

## Ode to E Pluribus Unum for Sunday June 8 2025



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### Spiral Galaxy NGC 2566 from Webb



*Image Credit: ESA/Webb, NASA & CSA, A. Leroy*

What's happening in the center of spiral galaxy NGC 2566? First, the eight rays that appear to be coming out of the center in the featured infrared image are not real — they are diffraction spikes caused by the mechanical structure of the Webb space telescope itself.

The center of NGC 2566 is bright but not considered unusual, which means that it likely contains a supermassive black hole, although currently not very active.

At only 76 million light years away, the light we see from NGC 2566 today left when dinosaurs roamed the Earth.

The picturesque galaxy is close enough so that Earthly telescopes, including Webb and Hubble, can resolve the turbulent clouds of gas and dust where stars can form and so allows study of stellar evolution. NGC 2566, similar in size to our Milky Way Galaxy, is notable for its bright central bar and its prominent outer spiral arms.

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## Jester's Cap



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From Last Week's Ode

*"Perhaps most importantly, curiosity promotes neuroplasticity, the brain's ability to rewire itself in response to new experiences. This makes it an ideal cognitive state for those inevitable moments of change when we need to break established neural patterns and form new connections."*

Jester's Response

Seems that this is another case of attributing correlation to causation. Kinda like the dubious idea that working crossword puzzles, etc., keeps your brain young and wards off dementia. Or that skipping breakfast causes pancreatic cancer. The first is wrong on its face: if your brain doesn't work well, you're going to have trouble solving problems/puzzles, so you won't try. Nobody enjoys frustration for very long. The second was debunked by no less a light than Lewis Thomas, erstwhile chief of Sloan-Kettering. He referred to the idea as "romance."

Eggs...and in a similar vein, the chicken/egg priority conundrum. An MIT grad did, in fact, solve the problem and published it in Tech Review's puzzle corner about 30 or 40 years ago. (Guilty.) Shall I leave it as a problem to be solved by the reader? The main

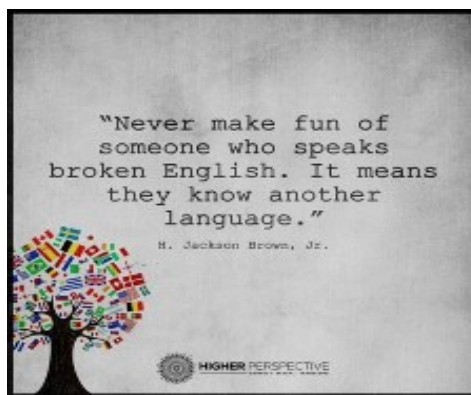
hint I'll give is that there is a logical answer. But you have to know a little bit about embryology and genetics to solve it. (Which, in itself, is a big hint.)

Have you ever tried to crush an egg by squeezing it? It's amazingly difficult to do. Not to mention messy. Do it over a sink. Wear dirty clothes and have a clean shirt on hand.

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It's HeathKit, not HealthKit. (Mea Culpa. I guarantee it's the last mistake I will ever make... until the next one)

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## A Game-Changing Way to Treat Stroke

*Researchers have developed a new technology for removing blood clots that is more than twice as effective as current techniques. It could significantly improve success rates in treating strokes, heart attacks, pulmonary embolisms, and other clot-related diseases.*



*Close-up of the milli-spinner, which consists of a long, hollow tube that can rotate rapidly, with a series of fins and slits near the clot that help create a localized suction. Through its innovative*

*design, the milli-spinner can shrink blood clots without rupturing them*  
*Andrew Brodhead*

Researchers at Stanford Engineering have developed a new technique called the milli-spinner thrombectomy that could significantly improve success rates in treating strokes, as well as heart attacks, pulmonary embolisms, and other clot-related diseases. In a paper [published](#) June 4 in Nature, the researchers used both flow models and animal studies to show that the milli-spinner significantly outperforms available treatments and offers a new approach for fast, easy, and complete clot removal.

<https://bit.ly/4kSkFTw>

*I'd like comments on this.*

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## Chords & Riffs

### Yuja Wang (1987- )



*myscene.org*

Yuja was born into a musical family in Beijing. After childhood piano studies in China, she received advanced training in Canada and at the Curtis Institute of Music under Gary Graffman.

Her international breakthrough came in 2007, when she replaced Martha Argerich as soloist with the Boston Symphony Orchestra. Two years later, she signed an exclusive contract with Deutsche Grammophon, and has since established her place among the

world's leading artists, with a succession of critically acclaimed performances and recordings.

