Ode to E Pluribus Unum for Sunday April 13 2025



Star Formation in the Pacman Nebula



Image Credit & Copyright: Juan Montilla (AAE)

You'd think the Pacman Nebula would be eating stars, but actually it is forming them.

Within the nebula, a cluster's young, massive stars are powering the pervasive nebular glow. The eye-catching shapes looming in the featured portrait of NGC 281 are sculpted dusty columns and dense Bok globules seen in silhouette, eroded by intense, energetic winds and radiation from the hot cluster stars. If they survive long enough, the dusty structures could also be sites of future star formation.

Playfully called the Pacman Nebula because of its overall shape, NGC 281 is about 10,000 light-years away in the constellation Cassiopeia. This sharp composite image was made through narrow-band filters in Spain in mid 2024. It combines emissions

from the nebula's hydrogen and oxygen atoms to synthesize red, green, and blue colors. The scene spans well over 80 light-years at the estimated distance of NGC 281.

===========

Chords & Riffs

Johannes Brahms (1833-18970



Caught up in the long list of musical greats whose names began with the letter B, Brahms has received relatively short shrift, but I'd like you to pay attention to several pieces that show some of the depth of his talent.

Blunt with a sometimes acerbic wit, he is known for famously quipping, "If there is anyone here whom I have not insulted, I beg his pardon," yet he had a great affinity for children, often delighting in their company and handing out candy during his walks.

Overall, Johannes Brahms emerges as a talented, complex individual with a rich inner life, strong friendships, and a deep connection to both nature and his art.

Brahms was the great master of symphonic and sonata style in the second half of the 19th century. He can be viewed as the protagonist of the Classical tradition of Joseph Haydn, Wolfgang Amadeus Mozart, and Ludwig van Beethoven in a period when the standards of this tradition were being questioned or overturned by the Romantics.

The first turning point came in 1853, when he met the violin virtuoso Joseph Joachim, who instantly realized the talent of Brahms. Joachim in turn recommended Brahms to the composer Robert Schumann, and an immediate friendship between the two composers resulted.

By the 1870s Brahms was writing significant chamber works and was moving with great deliberation along the path to purely orchestral composition. In 1873 he offered the

masterly orchestral version of his Variations on a Theme by Haydn. After this experiment, which even the self-critical Brahms had to consider completely successful, he felt ready to embark on the completion of his Symphony No. 1 in C Minor. This magnificent work was completed in 1876 and first heard in the same year. Now that the composer had proved to himself his full command of the symphonic idiom, within the next year he produced his Symphony No. 2 in D Major (1877). This is a serene and idyllic work, avoiding the heroic pathos of Symphony No. 1. He let six years elapse before his Symphony No. 3 in F Major (1883). In its first three movements this work too appears to be a comparatively calm and serene composition-until the finale, which presents a gigantic conflict of elemental forces. Again after only one year, Brahms's last symphony, No. 4 in E Minor (1884–85), was begun. This work may well have been inspired by the ancient Greek tragedies of Sophocles that Brahms had been reading at the time. The symphony's most important movement is once more the finale. Brahms took a simple theme he found in J.S. Bach's Cantata No. 150 and developed it in a set of 30 highly intricate variations, but the technical skill displayed here is as nothing compared with the clarity of thought and the intensity of feeling.

Intermezzo in A Opus 118 <u>https://youtu.be/HEAD6vGOFeM?list=PLRhpIx4Wl-aXfW3SK6sEowGHx0Sl-5SPF</u> Piano Concerto No. 1 in D Minor <u>https://youtu.be/1jB_6fpYY3o?t=2</u> Hungarian Dance No. 17 <u>https://youtu.be/_8oc0lfmFes?t=6</u> Piano Concerto No. 2 <u>https://youtu.be/P-nANi8n2Oc</u>

I am by no means through with Brahms...actually only beginning. In future Odes I'll highlight his chamber, choral, and finally his symphonic works.



