious about the influence of the cloud on our lives.

Historically, artists have often adapted new technology to creative ends. They’ve employed it as a tool to critique cultural norms, to produce social commentary, and sometimes even to subvert the medium itself, prompting awareness of its mechanisms of control. The response of artists to the ascendancy of television in the latter half of the 20th century is a case in point. Many artists adapted television into a platform for experimentation and subversion. They critiqued its format and messages by pushing boundaries through a variety of methods, including live performances and manipulated broadcasts. Similarly, web-based media provide an opportunity for continued artistic disruption and the exploration of new strategies to awaken cultural consciousness.

The unprecedented access to images and information provided by the cloud supplies contemporary artists and thinkers with resources for innovative work. As uncanny as the cosmic clouds unveiled by the Webb telescope, our digital cloud connects us across the virtual expanse of the internet in ways reminiscent of celestial interstellar networks. From the telescope’s deep space observations to the World Wide Web, where information orbits in a digital universe waiting to be discovered, the image of the cloud bridges virtual and cosmic realms.

The wonders unveiled by the Webb telescope echo the vastness of data and resources accessible through the web's cloud computing infrastructure. We are able to travel through the cloud in our midst to the clouds beyond in an interplay between human innovation and the cosmic order, the ethereal expanse of the internet's cloud seamlessly granting access to its celestial counterparts. Drawing these correlations intensifies my interest in the polysemous nature of the cloud image and its sway on human imagination. For most of human history, clouds have been seen as enigmatic, immeasurable, and ever-present. The cloud reflects these qualities for us today: it's a silent, floating, and pervasive source of power to which we are inextricably bound. We accept its unknowability just as we accept the mystery of the clouds overhead.

Clouds are like canvases for our projections. The diversity of clouds prompts different images and insights, while the internet's cloud ensures a continuous flow of stimulation to feed the imagination. The internet shapes our perception of outer space, influencing how and what we see, while images of space inspire technological interactivity. The relationship is symbiotic.

Searching the cloud for new kinds of clouds, I learned about the recently discovered Nube galaxy. *Nube* is Spanish for "cloud." The galaxy is about half the size of our own Milky Way, about 10 billion years old, and approximately 350 million light-years away. Since its stars are spread over a huge volume of space, Nube is invisible to most telescopes.

It's an almost dark galaxy, which means it's made of dark matter. Dark matter can't be seen, but it's assumed to exist based on the behavior of stars, planets, and galaxies. It's also said to constitute 80 percent of all matter in the universe. Nube is an extreme example of an almost dark galaxy. It's symmetrical, unusually large and dark, and of unknown origin. Nube also has an uncanny configuration, in that its dark matter is distributed in the form of a halo. This faint, ghostlike galaxy is prompting scientists to ask new questions about the mysteries of space.

Nube's tenebrous quality calls to mind the Christian tradition of apophatic theology: knowing God by what God is not. From this mystical perspective, I envision Nube as a symbol of the divine darkness in which God resides (Exod. 20:21), contiguous with his dwelling in the clouds in the tabernacle (Exod. 40:34–38) and above the mercy seat (Exod. 25:17–22).

Among the spiritual classics of the apophatic tradition is *The Cloud of Unknowing*, which emerged in late 14th-century England. This anonymous work of Christian mysticism is a spiritual handbook addressed to an unknown student, instructing them to seek God through contemplative prayer. “The first time you practice contemplation,” warns the author, “you’ll only experience a darkness, like a cloud of unknowing. You won’t know what it is. You’ll only know that in your will you feel a simple reaching out to God.” The author then stresses the importance of remaining in the present moment while immersing the self in a state of unknowing:

> You must also know that this darkness and this cloud will always be between you and God, whatever you do. They will always keep you from seeing him clearly by the light of understanding in your intellect and will block you from feeling him fully in the sweetness of love in your emotions. So, be sure to make your home in this darkness. Stay there as long as you can, crying out to him over and over again because you love him. It’s the closest you can get to God here on earth, by waiting in this darkness and in this cloud. Work at this diligently, as I’ve asked you to, and I know God’s mercy will lead you there.

This kind of unknowing may be as hard for many Western Christians to wrap their heads around as astronomy was for me. In our era, cloudiness in thought and perception is often seen as a barrier to realizing our full potential or to gaining mastery over our lives. René Descartes’s rationalist philosophy, so influential for Enlightenment thought, relied on a rigorous application of rules and axioms built on a set of first, “self-evident” principles, based on “the conception which an unclouded and attentive mind gives.” The dualism inherent in this kind of thinking encourages us to see rationality and religion as opposed to one another.

But our intellect is itself part of the unfathomable nature of God, and while the rational mind may not provide direct knowledge of God, it’s an integral part of God’s creation. In his letters, Paul intriguingly expresses the idea that mystery isn’t a contradiction of intellectual prowess but a lens through which rationality can be situated against worldly wisdom. We may envision a division between religion and science, but this distinction is confounded by the infinite nature of God’s love, which is radically whole.

Scientific exploration continues to confront the unfathomable: the intricate complexities of quantum mechanics, the mind-bending concept of multiple universes, the enigmatic nature of dark matter. The scientific vision of reality has radically changed since the 19th century, when the universe was commonly thought to lack any inner purpose. Some contemporary theories—such as the observer effect, which posits that we change a system simply by observing it—closely align with panpsychism, as well as with the age-old teachings of many religions about a supreme consciousness.

The biblical cloud is a thick darkness in which God dwells, masking the divine glory so that God can interact directly with humankind. When God speaks to Moses in Exodus 33 and to Peter, James, and John in Matthew 17, it is from a dense cloud. Without this mask, it is presumed, God’s children would be consumed by the light of his glory—a light far exceeding the sun. *The Cloud of Unknowing* advocates approaching that clouded glory. By moving beyond concepts, transcending knowledge, and humbly accepting the state of not knowing, the mystic embarks on a journey from the visible, through the invisible, to divine union within that luminous darkness.

Ultimately, scientists and mystics agree: at the deepest levels of exploration, the intricate mysteries of existence continue to surpass us.