She was named Musical America's Artist of the Year in 2017, and in 2021 received an Opus Klassik Award for her world-premiere recording of John Adams' Must the Devil Have all the Good Tunes? with the Los Angeles Philharmonic under the baton of Gustavo Dudamel.

In June 2012, Joshua Kosman of the San Francisco Chronicle wrote that Wang is "quite simply, the most dazzlingly, uncannily gifted pianist in the concert world today, and there's nothing left to do but sit back, listen and marvel at her artistry.'

Wang has received attention for her eye-catching outfits and glamorous stage presence as well as for her piano playing. In a much-quoted 2011 review of a concert at the Hollywood Bowl, Los Angeles Times classical music critic Mark Swed wrote:

"Her dress Tuesday was so short and tight that had there been any less of it, the Bowl might have been forced to restrict admission to any music lover under 18 not accompanied by an adult. Had her heels been any higher, walking, to say nothing of her sensitive pedaling, would have been unfeasible.

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The Impossible Virtuosity of Yuja Wang [https://youtu.be/Qri\\_DvU\\_9aM](https://youtu.be/Qri_DvU_9aM)

Philip Glass Piano Etude No. 6 <https://youtu.be/rWMQMd2VKEk>

Prokofiev: Piano concerto no.2 op.16 <https://youtu.be/yr1pFv5QzPc>

Ravel Left Hand Piano Concerto <https://youtu.be/ZbEtk1kdYx4>

Ravel G Major Piano Concerto plus encores [https://youtu.be/3iFbM\\_08H7U](https://youtu.be/3iFbM_08H7U)

Bach, Toccata BWV 911 <https://youtu.be/sBTSAbyAAi8?t=2>

Michael Tilson Thomas's "You Come Here Often?" <https://youtu.be/MK3sbDCMTcQ>

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## An Adventure Under the Darkest Skies in the World

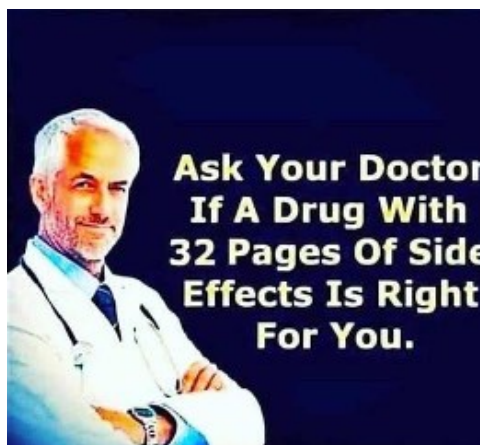


*Minkov*

Award-winning astrophotographer Mihail Minkov recently returned home to Bulgaria following an incredible 20-day journey across South America, where Minkov visited some of the world's most spectacular locations with the darkest skies.

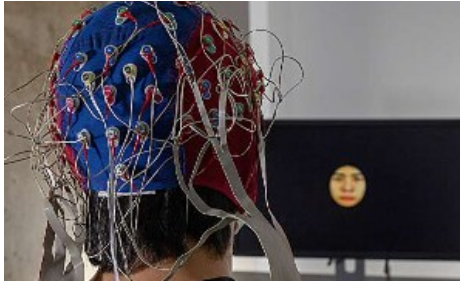
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## Do We Perceive Faces from Other Racial Groups Differently?



*Researchers at U of T Scarborough have used brain activity and AI to reveal why we have a tough time recognizing facial details of people from other races.*

*Credit: Don Campbell*

University of Toronto Scarborough researchers have harnessed artificial intelligence (AI) and brain activity to shed new light on why we struggle to accurately recognize faces of people from different races.

Across a pair of studies, researchers explored the Other-Race-Effect (ORE), a well-known phenomenon in which people recognize faces of their own race more easily than others. They combined AI and brain activity collected through EEG (electroencephalography) to reveal new insights into how we perceive other-race faces, including visual distortions more deeply ingrained in our brain than previously thought.

"What we found was striking—people are so much better at seeing the facial details of people from their own race," says Adrian Nestor, associate professor in the Department of Psychology and co-author of the studies.

A second study, recently published in the journal *Frontiers in Human Neuroscience*, looked more closely at brain activity that might be involved to explain ORE. Brain activity, which occurs in the first 600 milliseconds of seeing the images, was used to digitally reconstruct how the participants visually process faces in their mind.

