

Ode to E Pluribus Unum for Sunday August 11 2024

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Cometary Globules



Image Credit & Copyright: Mark Hanson & Martin Pugh, Observatorio El Sauce

What are these unusual interstellar structures? Bright-rimmed, flowing shapes gather near the center of this rich starfield toward the borders of the nautical southern constellations Puppis and Vela.

Composed of interstellar gas and dust, the grouping of light-year sized cometary globules is about 1300 light-years distant. Energetic ultraviolet light from nearby hot stars has molded the globules and ionized their bright rims.

The globules also stream away from the Vela supernova remnant which may have influenced their swept-back shapes. Within them, cores of cold gas and dust are likely collapsing to form low mass stars, whose formation will ultimately cause the globules to disperse. In fact, cometary globule CG 30 (on the upper left) sports a small reddish glow near its head, a telltale sign of energetic jets from a star in the early stages of formation.

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Particles that Break Causality and Move Faster than Light?



*A delicate sphere of gas created by a supernova blast wave 160,000 light-years from Earth.
(Image credit: NASA Goddard)*

In a new paper that has yet to be peer-reviewed, the physicists propose that our universe is dominated by tachyons — a hypothetical kind of particle that always moves faster than light. Tachyons almost certainly don't exist; going faster than light violates everything we know about the [causal flow of time](#) from past to future. But the hypothetical particles are still interesting to physicists because of the small chance that even our most closely held notions, like causality, might be wrong.

<https://bit.ly/3W4um8n>

With all the changes that have taken place in our understandings of the universe you may wish to doubt this, but it's hard to say "no way."

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PROTECT YOUR DOG'S PAWS		
AIR TEMP	CONCRETE	ASPHALT
80°	95°	115°
85°	105°	130°
90°	125°	140°
95°	140°	155°
7 SECOND RULE - PLACE HAND ON THE SURFACE TOO HOT FOR YOUR HAND, TOO HOT FOR YOUR HOUND		
6 SIGNS OF HEAT STROKE IN DOGS		

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U.S. National Debt Exceeds \$35 Trillion



Matzav.com

Treasury Department data indicates that this staggering figure translates to over \$104,000 per person and \$266,000 per household. This highlights the growing fiscal challenges facing the world's largest economy.

The current debt level equates to:

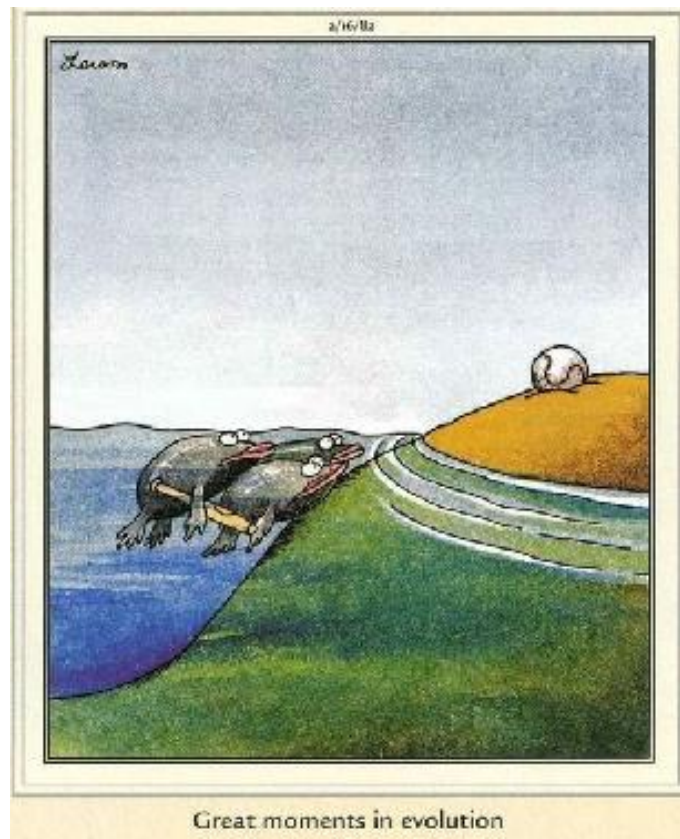
- \$104,497 per person
- \$266,275 per household
- \$483,889 per child

The debt-to-GDP ratio is projected to reach 99% this year, with forecasts indicating it will surpass 106% by 2027, breaking a nearly 80-year-old record set in 1946

<https://bit.ly/46vVW1q>

Just think of the savings when instead of SpaceX we can just climb a stack of bills to reach the Space Station. Do you think the Federal Reserve has its sights set on Mars?

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NASA Video Gallery



NASA Video Gallery

Since 1958, the National Aeronautics and Space Administration has brought the mysteries of the cosmos down to Earth, inspiring millions across the world to set their eyes on the final frontier. Its pioneering lunar missions, scientific discoveries, space-based observatories, and more have established it as the world's leading-edge space program

<https://bit.ly/4d6Sgpr>

A look at the agency's history, accomplishments...and failures

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Elegant Domed Apple Store in Kuala Lumpur



moss&fogg

Crafted as a glazed dome, the 87 x 87-foot (26.5 x 26.5 meter) roof seamlessly transitions from square to round geometries from its base to its apex.