============

See Some Snazzy Slugs in all Their Luminous Glory



nature.com

This strange-looking creature is Doto greenamyeri, a sea slug easily identified by the six donut-shaped structures on its back. These are cerata, an important feature of sea-slug anatomy often involved in breathing and digestion. Photographer Bryan Blauvelt used different lighting effects to capture this Doto in all of its luminous glory while diving in Bali, Indonesia.

https://bit.ly/41FchAa

============

The <u>Different Cloud Types</u> and How They Help Weather Forecasters

All clouds form as a result of saturation – that's when the air contains so much water vapor that it begins producing liquid or ice.



Cloud types show their general heights. Australian Bureau of Meteorology

Cumulus Clouds: Often, these are fair-weather clouds that form when the Sun warms the ground and the warm air rises. You'll often see them on humid summer days. if the air is particularly warm and humid, and the atmosphere above is much colder, <u>cumulus</u> <u>clouds</u> can rapidly grow vertically into cumulonimbus.

Cirrus Clouds: When cumulonimbus clouds grow high enough into the atmosphere, the temperature becomes cold enough for ice clouds, or <u>cirrus</u>, to form.

Stratus Clouds: When clouds form thick layers, we add the word "stratus," or "layer," to the name. <u>Stratus</u> can occur just above the ground, or a bit higher up – we call it altostratus then. It can occur even higher and become cirrostratus, or a layer or ice clouds.



Human Ancestors Made Bone Tools 1.5 Million Years Ago

A set of tools found in Tanzania were fashioned from the bones of hippos and elephants



An ancient bone tool kit unearthed in Tanzania exhibits a range of sizes and modifications. CSIC

Ancient human relatives crafted sharp-edged tools out of animal bones around 1.5 million years ago, researchers say.

Discoveries at Tanzania's Olduvai Gorge, a famous East African fossil location, represent the oldest known evidence of systematic bone tool production by hominids, according to archaeologist Ignacio de la Torre of CSIC-Spanish National Research Council in Madrid and colleagues.

Excavations conducted from 2015 through 2022 unearthed 27 bone tools in sediment that had already

been dated, the scientists report March 5 in Nature. Either of two fossil hominids known to have lived at Olduvai Gorge around 1.5 million years ago — a possible direct human ancestor called Homo erectus or a side-branch species dubbed <u>Paranthropus boisei</u> — could have created the bone artifacts, they say.

https://bit.ly/3XyCXjp

============

FLASHMOB CENTRAL

Shibuya Hachiko Japan



youtube

https://youtu.be/yF-f-ND7FT4

NASA Uses New Technology to Understand California Wildfires

The Compact Fire Infrared Radiance Spectral tracker, or C-FIRST, is managed an operated by NASA's Jet Propulsion Laboratory



The Compact Fire Infrared Radiance Spectral tracker, or C-FIRST, is managed an operated by NASA's Jet Propulsion Laboratory, and supported by NASA's Earth Science Technology Office. Combining state-of-the-art imaging technology with a compact design, C-FIRST enables scientists to gather data about fires and their impacts on ecosystems with greater accuracy and speed than other instruments. C-FIRST was developed as a spaceborne instrument, and flew onboard NASA's B200 aircraft in January 2025 to conduct an airborne test. Credit: NASA/JPL-Caltech

Developed at NASA JPL, the science instrument gives researchers a more detailed picture of high-temperature surfaces, such as land scorched by wildfire, than previous infrared instruments.

The January wildfires in California devastated local habitats and communities. In an effort to better understand wildfire behavior, NASA scientists and engineers tried to learn from the events by testing new technology.

The new instrument, the Compact Fire Infrared Radiance Spectral Tracker (c-FIRST), was tested when NASA's B200 King Air aircraft flew over the wildfires in the Pacific Palisades and Altadena, California. Based at NASA's Armstrong Flight Research Center in Edwards, California, the aircraft used the c-FIRST instrument to observe the impacts of the fires in near real time. Due to its small size and ability to efficiently simulate a satellite-based mission, the B200 King Air is uniquely suited for testing c-FIRST.

Managed and operated by NASA's Jet Propulsion Laboratory in Southern California, c-FIRST gathers thermal infrared images in high-resolution and other data about the terrain to study the impacts of wildfires on ecology. In a single observation, c-FIRST can capture the full temperature range across a wide area of wildland fires — as well as the cool, unburned background — potentially increasing both the quantity and quality of science data produced.