<https://bit.ly/3YuDX8U>

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**LOOK OFFICER,  
I'M JUST SAYING  
IF YOU CAUGHT ME  
THEN YOU WERE  
OBVIOUSLY  
SPEEDING TOO.**

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## Woodsman Spare that Tree

*The lone tree at Northumberland's Sycamore Gap was one of the most photographed in the country before it was deliberately cut down this week.*



*Kris Hodgetts, a photographer from Blyth in Northumberland*

Northumberland National Park Authority officials believe the tree was "deliberately felled". A teenager and a man in his 60s were arrested on suspicion of criminal damage and later bailed. Northumbria Police say the investigation remains ongoing.

It had been an iconic symbol of the area, standing tall for around 300 years in a natural dip in the landscape alongside Hadrian's Wall.

<https://bit.ly/42RxQhI>

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## New Gel Could Boost Coral Reef Restoration

*The substance improved coral larvae settlement by up to 20 times in experiments compared to untreated surfaces*



*Marine biologist Daniel Wangpraseurt (left) and postdoctoral researcher Samapti Kundu*



*examine coral growing in an experimental aquarium at UC San Diego's Scripps Institution of Oceanography.*

*Credit: Erik Jepsen/UC San Diego.*

Coral larvae are picky about where they attach and settle down. One of the ways they decide is by "[smelling](#)" [chemicals](#) in the water that are associated with healthy reefs.

Now, researchers at UC San Diego's Scripps Institution of Oceanography and Jacobs School of Engineering have developed a gel using nano-particles that slowly release some of coral larvae's favorite "smells." When the researchers applied the gel, called SNAP-X, to surfaces in lab experiments it increased coral larvae settlement by up to 20 times compared to untreated surfaces. SNAP-X could help overcome a major bottleneck in reef restoration efforts at a time when climate change is challenging the health of coral habitats. The gel is applied to surfaces as a coating and releases the coral-attracting chemicals for up to a month.

The research, published in [Trends in Biotechnology](#), was conducted with funding from the Defense Advanced Research Projects Agency's [Reefense program](#), which aimed to develop self-healing, hybrid biological and engineered reef-mimicking structures for coastal protection.

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## **Human Evolution Traded Fur for Sweat Glands**

*Now, our wounds take longer to heal than those of other mammals*



*Human wounds take longer to heal than the wounds of other mammals, researchers find. That could be because we have fewer hair follicles, and stem cells in hair follicles help regrow skin after an injury.*

*Pexels*

Skin healing is affected by hair. The follicles at the root of each hair contain stem cells, which, in addition to producing hair, can grow new skin when necessary. Since humans have much less hair than other mammals do, it makes sense that our wounds would also take longer to heal.

“When the epidermis is wounded, as in most kinds of scratches and scrapes, it’s really the hair-follicle stem cells that do the repair,” says Elaine Fuchs, a biologist at Rockefeller University.

It’s not entirely clear why early humans lost their hair. But it seems our species swapped the once-abundant hair follicles for sweat glands, which are not as efficient at healing wounds but help keep us cool in hot environments.

<https://bit.ly/4doMjFg>

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## FLASHMOB CENTRAL

### Flashmob à la Gare Saint-Lazare: Ravel Bolero



*youtube.com*

L'Orchestre national d'Île-de-France [https://youtu.be/Q\\_YsMiEex0k?t=511](https://youtu.be/Q_YsMiEex0k?t=511)

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### Whatever Flips Your Boat (at 210 mph)



whiskeyriff.com

<https://youtu.be/Or9be4RzCyA>

[https://fb.watch/zdXNWxz0\\_J/?mibextid=wwXIfr](https://fb.watch/zdXNWxz0_J/?mibextid=wwXIfr)

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## **Thin Plastic Films Could Help Refine Oil Cheaply With Less Pollution**



*Oil refineries, like this one in Scotland, may soon incorporate membrane-based filters to lower the energy required to separate crude oil into components such as gasoline and jet fuel.*

*Ben Montgomery/Getty Im*

To crank out the fuels and chemicals that drive modern society, refineries continuously boil thick, sticky crude oil. Lighter hydrocarbons waft upwards; they are captured and separated out into different components, such as gasoline, jet fuel, and heating oil. This energy-hogging process, driven by burning fossil fuels, consumes roughly 1% of all energy used worldwide and spews out 6% of global carbon emissions. Now, researchers report in *Science* that they can separate the lighter hydrocarbons used in

gasoline from heavier hydrocarbons using thin but durable plastic films. They work at moderate temperatures, and hence slash the process' energy requirements.