<https://mossandfog.com/elegant-domed-apple-store-in-kuala-lumpur/>

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Human Origins Tied to Ancient Jawless Blood-Sucking Fish



ranker.com

Vertebrates, including humans, trace their lineage back to ancient fish that lived more than 400 million years ago during the Devonian period (419 million to 359 million years ago). At that time, jawless fish filled the seas, while jawed vertebrates were uncommon. Today, the opposite is true.

Lampreys and hagfish are the only surviving groups of the once-dominant jawless vertebrates. They are among the most primitive living vertebrates, so studying their genes can help researchers better understand early vertebrate evolution.

<https://bit.ly/4dc2fKa>

Explains the road to political power, doesn't it?

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What Will the New Cardiovascular Risk Calculator Mean for Patients?

Analysis forecasts more heart attacks and strokes as fewer people become eligible for meds



Image: magicmine/iStock/Getty Images Plus

A recently unveiled cardiovascular disease risk calculator that measures a patient's risk for heart attack and stroke is better calibrated and more precise than its previous version, but if current treatment guidelines for cholesterol and blood pressure therapy remain unchanged, the new calculator may have unintended consequences, according to research from Harvard Medical School.

"At its core, cardiovascular disease prevention has two elements — predicting risk and choosing when to treat in order to prevent a heart attack or a stroke, so I would be concerned if we only change one side of this equation without reexamining the other side, which is the treatment threshold," said study senior author Raj Manrai, assistant professor of biomedical informatics in the Blavatnik Institute at HMS.

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

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UNESCO Adds Italy's Appian Way to List of World Heritage Sites



Renata Tyburczy/ iStock

Come for the pizza, stay for the historic scenery. Italy remains home to the highest number of UNESCO World Heritage Sites in the world: Via Appia, or the Appian Way, recently made the prestigious list, becoming the country's 60th inscribed location.

The oldest of the great roads built by the ancient Romans beginning in 312 B.C., the Appian Way is around 500 miles long and nicknamed the "Queen of Roads," or Regina Viarum. It was an essential roadway for Rome, and clearly demonstrates "the advanced technical skill of Roman engineers," according to the UNESCO description.

"It was originally conceived as a strategic road for military conquest, advancing towards the East and Asia Minor," the organization explains. "The Via Appia later enabled the cities it connected to grow and new settlements emerged, facilitating agricultural production and trade."

These days, the Appian Way serves a different purpose, as an open-air museum, a green space, and an area where both locals and tourists spend time biking, hiking, and simply enjoying the views, per the Associated Press. Check out more of the newly inscribed sites.

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Poetry Corner

John Keats (1795-1821)



Portrait of John Keats by William Hilton.

Although he died at the age of twenty-five, Keats had perhaps the most remarkable career of any English poet. He published only fifty-four poems, in three slim volumes and a few magazines. But over his short development he took on the challenges of a wide range of poetic forms from the sonnet, to the Spenserian romance, to the Miltonic epic, defining anew their possibilities with his own distinctive fusion of earnest energy, control of conflicting perspectives and forces.

Some time in 1814 Keats wrote his first poem, "In Imitation of Spenser." What is remarkable about this first poem is its vitality, its appropriation of the Spenserian rhyme scheme and richly compressed imagery to evoke a romantically voluptuous dream world.

Keats's first volume, *Poems*, appeared on 3 March 1817, with its dedicatory sonnet to Leigh Hunt. It begins with "I stood tip-toe," ends with another long poem, "Sleep and Poetry," and includes youthful poems as well as some recent, good work.

The great odes of the spring and fall 1819—Ode to Psyche, Ode to a Nightingale, Ode on a Grecian Urn, Ode on Melancholy, To Autumn (written in September), Ode on Indolence (not published until 1848, and often excluded from the group as inferior)—do not attempt to answer these questions. They rather explore the ironies of our attempts to answer them and of poetry's attempts to articulate them. The order of the odes has been much debated; it is known that Ode to Psyche was written in late April, Ode to a Nightingale probably in May, and To Autumn on 19 September 1819, but although Ode on a Grecian Urn and Ode on Melancholy are assumed to belong to May, but no one can be certain of any order or progression. In style and power the odes represent Keats's finest poetry; indeed, they are among the greatest achievements of Romantic art.

Ode to a Grecian Urn

Thou still unravish'd bride of quietness,
 Thou foster-child of silence and slow time,
Sylvan historian, who canst thus express
 A flowery tale more sweetly than our rhyme:
What leaf-fring'd legend haunts about thy shape
 Of deities or mortals, or of both,
 In Tempe or the dales of Arcady?
What men or gods are these? What maidens loth?
What mad pursuit? What struggle to escape?
 What pipes and timbrels? What wild ecstasy?