"Currently, no instrument is able to cover the entire range of attributes for fires present in the Earth system," said Sarath Gunapala, principal investigator for c-FIRST at NASA JPL. "This leads to gaps in our understanding of how many fires occur, and of crucial characteristics like size and temperature."

For decades, the quality of infrared images has struggled to convey the nuances of high-temperature surfaces above 1,000 degrees Fahrenheit (550 degrees Celsius). Blurry resolution and light saturation of infrared images has inhibited scientists' understanding of extremely hot terrain, thereby also inhibiting wildfire research. Historically, images of extremely hot targets often lacked the detail scientists need to understand the range of a fire's impacts on an ecosystem.

To address this, NASA's Earth Science Technology Office supported NASA JPL's development of the c-FIRST instrument, combining state-of-the-art imaging technology with a compact and efficient design. When c-FIRST was airborne, scientists could detect smoldering fires more accurately and quickly, while also gathering important information on active fires in near real time.

"These smoldering fires can flame up if the wind picks up again," said Gunapala. "Therefore, the c-FIRST data set could provide very important information for firefighting agencies to fight fires more effectively."

For instance, c-FIRST data can help scientists estimate the likelihood of a fire spreading in a certain landscape, allowing officials to more effectively monitor smoldering fires and track how fires evolve. Furthermore, c-FIRST can collect detailed data that can enable scientists to understand how an ecosystem may recover from fire events.

"The requirements of the c-FIRST instrument meet the flight profile of the King Air," said KC Sujan, operations engineer for the B200 King Air. "The c-FIRST team wanted a quick integration, the flight speed in the range 130 and 140 knots on a level flight, communication and navigation systems, and the instruments power requirement that are perfectly fit for King Air's capability."

By first testing the instrument onboard the B200 King Air, the c-FIRST team can evaluate its readiness for future satellite missions investigating wildfires. On a changing planet where wildfires are increasingly common, instruments like c-FIRST could provide data that can aid firefighting agencies to fight fires more effectively, and to understand the ecosystemic impacts of extreme weather events.

============



===========

Ice Core Evidence for the Los Chocoyos Supereruption Disputes Millennial-Scale Climate Impact



cosmosmagazine.com

Volcanic supereruptions are considered among the few drivers of global and existential catastrophes, with recent hypotheses suggesting massive volcanic stratospheric sulfate injection could instigate major shifts in global climate.

The absence of supereruptions during recent history as well as large uncertainties on eruption ages limits understanding of the climatic risk they impose. Polar ice cores have well-resolved continuous age models, record past temperature, and contain volcanic sulfate and cryptotephra deposits which can be geochemically fingerprinted to determine eruption timing and improve stratospheric sulfur loading estimates.

Here, we provide an age of 79,500 years for the Atitlán Los Chocoyos supereruption, one of the largest Quaternary eruptions, by identifying tephra shards in ice cores from both Greenland and Antarctica. This ice core age is supported by a revised marine sediment core stratigraphy age for the Los Chocoyos ash layer. Through comparison with well-dated ice-core temperature proxy records, our study suggests that despite being one of the largest sulfur emissions recorded in ice cores, the Los Chocoyos supereruption did not trigger a millennial-scale cold period.

https://www.nature.com/articles/s43247-025-02095-6

============

'Next-Level' Chaos Traces the True Limit of Predictability

In math and computer science, researchers have long understood that some questions are fundamentally unanswerable. Now physicists are exploring how even ordinary physical systems put hard limits on what we can predict, even in principle.



The future of certain theoretical systems is unknowable, even to an all-knowing demon. Kristina Armitage/Quanta Magazine

https://bit.ly/4bvnBSs

How the Development of the Camera Changed Our World

These days, thanks to smartphones, almost everyone has a camera at any given moment.