Membranes are already widely used in desalination plants to filter drinking water from seawater. These membranes are made relatively cheaply, using two kinds of polymer building blocks called monomers: one dissolved in water and the other in oil. When the two mixtures are combined, the monomers react at the oil-water interface to form a thin, continuous membrane.

But the water-soluble monomers used in desalination don't work for oil separation, so scientists modified the procedure, dissolving both sets of monomers in oil. They also chose monomers that form pores ideally sized for filtering light hydrocarbons when they pack together in films. When the team added these monomers, water, and a catalyst that's drawn to the oil-water interface, the catalyst reacted with both monomers to create the oil separation membrane.

<https://bit.ly/3SnSQpX>

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## **A Film Made With AI. You'll Be Blown Away—and Freaked Out.**

*We tried to direct an AI film with Veo and Runway. The tools are magic. The process is madness.*

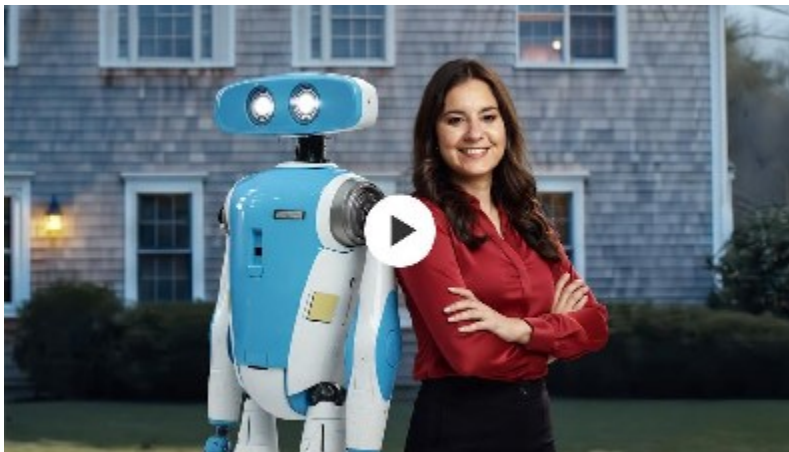


PHOTO: AI GENERATED

AI tools like Google's Veo 3 and Runway can now create strikingly realistic video. WSJ's Joanna Stern and Jarrard Cole put them to the test. Watch their quirky, three-minute comedy and see how they did it.

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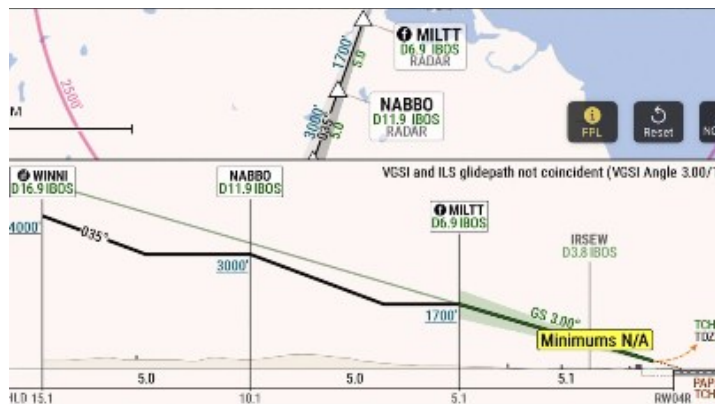
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## Garmin Reinvents Procedural Charts with SmartCharts

*Garmin has introduced SmartCharts, an electronic library of aeronautical procedural charts along with geo-referenced positioning.*



garmin

Nine years in the making, Garmin has reinvented digital aeronautical procedural charts with a new product it calls SmartCharts. Available with the Garmin Pilot app for iOS, the SmartCharts procedures automatically adjust and scale as the pilot zooms and pans within the chart, similar to Garmin's data-driven maps across its entire aviation product line. This data also allows SmartCharts to highlight details and notes that could be easily overlooked and lost on traditional charts, while also reducing clutter—and reducing the potential for error. In a first for the industry, the approach vertical profile view on the approach SmartChart is geo-referenced, with the aircraft appearing on the profile at its altitude.

<https://bit.ly/43NWolq>

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## Promising Breast Cancer Results "Patients With Gene Mutations



*Md Zakir Mahmud/ iStock*

The results of a small clinical trial suggest that an update in treatment could improve survival rates for early-stage breast cancer patients who have inherited the BRCA1 or BRCA2 gene mutations. The mutations, which make one significantly more likely to develop breast cancer, affect about 1 in 400 people.