Heard melodies are sweet, but those unheard
 Are sweeter; therefore, ye soft pipes, play on;
Not to the sensual ear, but, more endear'd,
 Pipe to the spirit ditties of no tone:
Fair youth, beneath the trees, thou canst not leave
 Thy song, nor ever can those trees be bare;
 Bold Lover, never, never canst thou kiss,
Though winning near the goal yet, do not grieve;
 She cannot fade, though thou hast not thy bliss,
 For ever wilt thou love, and she be fair!

Ah, happy, happy boughs! that cannot shed
 Your leaves, nor ever bid the Spring adieu;
And, happy melodist, unwearied,

For ever piping songs for ever new;
More happy love! more happy, happy love!
For ever warm and still to be enjoy'd,
For ever panting, and for ever young;
All breathing human passion far above,
That leaves a heart high-sorrowful and cloy'd,
A burning forehead, and a parching tongue.

Who are these coming to the sacrifice?
To what green altar, O mysterious priest,
Lead'st thou that heifer lowing at the skies,
And all her silken flanks with garlands drest?
What little town by river or sea shore,
Or mountain-built with peaceful citadel,
Is emptied of this folk, this pious morn?
And, little town, thy streets for evermore
Will silent be; and not a soul to tell
Why thou art desolate, can e'er return.

O Attic shape! Fair attitude! with brede
Of marble men and maidens overwrought,
With forest branches and the trodden weed;
Thou, silent form, dost tease us out of thought
As doth eternity: Cold Pastoral!
When old age shall this generation waste,
Thou shalt remain, in midst of other woe
Than ours, a friend to man, to whom thou say'st,
"Beauty is truth, truth beauty,—that is all
Ye know on earth, and all ye need to know."

Ode to a Nightengale

My heart aches, and a drowsy numbness pains
My sense, as though of hemlock I had drunk,
Or emptied some dull opiate to the drains
One minute past, and Lethe-wards had sunk:
'Tis not through envy of thy happy lot,
But being too happy in thine happiness,—
That thou, light-winged Dryad of the trees
In some melodious plot
Of beechen green, and shadows numberless,
Singest of summer in full-throated ease.

O, for a draught of vintage! that hath been

Cool'd a long age in the deep-delved earth,
Tasting of Flora and the country green,
Dance, and Provençal song, and sunburnt mirth!
O for a beaker full of the warm South,
Full of the true, the blushful Hippocrene,
With beaded bubbles winking at the brim,
And purple-stained mouth;
That I might drink, and leave the world unseen,
And with thee fade away into the forest dim:

Fade far away, dissolve, and quite forget
What thou among the leaves hast never known,
The weariness, the fever, and the fret
Here, where men sit and hear each other groan;
Where palsy shakes a few, sad, last gray hairs,
Where youth grows pale, and spectre-thin, and dies;
Where but to think is to be full of sorrow
And leaden-eyed despairs,
Where Beauty cannot keep her lustrous eyes,
Or new Love pine at them beyond to-morrow.

Away! away! for I will fly to thee,
Not charioted by Bacchus and his pards,
But on the viewless wings of Poesy,
Though the dull brain perplexes and retards:
Already with thee! tender is the night,
And haply the Queen-Moon is on her throne,
Cluster'd around by all her starry Fays;
But here there is no light,
Save what from heaven is with the breezes blown
Through verdurous glooms and winding mossy ways.

I cannot see what flowers are at my feet,
Nor what soft incense hangs upon the boughs,
But, in embalmed darkness, guess each sweet
Wherewith the seasonable month endows
The grass, the thicket, and the fruit-tree wild;
White hawthorn, and the pastoral eglantine;
Fast fading violets cover'd up in leaves;
And mid-May's eldest child,
The coming musk-rose, full of dewy wine,
The murmurous haunt of flies on summer eves.

Darkling I listen; and, for many a time

I have been half in love with easeful Death,
Call'd him soft names in many a mused rhyme,
To take into the air my quiet breath;
Now more than ever seems it rich to die,
To cease upon the midnight with no pain,
While thou art pouring forth thy soul abroad
In such an ecstasy!
Still wouldst thou sing, and I have ears in vain—
To thy high requiem become a sod.

Thou wast not born for death, immortal Bird!
No hungry generations tread thee down;
The voice I hear this passing night was heard
In ancient days by emperor and clown:
Perhaps the self-same song that found a path
Through the sad heart of Ruth, when, sick for home,
She stood in tears amid the alien corn;
The same that oft-times hath
Charm'd magic casements, opening on the foam
Of perilous seas, in faery lands forlorn.

Forlorn! the very word is like a bell
To toll me back from thee to my sole self!
Adieu! the fancy cannot cheat so well
As she is fam'd to do, deceiving elf.
Adieu! adieu! thy plaintive anthem fades
Past the near meadows, over the still stream,
Up the hill-side; and now 'tis buried deep
In the next valley-glades:
Was it a vision, or a waking dream?
Fled is that music:—Do I wake or sleep?