Photo: Amador Loureiro

With the resurgence of digital cameras, photography's impact on the world is more evident than ever. Rewinding time, before selfies were a cultural norm, before geniuses like Cindy Sherman and Andrea Gursky elevated photography to an art form, someone had to invent this piece of technology. So, who invented the camera? And how has it evolved over time into the piece of equipment we now know? Let's take a look at how this revolutionary invention changed how we document life.

https://bit.ly/4kDzgCR



============

'Phononic Shield' Protects Mantis Shrimp from Its Own Shock Waves

Dactyl clubs are hammer-like structures located on each side of a mantis shrimp's body. They store energy in elastic structures similar to springs that are latched in place by tendons. When the shrimp contracts its muscles, the latch releases, releasing the stored energy and propelling the club forward with a peak force of up to 1500 N.



Sound striker: A mantis shrimp shows off its greenish-yellow dactyl clubs. (Courtesy: Andy Law)

When a mantis shrimp uses shock waves to strike and kill its prey, how does it prevent those shock waves from damaging its own tissues? Researchers at Northwestern University in the US have answered this question by identifying a structure within the shrimp that filters out harmful frequencies.



https://bit.ly/3QWsHxB

============

Consciousness Before Birth? Imaging Studies Explore the Possibility

Fetal and infant brains offer clues to when human experience begins



Clarifying when consciousness arises in human development could help refine hospital care for premature infants.J ill Lehmann/Getty Images

Certain features of the brain are crucial for consciousness. One is a set of connections between the thalamus—which receives and relays sensory and motor information from the body—and the cortex, where such information is further processed. Studies of fetal brains show the foundations of that link are not in place until about 24 weeks of development.

But whether those structures are sufficient for consciousness isn't clear, so investigators are finding creative ways to search for possible markers of consciousness in brain activity. One resource is the U.K.-based Developing Human Connectome Project, which has collected functional MRI (fMRI) data from hundreds of newborns, who managed to lie still enough in their swaddles by dozing through the noisy scanning process.

In <u>work published</u> in 2022, neuroscientist Lorina Naci of Trinity College Dublin and colleagues found all three networks, along with this alternating activity pattern, in newborns born at full term—after 37 weeks—and in premature infants who were born before then but scanned when they reached an equivalent age. But premature newborns scanned earlier, between roughly 32 and 37 weeks, showed no networks resembling the default mode or ECN and no reciprocal activity. That suggests these features emerge late in pregnancy.

In a <u>study published last month</u>, Naci and her colleagues found another feature thought to support conscious awareness, one that seems to emerge even earlier. Most premature newborns scanned before 37 weeks had signs of what's known as smallworld architecture. This organizational pattern, consisting of dense neural connections between nearby brain areas and sparser links between more distant ones, has been shown to be disrupted during anesthesia and after brain injury.

https://bit.ly/4hk1n7f

============

Silent Drill Platoon Performs at Halftime on Thursday Night Football

The Marine Barracks Washington DC presents a highly disciplined, precision performance from the United States Marine Corps Silent Drill Platoon.



dvdshut.com

https://youtu.be/0xvXMEnwyYM

===========

No More Free Ride for Luggage on Southwest

Baggage fees to launch in May.



Credit: Wikipedia, Tomás Del Coro

Southwest Airlines signaled the end of an era today with the announcement that it will begin charging passengers to check bags. The signature policy of fee-less checked bags has been in place for decades, setting the low-fare airline apart from rivals.

Southwest CEO Bob Jordan said, "We have tremendous opportunity to meet current and future customer needs, attract new customer segments we don't compete for today, and return to the levels of profitability that both we and our shareholders expect."

It was less than 12 months ago that Southwest announced it would abandon another singular policy—the open-boarding process. It had been in play for Southwest for more than 50 years but will fade away in favor of assigned seating starting in 2026.

Pricing for the new baggage fee process was not announced, but the Dallas-based airline said baggage fees would begin with flights booked as of May 28.

==========

How Did Eastern North America Form?

With many collisions and much crumpling of rock, down the ages. The story holds lessons for how the edges of continents are built and change over time.