In the study, 39 cancer patients with BRCA1 or BRCA2 received a targeted drug, olaparib, along with chemotherapy before surgery. Another 45 women underwent chemotherapy but did not take the pill, which works by blocking a protein called PARP and thus causing cancer cells to die rather than repair.

Three years later, all of the women who took olaparib had survived, compared with six deaths in the other group. "It is rare that you see 100% survival at 36 months for this subtype of breast cancer," trial lead Jean Abraham told the BBC. "We're incredibly excited about the potential of this new approach."

For participant Jackie Van Bochoven, who was diagnosed with an aggressive breast tumor in 2019, the study represents "new hope." She added: "Six years on, I'm well and cancer-free. It's amazing."



## Hundreds Scale Mount Everest in a Weather-Hit Climbing Season



*Mountaineers queue up below Camp 4 on the way to the summit of Mount Everest in Nepal, May 17, 2025.*

*(AP Photo/Jenjen Lama)*

Hundreds of climbers and their Sherpa guides scaled Mount Everest this month in Nepal, struggling against harsh weather to make it to the summit of the world's highest mountain before the climbing season finishes at the end of May.

Though several climbers did manage to reach the summit in mid-May, weather conditions deteriorated for days, forcing a retreat to base camp for many.

The route to the summit is equipped with ladders and ropes but these are removed at the end of May, marking an end to the climbing season before the monsoon brings heavy rainfall and bad weather.

According to Nepal's Department of Mountaineering, 468 foreign climbers from 57 countries were given permits to climb Everest by the end of May, along with a roughly equal number of Nepalese mountain guides.

<https://bit.ly/4mIxBgE>

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## Do Parrots Actually Understand What They're Saying?



*When parrots talk, are they just mimicking what they hear, or do they actually understand the*

*meaning behind their words?*

*(Saurabh Goel / 500px via Getty Images)*

In the wild, parrots squeak, squawk, whistle and trill to communicate with their flockmates. These highly social birds rely on their complex communication systems to get food and warn of potential dangers, and research even suggests parrots use "signature contact calls" to refer to each other, similar to how humans call each other by name.

But when parrots live with people, they don't have any flockmates to learn "parrot" from. Instead, they use their highly specialized brains to pick up on human speech. So when parrots talk, do they really understand what they're saying, or are they just masters of mimicry?

"Birds that are trained appropriately can learn amazing amounts of speech," Irene Pepperberg, a research professor of psychological and brain sciences at Boston University, told Live Science. Pepperberg has spent her career training parrots to use human language. Her most famous study participant, Alex the African gray parrot, was known for his prolific communication skills.

Alex understood more than 100 words for different objects, actions and colors. He could count up to six and had a basic understanding of the concept of zero. When given an object, Alex could identify its color, shape and material, as well as accurately compare multiple objects using terms like "bigger" or "smaller" and "same" or "different."

<https://bit.ly/43P62cR>

*I think the real test would be to see how many parrot jokes Alex knows.*

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## Hawk Uses Traffic Patterns to Target Prey

*Researcher records Cooper's hawk in New Jersey making use of pedestrian crossing and line of cars while hunting*



*The Cooper's hawk took up its position when the crossing's sound signal began.*

*Photograph: Rory Merry/Zuma Press Wire/Rex/Shutterstock*

Like a Tom Cruise stunt: hawk uses traffic patterns to target prey

Researcher records Cooper's hawk in New Jersey making use of pedestrian crossing and line of cars while hunting

It is a tactic worthy of Tom Cruise's Ethan Hunt: wait until a beeping pedestrian crossing indicates a traffic queue has formed then use the line of cars as cover to reach your target. But this isn't a scene from Mission: Impossible – it's the behavior of a young hawk.

The discovery is not the first time birds have been found to make use of an urban environment. Crows, for example, are known to drop foods such as walnuts on to roads for cars to crush them open.

<https://bit.ly/4mvseky>

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During my job interview  
yesterday, the  
interviewer asked, 'Why  
do you think I should  
give you this job?'

I replied, 'Because my  
best friend Dave works  
in your IT department,  
and he told me you're  
having an affair with  
your secretary.'

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## Newest Member Of The Solar System Just Announced

The object is in an extreme orbit and big enough to be a new dwarf planet and challenge the Planet 9 hypothesis.