To Autumn

Season of mists and mellow fruitfulness,
Close bosom-friend of the maturing sun;
Conspiring with him how to load and bless
With fruit the vines that round the thatch-eaves run;
To bend with apples the moss'd cottage-trees,
And fill all fruit with ripeness to the core;
To swell the gourd, and plump the hazel shells
With a sweet kernel; to set budding more,
And still more, later flowers for the bees,

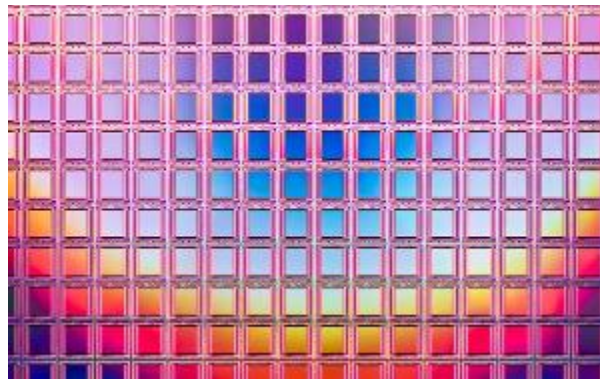
Until they think warm days will never cease,
For summer has o'er-brimm'd their clammy cells.

Who hath not seen thee oft amid thy store?
Sometimes whoever seeks abroad may find
Thee sitting careless on a granary floor,
Thy hair soft-lifted by the winnowing wind;
Or on a half-reap'd furrow sound asleep,
Drows'd with the fume of poppies, while thy hook
Spares the next swath and all its twined flowers:
And sometimes like a gleaner thou dost keep
Steady thy laden head across a brook;
Or by a cyder-press, with patient look,
Thou watchest the last oozy hours by hours.

Where are the songs of spring? Ay, Where are they?
Think not of them, thou hast thy music too,—
While barred clouds bloom the soft-dying day,
And touch the stubble-plains with rosy hue;
Then in a wailful choir the small gnats mourn
Among the river shallows, borne aloft
Or sinking as the light wind lives or dies;
And full-grown lambs loud bleat from hilly bourn;
Hedge-crickets sing; and now with treble soft
The red-breast whistles from a garden-croft;
And gathering swallows twitter in the skies.

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'World's Purest Silicon' Could Lead To 1st Million-Qubit Quantum Computing Chips



*Abundance of Camera CMOS on Silicon Wafer
(Image credit: Getty Images)*

Scientists engineer the 'purest ever silicon' to build reliable qubits that can be manufactured to the size of a pinhead on a chip and power million-qubit quantum computers in the future.

While the bits in classical computers encode data as either 1 or 0, qubits in quantum computers can be a superposition of these two states — meaning they can achieve a quantum state known as "coherence" and occupy both 1 and 0 in parallel while processing calculations.

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

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FDA Approves Blood Test to Screen for Colon Cancer



Cologuard Test Might Replace Colonoscopies
mddionline.com

The Food and Drug Administration on Monday approved Guardant Health's blood test, called Shield, to screen for colon cancer. The test isn't meant to replace colonoscopies, but is generating enthusiasm among doctors who say it has the potential to boost the dismal rate of screenings for the second-highest cause of cancer death in the United States.

The new test could increase the number of people screened for colorectal cancer, especially among adults too young for routine colonoscopies.

<https://bit.ly/4dsWK9u>

The world should be a happier place.

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Historical and Unseen Photos of Persia Leaked Online



PetaPixel

An anonymous hacker has leaked thousands of photos showing what Iran was like under the Qajar dynasty in the 19th century.

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

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Chords & Riffs

Jacques Loussier (1934-2019) Looks Back at Bach



musicalitis.com

One of the original “cross-over” artists, Loussier was blessed with the ability to play both classical and jazz and merge them convincingly into his own unique hybrid. Unlike many classical artists' efforts to “go jazz”, the Jacques Loussier Trio could truly swing, helping it sell over 7 million records in its sixties and early seventies heyday.

Loussier started piano lessons aged ten and after three months had his first encounter with the music of J. S. Bach through the little prelude in G minor. He quickly became obsessed and played it 'tens, hundreds of times', embellishing by dropping or adding notes, changing the tempo, and recontextualising the music.

In 1959 he formed the Jacques Loussier Trio with two of France's finest jazz musicians, bassist Pierre Michelot and drummer Christian Garros. Chiming perfectly with the mood of the era, a copy of the Jacques Loussier Trio Play Bach became de rigeur for any aspiring bohemian's record collection, alongside Brubeck's Time Out, Getz/Gilberto and Glenn Gould's Goldberg Variations.

Aside from Bach the trio would go on to explore the music of Debussy, Chopin, Vivaldi and many more.

Bach Fugue in D-Minor <https://youtu.be/1IQftbMNea8>

Air on a G-String <https://youtu.be/14AhD3xdoMk?t=17>

Italian Concerto <https://youtu.be/xyqvoK6RXnQ?t=22>

Bach Swinging with Bobby McFerrin <https://youtu.be/q71LjwZ4XXs?t=4>

Erik Satie, Gymnopédie Nt 1 <https://youtu.be/Evx0Fc5Vt8o>

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Portable Fingernail Scanner Can Detect Early Signs of Infection.