How slivers of crust can build a continent knowable magazine

Connecticut — along with much of the rest of eastern North America — holds important clues about Earth's history. This region, which geologists call the eastern North American margin, essentially spans the US eastern seaboard and a little farther north into Atlantic Canada. It was created over hundreds of millions of years as slivers of Earth's crust collided and merged. Mountains rose, volcanoes erupted and the Atlantic Ocean was born.

The bulk of North America today is made of several different parts. To the west are relatively young and mighty mountain ranges like the Sierra Nevada and the Rockies. In the middle is the ancient heart of the continent, the oldest and stablest rocks around.

And in the east is the long coastal stretch of the eastern North American margin. Each of these has its own geological history, but it is the story of the eastern bit that has recently come into sharper focus.

https://bit.ly/4hxyxk2



How Medicaid Works, in Charts.

The program is a political flashpoint because of its vital role in the lives of adults and children across the country

============





As Congress gears up to pass President Trump's massive legislative package, one of the biggest fights is over the future of Medicaid. To make their targeted budget numbers, Republicans will likely need to carve hundreds of billions of dollars in spending out of

the health program that serves lower-income people. But Medicaid is a political flashpoint because of the core role it plays in the lives of millions of Americans—many of whom vote for Republicans—as well as state budgets and the healthcare economy.

Begun in 1965 as a program for needy Americans, including low-income children with caretakers, as well as elderly, blind and disabled people, Medicaid has grown over the years. It cost \$872 billion in 2023, most of it state and federal government spending, or about 18% of what the nation paid for healthcare. Enrollment rose during the pandemic, when periodic eligibility reviews were suspended, but since then, millions have been removed from the rolls as reviews resumed.

https://bit.ly/4hNR9wm

===========



Ilia Malinin Defends Figure Skating World Title

nbcsports.com

Ilia Malinin totaled 318.56 points between his short program and free skate, in which he landed a record-tying six quadruple jumps, to repeat as the figure skating world champion and cap an undefeated season

https://youtu.be/w9netjhk_aM



After a 2 Year Hiatus, Alysa Liu Wins Women's World Championship



Tim Clayton/Corbis via Getty Images

Following a dazzling free skate and a standing ovation from the crowd, 19-year-old Alysa Liu became the first American women's figure skating world champion in almost two decades on Friday night. Her program at TD Garden in Boston was set to Donna Summer's disco cover of "MacArthur Park" and culminated in her first-place finish with a cumulative 222.97 points at the 2025 World Figure Skating Championships. Liu, who came out of a two-year retirement to compete, called it "the best run-through I've ever done," adding: "I'm so happy." Watch her winning routine.

https://youtu.be/tW-XnKjykuQ

===========

All It Takes Is a Dream... and Money

SpaceX launches private Fram2 astronauts on historic spaceflight over Earth's poles



The astronauts of SpaceX's Fram2 mission over Earth's poles. From left to right: Mission specialist and medical officer Eric Phillips, pilot Rabea Rogge, vehicle commander Jannicke

Mikkelsen and mission commander Chun Wang. (Image credit: SpaceX)

The private Fram2 mission lifted off atop a Falcon 9 rocket from Launch Complex-39A at NASA's Kennedy Space Center in Florida today (March 31) at 9:46 p.m. EDT (0146 GMT on April 1), sending the Crew Dragon capsule "Resilience" into a polar orbit with a quartet of spaceflight rookies aboard.

Fram2 is SpaceX's 17th human spaceflight overall, and the sixth launched for private customers. Resilience has now flown four of those; the capsule also conducted Crew-1, SpaceX first operational astronaut mission to the International Space Station (ISS) for NASA, as well as Inspiration4 and Polaris Dawn, the company's first and most recent private crew launches to Earth orbit, respectively.

https://bit.ly/4jxPGf1

Study Links Shingles Vaccine and Reduced Risk of Dementia



Liuhsihsiang/ iStock

In a recent study, scientists found <u>evidence</u> that the shingles vaccine may boost cognitive health, giving more weight to a link suggested by previous research. After analyzing health records of 280,000 older adults in Wales, they found those who were vaccinated against shingles were 20% less likely to be diagnosed with dementia than those who were not, with an even stronger effect seen in women.