*Image Credit: images of dwarf planets from NASA/JPL-Caltech; image of 2017 OF201 from Sihao Cheng et al.*

The Solar System has just gotten a new official member. Currently, with the name of 2017 OF201, this is a trans-Neptunian object (TNO). This means that it orbits the Sun further away than Neptune. Actually, its orbit is so big that it takes about 25,000 years to complete.

The discovery of the object was officially announced on May 21, 2025, by the International Astronomical Union's Minor Planet Center. It is estimated to have a diameter of about 700 kilometers (435 miles), big enough for this to be a dwarf planet

<https://bit.ly/3FrIrHZ>

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## See Live 4K video views of Earth from the ISS via Sen cameras

*It's really easy to just stare at these videos for hours.*



NASA



Click play, go full-screen, lean back and enjoy. That's how easy it is now to get lost in the absolutely stunning scape that is our planet Earth from space as it streams live before your eyes.

<https://bit.ly/3Ha0RMM>

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## **500-Year-Old Artifacts from a Little-Known Culture found in Trash**

*When two spelunkers investigated what they thought was trash in a cave in Mexico, they discovered more than a dozen artifacts dating back centuries.*



*About 500 years ago, someone placed a shell bracelet on a stalagmite in a Mexican cave.  
(Image credit: Katiya Pavlova)*

While investigating a cave high in the mountains of Mexico, a spelunker thought she had found a pile of trash from a modern-day litterbug. But upon closer inspection, she discovered that the "trash" was actually a cache of artifacts that may have been used in fertility rituals more than 500 years ago.

"I looked in, and it seemed like the cave continued. You had to hold your breath and dive a little to get through," speleologist Katiya Pavlova said in a translated statement. "That's when we discovered the two rings around the stalagmites."

The cave, called Tlayócoc, is in the Mexican state of Guerrero and about 7,800 feet (2,380 meters) above sea level. Meaning "Cave of Badgers" in the Indigenous Nahuatl language, Tlayócoc is known locally as a source of water and bat guano. In September 2023, Pavlova and local guide Adrián Beltrán Dimas ventured into the cave — possibly the first time anyone has entered it in about five centuries.

<https://bit.ly/3FrY3dx>

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## WWI Submarine Discovered 'Remarkably Intact' Off San Diego

*A submarine that sank over 100 years ago has been surveyed off the coast of San Diego.*



*A reconstruction made from detailed digital photographs and sonar data shows the U.S. submarine F-1 lying on the seafloor a few miles from San Diego.*

*(Image credit: Image by Zoe Daheron, © Woods Hole Oceanographic)*

Researchers have located the wrecks of two long-lost military vehicles on the seafloor a few miles from San Diego: an American submarine that sank during a training accident in 1917, and a U.S. Navy training aircraft that crashed nearby in 1950.

The USS F-1 submarine sank in seconds after it was badly damaged in a collision with another U.S. Navy submarine. Nineteen of its crew drowned in the accident, and three were rescued by the other sub.

The discovery, made by an expedition to the site earlier this year by researchers from the Woods Hole Oceanographic Institution (WHOI) and the U.S. Navy, was the first time the sub wreck had been located and surveyed since the sinking.

<https://bit.ly/3SpHpy2>

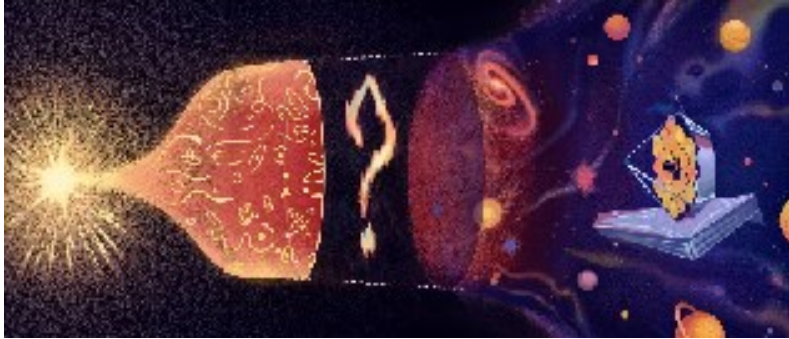
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## The Tense New Era in Cosmology

*Each week Quanta Magazine explains one of the most important ideas driving modern research. This week, physics staff writer Charlie Wood describes the new era dawning in cosmology.*



*Quanta*

Humans have wondered where the world came from for millennia, but it's only in the last century that we've started to figure it out. Edwin Hubble's observations in the 1920s revealed that our Milky Way is just one of many galaxies, and that these galaxies are all being dragged away from one another by the expansion of space. That led cosmologists to infer that the universe is not eternal — that an explosive "Big Bang" in the distant past had kicked off the expansion.