Courtesy of Leuko Labs

MIT's PointCheck portable fingernail scanner empowers patients to track their white blood cell levels

Many of the infections that occur in chemotherapy patients in the United States annually could be prevented simply by monitoring the white blood cell count. The levels typically rebound, but doctors currently lack a system to accurately assess these levels before and after treatment.

For the moment, PointCheck remains an investigational device. They've been developing the product for the past four years, culminating in a study to be submitted to the FDA this year. Their studies thus far have shown exceptional promise. A previous study published in Scientific Reports showed that their device was 95% accurate.

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

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Facing the Challenge

One year in, USAA's Suicide Prevention Program has screened 15,000 veterans



SDI Productions/ iStock

In June 2023, USAA partnered with Reach Resilience and the Humana Foundation to launch Face the Fight. The suicide prevention program is aimed at changing the unfortunate facts surrounding veteran mental health: military service members are more likely to die by suicide than in combat, and veterans are 50% more likely to die by suicide than their non-veteran peers.

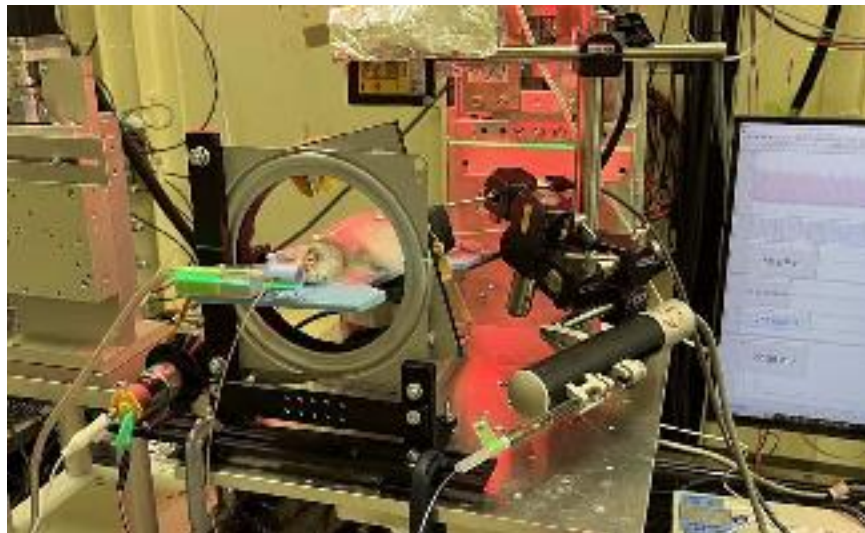
Now, a year on, the initiative is celebrating its successes. Face the Fight has screened nearly 15,000 vets for suicide risk, provided more than 5,000 with suicide-specific interventions, and trained 130 mental health clinicians on treatments for former service members.

"What we've learned over the past year is just how powerful reaching out and connecting with someone can be," USAA President Wayne Peacock said in a statement.

"We've heard stories of those who've connected with old friends, battle buddies, and loved ones; they're building a sense of community and purpose — and actively breaking the stigma that asking for help is a weakness."

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Dark-Field X-Ray Imaging Reveals Potential of Nanoparticle-Delivered Gene Therapy



Experimental setup Nanoparticles are delivered to an anesthetized rat in a motorized magnetic array.

(Courtesy: Ronan Smith)

One proposed treatment for cystic fibrosis is gene therapy, in which a viral vector delivers a healthy copy of the CFTR gene into airway cells to produce functional CFTR protein. To transport this vector to target cells and keep it there long enough to interact with them – key challenges for all gene therapies – researchers have coupled the vector to magnetic nanoparticles, which should allow controlled delivery to the airways using an external magnetic field.

Researchers at the [University of Adelaide](https://www.adelaide.edu.au/) are now tackling another pressing challenge for successful gene therapy – visualizing the magnetic nanoparticles within live airways and manipulating them *in vivo*. To achieve this, they explored the use of dark-field X-ray imaging to enhance nanoparticle contrast and understand how magnetic nanoparticles move within the airway of a live rat, reporting their findings in *Physics in Medicine & Biology*.

<https://bit.ly/3SjJU5x>

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Oculomics: a Window to the Health of the Body



What if eye tests could tell us about more than just the health of the eye? What if these tests could help us spot some of humanity's greatest healthcare challenges, including diabetes, Alzheimer's or heart disease?

Just as our eyes tell us lots about the world around us, so they can tell us

lots about ourselves. Researchers working in what's known as "oculomics" are seeking ways to look at the health of the body, via the eye. In particular they're exploring the link between certain ocular biomarkers (changes or abnormalities in the eye) with systemic health and disease. Simply put, the aim is to unlock the valuable health data that the eye holds on the body (*Chronic Disease. Ophthalmol. Ther.* 13 [1427](#)).

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Game Theory Can Make AI More Correct and Efficient



Señor Salme for Quanta Magazine

Researchers are drawing on ideas from game theory to improve large language models and make them more consistent.