"For the first time, we are able to say much more confidently that the shingles vaccine causes a reduction in dementia risk," senior study author Pascal Geldsetzer told The Guardian. "If this truly is a causal effect, we have a finding that's of tremendous importance."

Although the "how" is still unclear, scientists have some <u>theories</u> about the vaccine's protective qualities. "It may reduce inflammation, support the immune system in ways

that protect the brain, or involve other mechanisms," said Julia Dudley, the head of research at Alzheimer's Research U.K. She added: "Understanding this link better, including the reason for any differences between men and women, could open new avenues for dementia prevention and treatment."

Get info on who should get the shingles vaccine and revisit some expert <u>tips</u> on reducing your risk of Alzheimer's.

===========

'Uniquely Human' Language Capacity Found in Bonobos



Bonobos are endangered great apes inhabiting the rainforest of the Democratic Republic of the Congo. They live in large groups of males and females, where the hierarchical rank of an individual is determined by its mother's rank and its friendship bonds with females. M. Surbeck, Kokolopori Bonobo Research Projec

Humans can combine words to create new meanings—an ability that gives language its expressive power and sets it apart from the communication of other animals. Now, researchers have found a more modest version of this ability in bonobos, our closest living relative.

Humans can effortlessly talk about an infinite number of topics, from neuroscience to pink elephants, by combining words into sentences. This is thanks to compositionality: the ability to combine meaningful units into larger structures whose meaning is derived from the meaning of its units and the way they are combined.

For years, scientists believed that only humans extensively used compositionality. Animal communication was thought to be mostly a mere random assortment of calls, with only rare instances of compositionality. However, our new study, recently published in the journal Science, says otherwise. By extensively researching the vocal communication of bonobos in their natural habitat, the Kokolopori Community Reserve in the Democratic Republic of the Congo, we found that vocal communication between bonobos – our closest living relatives, along with chimpanzees – relies extensively on compositionality, just like human language.

The team spent 8 months following wild bonobo groups in the Kokolopori Bonobo Reserve in the Democratic Republic of Congo, recording hundreds of vocalizations and the context in which they occurred. These vocalizations were often combinations of two distinct calls—and sometimes, these combined calls appeared to take on a new meaning, just as humans combine words to create something that is more than the sum of its parts.

https://bit.ly/3R3Yjla

===========

What's Your Dog Thinking? A Brain Scan Offers Clues

Once dogs are trained to lie still in an MRI, scientists can observe their brain activity.



Photograph by Elke Vogelsang

By peering into a dog's brain, researchers are able to see how it reacts to stimuli like hand signals, sounds, and smells. Activity in the reward center can show whether dogs prefer human affection to food (most like both equally), and which ones may not be fit for duty as service dogs (if, for example, they get too anxious or excited with strangers).

https://bit.ly/3EjQDbF

===========

What Is Your Cat Telling You? New Technology Deciphers Meows

Is your cat saying "feed me!" or "I love you?" A new AI-powered app promises to demystify what your feline is saying.



cat-world.com

That's where Sergei Dreizin and Mark Boyes, computer scientists at Akvelon, a software engineering company based in Bellevue, Washington, say they can help. The duo are the brains behind the <u>MeowTalk app</u>, which aims to "give cat owners the best tools available" for interpreting their pet's needs.

"Cats have vocabulary," says Dreizin. "And you definitely will understand your cat better if you're actually paying attention."

The free app records your feline's meows and translates them into a small range of phrases, such as "I'm annoyed" and "Feed me!" Users can rate the accuracy of MeowTalk's translations, which further refines the computer model. Launched in November 2020, the app has been downloaded over 20 million times, and Dreizin estimates that the program has analyzed over a billion meows to date. (What are our cats trying to tell us?)



============

Alzheimer's Blood Test

Researchers have developed a blood test that diagnoses Alzheimer's disease and measures its progression with 92% accuracy.



asianscientist.com

The breakthrough offers a potential tool to accurately diagnose the disease while tailoring treatments to an individual's specific disease stage.