In the last 30 years, cosmologists have pinned down this cosmic origin story with precise numbers. In 1998, researchers monitoring the motion of dozens of galaxies discovered that the expansion of space is ever so slightly picking up its pace, an acceleration powered by a mysterious "dark energy." Then, in the 2000s, a NASA satellite mapped out the leftover heat glow of the early universe in sufficient detail for researchers to deduce when the universe began (13.77 billion years ago) and what its main ingredients are today (71.4% dark energy, 24% dark matter — an invisible form of matter that holds galaxies together — and 4.6% visible matter). Adam Riess, one of the Nobel Prize-winning discoverers of dark energy, called this moment "the end of the beginning in our quest to understand the Universe."

In recent years, the quest has matured and intensified. Researchers have measured the same heat glow much more precisely from both the ground and space. And where cosmologists once made inferences based on the motions of dozens of galaxies, they now have access to millions.

But as the mountains of data have accumulated, cracks in cosmologists' accounting have begun to emerge — conflicts between theory and data that they refer to affectionately and hopefully as "tensions."

Tensions both invigorate and frustrate the field. They may foreshadow big discoveries. Or they may indicate subtle missteps in analysis that crop up as cosmologists attempt to integrate millions of observations of wildly different cosmological objects.

Answers are on the way. A new wave of flagship observatories is coming online, and their data seems likely to relieve the field's growing tensions, one way or the other.

## **A Kilometer High Cliff on Comet Churyumov - Gerasimenko**



*Image Credit & Licence (CC BY-SA 3.0 IGO): ESA, Rosetta spacecraft, NAVCAM; Additional Processing: Stuart Atkinson*

This kilometer high cliff occurs on the surface of a comet was discovered on the dark nucleus of Comet Churyumov - Gerasimenko (CG) by Rosetta, a robotic spacecraft launched by ESA, which orbited the comet from 2014 to 2016. The ragged cliff, as featured here, was imaged by Rosetta early in its mission. Although towering about one kilometer high, the low surface gravity of Comet CG would likely make a jump from the cliffs by a human survivable. At the foot of the cliffs is relatively smooth terrain dotted with boulders as large as 20 meters across. Data from Rosetta indicates that the ice in Comet CG has a significantly different deuterium fraction -- and hence likely a different origin -- than the water in Earth's oceans. The probe was named after the Rosetta Stone, a rock slab

featuring the same text written in three different languages that helped humanity decipher ancient Egyptian writing.

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## **A Rare 10-Carat Pink Diamond Is Going Up for Auction**

*If you or your partner have \$5 million to spare, your engagement ring could get a major upgrade.*

*Courtesy of Christie's*

A rare 10-carat pink diamond ring will go up for auction at Christie's in New York City next month. It is said to be tied to Marie Antoinette and will be featured in the "Magnificent Jewels" auction.

The kite-shaped stone is steeped in royal history and dates back to the mid-18th century.



Christie's anticipates the diamond will sell for up to \$5 million. It was last sold at auction in 1996.

According to royal lore, Queen Marie Antoinette entrusted her most treasured jewels to her faithful coiffeur on the eve of her failed escape from Paris in 1791, hoping to one day reclaim them," a press release from the auction house notes.

"Though fate intervened, the jewels were eventually passed down to her only surviving child, Duchess Marie Thérèse de Angoulême, and later to her niece, Duchess Marie Thérèse de Chambord. Though not known for certain, it is likely that this diamond was part of this inheritance."

<https://bit.ly/4dQm8Yk>

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## **Can AI Researchers Save Energy By Going Backward?**

*Reversible programs run backward as easily as they run forward, saving energy in theory. After decades of research, they may soon power AI.*



*Nash Weerasekera for Quanta Magazine*

For a long time, we have muddled through with wasteful computers. But with the rise of artificial intelligence, which has pushed the power demands of computing to new heights, this seemingly inconsequential decision might be about to bite us. We may need to redesign computing from scratch.

Thankfully, we know exactly what to do. It involves a trick that might sound a touch unlikely: getting processors to do everything twice, once forwards, then in reverse. "Reversible computing can be so much more energy efficient than conventional computing, and it's potentially the way we should have originally built computers," says Hannah Earley at UK-based reversible computing company Vaire Computing.

<https://bit.ly/4jvcBqG>

*It's that damn thermodynamics thing again. It's counterintuitive but it works.*

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## They're 15. Wait Until You Read Their Newspaper.