Imagine you had a friend who gave different answers to the same question, depending on how you asked it. "What's the capital of Peru?" would get one answer, and "Is Lima

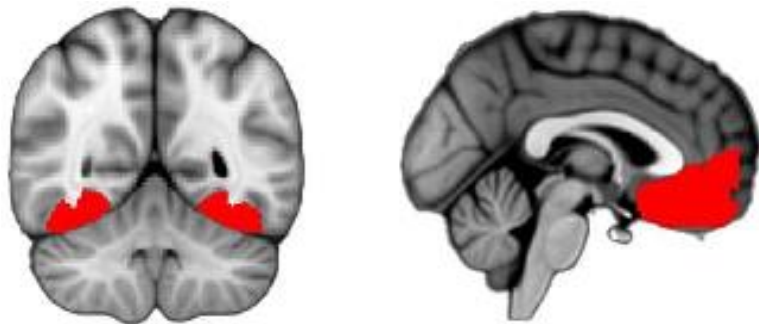
the capital of Peru?" would get another. You'd probably be a little worried about your friend's mental faculties, and you'd almost certainly find it hard to trust any answer they gave.

To make a language model's answers more consistent — and make the model more reliable overall — Jacob—a doctoral candidate at MIT--and his colleagues devised a game where the model's two modes are driven toward finding an answer they can agree on. Dubbed the consensus game, this simple procedure pits an LLM against itself, using the tools of game theory to improve the model's accuracy and internal consistency.

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

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Brain-Imaging Study Reveals Curiosity as It Emerges



Human brain-scan images show regions toward the back and front that are active for a person who is feeling curious.

Credit: Gottlieb Lab/Columbia's Zuckerman Institute

In a study published in the [Journal of Neuroscience](#), the scientists revealed brain areas that appear to assess the degree of uncertainty in visually ambiguous situations, giving rise to subjective feelings of curiosity.

"Curiosity has deep biological origins," said corresponding author Jacqueline Gottlieb, Ph.D., a principal investigator at the Zuckerman Institute. The primary evolutionary benefit of curiosity, she added, is to encourage living things to explore their world in ways that help them survive.

"This is really the first time we can link the subjective feeling of curiosity about information to the way your brain represents that information," Dr. Gottlieb said.

<https://bit.ly/3WcGiV3>

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The Vanishing Islands That Failed to Vanish

Low-lying tropical island nations were expected to be early victims of rising seas. But research tells a surprising story: Many islands are stable. Some have even grown.



The island of Hulhumalé was reclaimed from the ocean, expanding from zero to 65,000 residents.

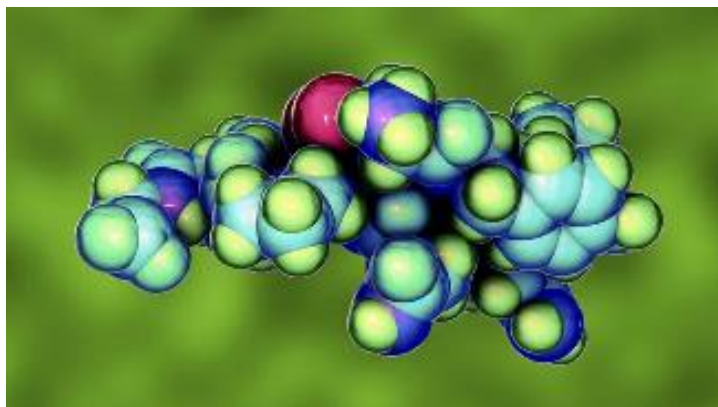
Source: Images by CNES and Airbus via Google Earth

Then, not very long ago, researchers began sifting through aerial images and found something startling. They looked at a couple dozen islands first, then several hundred, and by now close to 1,000. They found that over the past few decades, the islands' edges had wobbled this way and that, eroding here, building there. By and large, though, their area hadn't shrunk. In some cases, it was the opposite: They grew. The seas rose, and the islands expanded with them.

<https://bit.ly/3WkvVi3>

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Oxytocin May Link Sleep Apnea and High Blood Pressure



Oxytocin, sometimes called the "love hormone," also helps regulate blood pressure.
(Image credit: Kateryna Kon/Science Photo Library via Getty Images)

Two brain-made chemicals, including oxytocin, may play a role in increasing blood pressure after repeated periods of low oxygen.

In a study of lab rats published in May in [The Journal of Physiology](#) , the scientists zeroed in on two brain-made chemicals known to affect blood pressure: [oxytocin](#), also famous for its roles in attachment and social bonding, and corticotropin-releasing hormone (CRH). They wanted to see how these two "neurohormones" influence the brainstem, a structure at the bottom of the brain tasked with controlling many involuntary functions, including blood pressure.

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Volkswagen Is Investing Billions in a Joint Venture with Rivian

VW CEO Oliver Blume said the multibillion-dollar partnership would strengthen the company's tech know-how and make it more competitive.



Tramino/Getty Images

The agreement, which the automakers announced late last month, would see VW invest up to \$5 billion into a joint effort to develop "next-generation software-defined vehicle platforms" that both companies would use for their own vehicles.

The deal gives Europe's leading automaker access to Rivian's tech know-how, which is important because VW reportedly has struggled with software issues in some of its vehicles, including its electric ID.3 and ID.4.