Unlike existing blood tests that <u>only aid in diagnosis</u>, the new test can distinguish between early- and late-stage Alzheimer's and differentiate it from other causes of cognitive impairment. The test identifies levels of MTBR-tau243, a protein that indicates toxic tau accumulation in the brain, correlating with Alzheimer's severity. Researchers found patients with non-Alzheimer's cognitive impairment showed normal levels of the protein, while patients with mild cognitive symptoms from Alzheimer's showed elevated tau protein levels, and those in the dementia phase showed levels up to 200 times higher.

Alzheimer's affects nearly 7 million Americans. Accumulations of molecules known as amyloid beta plaques and misfolded tau proteins are believed to play a key role. See the best Alzheimer's resources on 1440 Topics <u>here.</u>



Robot Spy Copies Orangutan Behavior to Earn Their Trust

In order to observe these orangutans as part of the troop, our spy robot must fully integrate, and the best way to do this is through mimicry.



dailymail.co.uk

https://youtu.be/-kjcorlHzPM

'Adolescence' on Netflix's Top 10 All-Time Rankings

The U.K. series leapfrogged 'The Queen's Gambit,' 'Bridgerton,' 'The Night Agent' and 'Fool Me Once'.



Stephen Graham as Eddie Miller and Christine Tremarco as Manda Miller in 'Adolescence.' Courtesy of Netflix

Adolescence debuted less than a month ago and already has more than 114 million views, Netflix says. Of that total, 17.8 million happened last week, making Adolescence

No. 1 yet again, besting Gone Girls: The Long Island Serial Killer and and the streamer's medical-procedural experiment Pulse in their respective debut weeks.

Adolescence tells the story of how a family's world is turned upside down when 13year-old Jamie Miller (Owen Cooper) is arrested for the murder of a teenage girl who goes to his school. Stephen Graham is Jamie's father (and his "appropriate adult" in police-talk), Eddie Miller. Ashley Walters stars as Detective Inspector Luke Bascombe and Erin Doherty is Briony Ariston, the clinical psychologist assigned to Jamie's case.

I have not watched this yet, but I've been told it's a 'must.'

===========

My Walking Thoughts



For Sunday April 13 2025

===========

CarQual in the Cougar

The precision required to plunk a two-ton, bent-wing conglomeration of metal, fuel, and viscera into a 40-foot-by-200-foot box at 130 knots is exacting, and because the margin for error is so small even little mistakes are magnified. But gradually after hours of what are called Field Carrier Landing Practice (FCLPs), you and your compatriots feel the skills coalesce. Then one fine day it's time to head out over the Gulf of Mexico for a date with the ship... in my case the USS Antietam.

The modern aircraft carrier is a miracle of engineering and efficiency, packing more firepower than the weaponry found in two-thirds of the world's nations. But bringing that firepower to bear is no trivial matter because if you can't get the aircraft up in the air and back again rapidly you might as well stay home.

The critical path is through "cycle time," the time that it takes to launch and recover flights of aircraft. The longer the sequence takes, the less effective the weaponry becomes, not merely because fewer aircraft can be cycled in a given time but because the carrier itself, trapped into steaming longer into the wind, is increasingly at risk.

Efficient operations require teamwork and skill that are a product of practice and adherence to procedure, and these in turn demand strict attention to detail and safety. You can't go around banging up equipment and tossing away lives if you want to stay in the carrier business. Given all of the landing aids and safety measures that came into the fleet during the 1960s, carrier qualification in the F-9 was easier compared to the challenges facing students as recently as a decade before, but still the evolution was not what anyone would call "a piece of cake."

The fun begins when you're travelling upwind along the starboard side at 2500 feet where the boat appears almost larger than life. It's only when you roll into the groove a quarter mile astern for a low pass that you realize that rather than a 10,000-foot hunk of concrete with lots of margin for error you've gotten used to, you're heading for a rendezvous with something more reminiscent of your bathtub rubber duckie than a 38 thousand ton 33-knot Essex class, 3 thousand crewed floating city.

Now for your first trap

After the low pass, you're told to make two hook-up touch-and-goes, after which it's down to serious business. The next time around you check your instruments, make sure your wheels, flaps are where they belong, and make that fateful call, "Two Foxtrot Two Four Six abeam. Hook down. Fuel state two point nine," your electronically modified voice announcing to the Landing Signal Officer (LSO) that you're ready for the show.