*The Ditch Weekly, a paper by middle and high schoolers in Long Island, is covering the Hamptons from a new angle.*



*A mix of old and new members of the Ditch Weekly staff, which, in its second summer, is 20 teenagers strong.*

*Credit...Alex Hodor-Lee for The New York Times*

On a Saturday morning in May, five hard-nosed reporters filed into an office on the South Fork of Long Island and picked up their red pens.

For two hours, they combed through the drafts in front of them. Clunky sentences were tightened. Inelegant adjectives were cut. Powdered doughnut holes were eaten, and mini bags of Cheez-Its, too.

This was the final proofreading session for an issue of The Ditch Weekly, a seasonal newspaper about Montauk that is written and edited by locals ages 13 to 17. Its staffers had gathered to put the finishing touches on their first paper of the year, which would be published over Memorial Day weekend.

<https://bit.ly/3Z5dFdE>

*I'd like to put them to work with the Ode.*

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## Once a Leading Killer, Tuberculosis is Now Rare in Rich Countries

*As much as one-quarter of deaths in Europe and the United States were once from tuberculosis*



*A young woman with tuberculosis being cared for. A watercolor by Robert Humphrey Giles in the 1800s.*

*Source: Wellcome Collection.*

While TB was called “consumption” because it led to a loss of appetite, weight loss, and fatigue — an “eating away” of the body — most people died from the destruction of lung tissue. Dead lung tissue can form cavities or holes, leading to coughing and breathing problems. Have you ever watched an old film or TV programme, and seen a character coughing up blood into a handkerchief? That was often tuberculosis, and a silent way of telling you that the character was doomed.

Tuberculosis is not mentioned much in the rich world anymore, but the fight continues in other parts of the world. The world waged war on the disease but left it half-finished.

Tuberculosis still kills almost 1.3 million people every year. That makes it the world’s deadliest infectious disease.

<https://bit.ly/4mDdRe5>

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**Fun fact: Life is easier  
in 2021 for a boy  
named Sue than it  
was in 1969**



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## For Those of You Who Have Not Had the Shingles Vaccine

*A new analysis of a vaccination program in Wales found that the shingles vaccine appeared to lower new dementia diagnoses by 20% — more than any other known intervention.*



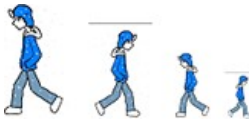
Getty Image

<https://bit.ly/3RZgCs2>

*Thanks to Michael Hoevel for sending this along.*

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## My Walking Thoughts



**For Sunday June 8 2025**

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## How Many Showers Does it Take to Erase a Landfill Visit?

I visited Los Angeles City/County Sunshine Canyon Landfill on Tuesday where I perched on a hillside watching as a group of microbiologists prepared a series of test cells. Why there, why me? Allow me explain.

As a member of the Independent Hearing Panel of the Environmental Affairs Division's Local Enforcement Agency, I was at Sunshine to monitor the progress of the Agency's odor and emissions reduction mitigation plan. The plan is the most comprehensive ever, designed to deal with a situation destined to become increasingly critical where local planning commissioners find it expedient to grant new residential developments on the doorstep of preexisting sites as this... while you're at it you might toss airports, wastewater treatment facilities, and wildfire-prone areas into the same mix.

Sunshine Canyon Landfill is a state-of-the-art Class III municipal landfill on a 1,036-acre site operated as a joint City/County landfill owned and operated by Browning-Ferris Industries of California, Inc. and Republic Services, Inc.

In operation since 1958 it currently handles about one-third of the daily waste generated in Los Angeles County, receiving roughly 9,000 tons of waste per day or more than 2.5 million tons annually.

Its 23.5 MW biogas power station converts landfill gas into energy, powering approximately 25,000 homes, but therein lies a great part of the problems the LEA is working to alleviate. Both the odors and emissions are cause for complaints and lawsuits.

*[In 2024, a major lawsuit alleged negligence and reckless operation of the landfill, particularly following heavy rains in late 2022 and 2023.]*

I'll leave details of the various efforts for another forum, but my purpose here is to bring to the attention of the public and its local planning officials the need to think through the implications of such actions as permitting development where health and safety issues and conflicts of interest are certain to arise.

You might not think highly of landfills but they are crucial to the health and well-being of our communities. Of equal importance, however, is the care with which landfills must be designed, constructed, monitored, and remediated throughout their lifetimes... which in the case of Sunshine Canyon will be well beyond that of its neighbors.

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