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NASA Selects International Space Station US De-Orbit Vehicle



X (Formerly Twitter)

NASA announced SpaceX has been selected to develop and deliver the U.S. Deorbit Vehicle that will provide the capability to deorbit the space station and ensure avoidance of risk to populated areas.

"Selecting a U.S. Deorbit Vehicle for the International Space Station will help NASA and its international partners ensure a safe and responsible transition in low Earth orbit at the end of station operations.

<https://bit.ly/3y6pC8s>

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The Mystery of the Largest Light in the Sea



Nautilus

This giant squid has the world's biggest light-producing organs. But why?

A quarter-mile below the ocean's surface, in the borderless realm of the midwater, two blue-green orbs illuminate the inky black. They glow for a few seconds then disappear. When they return, it's for the same duration.

These orbs belong to *Taningia danae*, a species of deep-sea squid who can grow to more than seven feet in length and weigh more than 130 pounds. Also known as the Dana octopus squid for their eight arms and lack of feeding tentacles, these animals glide through the depths on a pair of huge muscular fins that unfurl from their maroon-colored body, or “mantle.”

“A lot of deep-sea animals have a tremendous number of photophores,” says Sönke Johnsen, a visual ecologist from Duke University. “But the individual photophores themselves are not that big; typically on the order of a couple of millimeters. I think that’s why *Taningia*’s are so fascinating—just the sheer size of them.”

<https://bit.ly/3A4s4Nf>

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“More Than Just a Doll”: Mattel Releases First Blind Barbie



Mattel

Barbie launched in 1959 and has come a long way since then, with an array of diverse dolls in the lineup. Most recently, Mattel released the first blind Barbie, made in collaboration with the American Foundation for the Blind.

“Barbie is all about joy — about discovering and understanding the world through play — and it’s wonderful to think that children with a vision impairment can now play with a Barbie that looks like them,” Debbie Miller, director of customer advice and support at the Royal National Institute of Blind People, told CNN.

The doll goes beyond representation, though, featuring details that make it more accessible. For example, Blind Barbie’s box has Braille lettering and her outfit is made with tactile fabric to provide a “satisfying play experience for kids with blindness or low vision,” per a press release.

Mattel also released the first Black Barbie doll with Down syndrome, part of the same Fashionistas collection as Blind Barbie. “We recognize that Barbie is much more than

just a doll,” said Krista Berger, senior vice president of Barbie and global head of dolls. “She represents self-expression and can create a sense of belonging.”

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Kelly Ortberg, Former Rockwell Collins Head, Is New Boeing CEO



headtopics.com

Ortberg, who retired from Rockwell Collins in 2021, will take over a Boeing that is besieged by losses on the defense side and public condemnation on the commercial side.

Ortberg will be tasked with leading Boeing out of an ongoing safety and manufacturing crisis, which escalated in January after a piece of a 737 MAX fuselage broke off from the jet in mid-flight. The incident prompted investigations from the Federal Aviation Administration and the National Transportation Safety Board, and Boeing has slowed commercial jet production as it tries to stabilize its production lines.

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

Boeing approved a pay package of nearly \$33 million for outgoing CEO Dave Calhoun

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24 new UNESCO World Heritage Sites for 2024



*Kenozero Lake"MIKHAIL PROKHOROV*pr89, CC

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Last month, the United Nations Educational, Scientific and Cultural Organisation (UNESCO) named the new cultural and natural properties inscribed on its list of World Heritage Sites.

Properties on the list are considered to be of outstanding universal value and benefit from the highest level of heritage protection in the world.

There are now 1,223 World Heritage Sites around the globe.

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

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Investigating “Oatzempic”

This controversial new diet drink is the talk of TikTok, but does it actually work?



airmail news

It was never going to be long before social media invented a natural alternative to the much-hyped “miracle” weight-loss injectable of the drug semaglutide, best known by its brand name Ozempic. And indeed hot on its heels comes a wellness trend in the form of an oat-based drink that will supposedly curb your appetite and lead to dramatic weight loss. “Oatzempic,” as the DIY drink is being dubbed, is made by blending half a glass of rolled oats, a glass of water, a dash of cinnamon and a squeeze of lime juice.

As rudimentary and unlikely as it sounds, it has amassed a cult following, with 40 million views on TikTok as well as before-and-after posts on Instagram. Some are claiming it has helped them to shed several pounds in time to achieve a “summer bod.”

<https://airmail.news/look/issues/2024-7-5/investigating-oatzempic>

I won't tell you the answer, you need to read this article for the pros and cons.

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Which one destroyed the personal pronoun?

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Not Having Enough Sex May Have Deadly Consequences



Sex may even help people survive after a heart attack.

Image credit: Momentum studio/Shutterstock.com

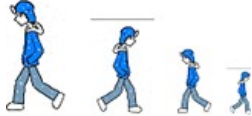
Women who have sex less than once a week may be more likely to die early than those who engage in more regular intercourse, according to the results of a [new study](https://bit.ly/4d6SZXH). While this same impact was not observed in men, the researchers did note that more frequent sex reduces the chances of an early grave in both men and women with depression.