So from there until roughly two-thirds the way around to the ship's heading you hold your altitude at 350 feet until you see the the 'meatball' – the glideslope projection – come alive in the ship's mirror.

"Two Four Six, ball." There's that voice again... so confidant sounding, so assured... but maybe your gut is not quite as convinced.

"Roger ball". The LSO responds to your call. "Watch your line-up, Two Four Six," pretty much a routine reminder during a student session, because it is easy to concentrate so hard on the glide slope that line-up drops out of the scan. Moreover, pilots develop characteristic passes with which the LSOs become familiar. Mine, for instance, was typically slightly slow out of turn ("SLOOT' in LSO-ese), coming on-speed about halfway down the glide slope.

Whatever your start position, from this point on you're too busy meeting the constant challenges of maintaining control of just three little parameters: glideslope, angle of attach, and lineup. Your entire world is one devoid of 'externalities.' Just thousands of tiny, unthought about corrections.

"Watch your line up," the LSO issues a reminder, and you notice you've strayed slightly right of course. You respond with a tick on the stick and maybe a nudge on the left rudder.

Another call gets you attention... "Power," and you scootch your left hand forward just as you feel the burble of disturbed air coming off the boat's "island." At first this is disconcerting, but later on it's somehow comforting. "I'm where I belong," you think.

There is a point just as you cross the round down when you sense yourself stretching for the ground—the feeling maybe you're too high—and then BAM! The Cougar slams down just the way it's supposed to, and you ram the throttle forward to the firewall in case of a bolter. But the hook snags a wire and as you fall forward into your seat straps you hope you remembered to lock them as part of the landing checklist

As it turns out, you have and before you know it the bird has rocked back to an even stance with someone in front signaling you to pull the power back and retract the hook.

Clearing the landing area, you're waved forward and spotted in line for one of the catapults, a memorable time because from this vantage point you see the ship is not a rock. The bow swings above and below the horizon, giving sequential views of whitecaps and scudding sky. Despite the heavy stabilization gear, the ship shoulders its way through the swells in a ratcheting motion. An occasional maverick wave tosses the bow still higher, and amidships the feeling is like being in an elevator.

Waiting to be taxied forward to the catapult is about the only time you have to look the instruments over and set your configuration for takeoff. In the F-9, this means flaps down and trim at 3 degrees nose-up. A crewman attaches a tiller bar to your nose gear to guide you onto the catapult while the taxi-director frantically signals you to leap ahead or squeal to a stop. The pace is frenetic, but with sudden surprise you realize you're lashed to the catapult.

The shuttle and bridle are the forward thrusting mechanisms, while the holdbacks secure the airplane to the deck. The minute you are tied on, the cat officer signals for run-up. With a final check of the instruments, you snug your head all the way into the headrest, make sure that you've locked the throttle and catapult handle between your thumb and fingers, taken your feet off the brakes (not that they would much to slow your progress off the front of a boat), then looking straight ahead salute your readiness for the cat shot.

You never know how long it will take for the launch instructions to get to the end of the line, but it's been my experience that just about the time I start to exhale my first big breath, that's when it comes. In the later-model boats with steam catapults, the feeling is one of inexorability. In the older ships like Antietam with the hydraulic cats, it's more violent.

WHANGGC! Every nut and bolt in the airplane adds to the din as your eyeballs press into the back of your head, your feet lift off the rudder pedals, and the stick slams into the meat of your hand. In the next instant, the hydraulic stroke's duty complete, you fall forward against your shoulder straps, and you're airborne and climbing away in a slight clearing turn. Somewhere in the depth of your soul you give thanks that all those little details that go into a successful cat shot have worked as advertised.

"Two Four Six, your signal is Bingo," Pri Fly calls, telling you you've fulfilled that which distinguishes aviators from pilots. "It should be more," you think as you begin to adjust to the situation, and while you ponder that in something of a dream state, you hear, "Pigeons to Homeplate two-six-five degrees for sixty-two miles."

It's not even time for lunch yet.