<https://bit.ly/4d6SZXH>

Where was this study back when I was in college?

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My Walking Thoughts



For Sunday August 11 2024

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Back Under the Bag Again

As I passed Lt. Winans on my way from the classroom to the hangar, he waved me over, a large smile on his face.

"Oh-oh," I told myself, this doesn't look so good," fearing I had missed something important in the 22 hours since I had last seen him. But I was wrong. He wanted to prepare me for my upcoming flight, my first in the radio instrument (R/I) stage I had been worrying about all morning.

"You'll be flying with Lt. Searcy today," he said, "Yeah, he's a stickler for procedures but a great teacher...we flew together in the fleet."

He went on to explain how he was on his way for his annual flight physical, so he had pulled some strings to get me assigned to fly the hop with his buddy.

"You're doing ok," he added as he turned to leave. "Just keep your scan going and watch for things that don't match up with where you think you are."

'Huh,' I thought. 'Maybe radio/instruments won't be so tough after all,' forgetting for the moment that I had a lot to learn before I could entertain such an asinine belief.

Once upon a time in those wonderful days of yore populated by studly heroes and captivating princesses, a small group of fanatics known as aviators took to the sometimes dark and stormy skies clad in plus fours, riding boots, and leather jackets, bringing with them their flying kit containing things elemental to their safe journey into the heavens. Not included in the duffle were the likes of I-Pads, cell phones, the venerable kneeboards carrying the reams of paper we find today...not even the Jepp charts, approach plates, those impossible-to-fold maps, and E-6B computers of 1960s. Uh-uh, the contents were more apt to be a cat, a pigeon, and a hen from the barnyard, each carefully fed and tended for their tasks.

"What tasks," you ask? Well look at it this way. Cats always land on their feet, so who or what would you choose to keep yourself oriented to the world around you? Unlike humans, for centuries pigeons have been raised and revered for their navigation and communications skills. As for chickens, who better to sniff out danger and react accordingly?

Looking around the cockpit, I was faced with a new assortment of thingamajigs put there by the nation's finest scientists and engineers to handle the gnarly tasks leading to a successful flight. In addition to the plethora of instruments and controls described in the earlier chapter on Basic Instrument flight I now had to learn to use the:

- AN/ARN-6 High Frequency Radio Comp (HF)
- Very High Frequency Omnidirectional Range (VOR) Receiver
- Radio Magnetic Instrument (RMI) that presented the HF and VOR information as overlays to the Radio Magnet Indicator (RMI).
- Glideslope Indicator (GS)
- And last, the Marker Beacon Receiver and light for showing the passage of the Outer Marker on an instrument approach.

All that was missing from the kit was the threat indicator (Chicken), but no problem, I carried that around internally.

R/I differed from its preceding Basic Instrument stage where all I had to do was try and keep the bird somewhere between the stratosphere and the ground. The where part of that equation was in the hands of the instructor.

Now, not only did I have to keep the airplane in the sky, but at a precise altitude, on a heading and an airspeed appropriate to some sort of destination. Moreover, I had to know where I was at any given moment and do all these tasks while communicating with the instructor or worse still some jaded controller who had heard and seen it all from Whiting's flummoxed R/I students. Face it, it was people like me who made what should have been a boring job into a memorable joy to folks at a console, praying for me or those of my ilk to treat them to some sort of a monumental screw up.

Before carrying you along through the veil of tears that were to characterize my first R/I hop, I need to provide a little more background to the venture.

Prior to the 1930s, people like Lindbergh, Wiley Post, and Amelia Earhart found their way from Point A to Point B by means of dead reckoning—essentially a matter of time,

heading, and airspeed—along with enroute weather good enough to determine an approximate present position, and then to see the ground in order to land, regardless of that spot being the intended destination or some other point of opportunity. Lacking this, the alternatives declined to either a 'silk descent' or what was often referred to as 'buying the farm.'

While the situation was good enough for barnstormers or other daredevils, it didn't meet the needs of either the military or commercial folks whose futures depended on reliable day/night/in-the-clouds operations, so many of the same people who had survived the perils of the dead reckoning day began looking into developments in communications and instrumentation to meet the challenge.

As advancements in gyroscopic displays and radio range finding and communications found their way into cockpits of the early 1930s the world of aviation underwent a fundamental transformation, overcoming many of the navigation shortcomings that held reliable scheduling in check. While rudimentary by today's standards, these newly acquired technologies and techniques set aviation on the path to commercial success and military supremacy.

What awaited me in under the instrument hood in the T-28 was an array of navigation instruments that would have dazzled the pioneers of the 1930s; entrepreneurs like Elmer Sperry, Arthur Collins who developed the tools; aviators such as Charles Lindberg, Amelia Earhart, Wiley Post Jimmy Doolittle, Howard Hughes, Apollo Soucek—all graduates of the dead reckoning school of hard knocks—who pushed to that mythical but very real 'edge of the envelope' to make instrument flight daily fare.

Ok, that's enough for today. If I have to put my disastrous first radio/instrument flight in front of friends and strangers alike, at least you can cut me some slack by giving me a week to prepare myself for the task.

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