Ode to E Pluribus Unum for December 11 2022

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50 Years Ago Today Was the Last We Landed on the Moon

It's still there but where are we?

Well last Monday Artemis skimmed by at an altitude of 60 miles

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Looking for a Christmas Gift?

How about an Amphicar?

https://bit.ly/3VENfvl

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Ten Creative Commercials

https://youtu.be/bIRa63nR2mU?t=1

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The Minions Know Gilbert and Sullivan

https://youtu.be/_RG8hoGMxKw

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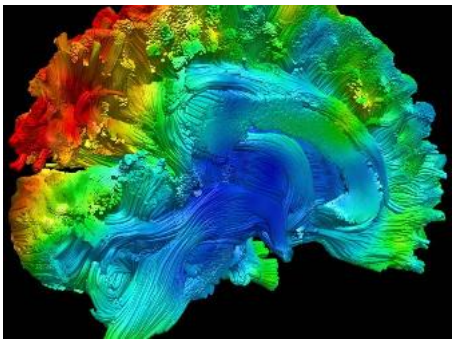
New View on the Brain: It's All in the Connections



Donders Centre for Cognition

It's not the individual brain regions but rather their connections that matter: neuroscientists propose a new model of how the brain works. This new view enables us to understand better why and how our brains vary between individuals. The researchers publish it in a special issue of Science on November 4th.

Our right hemisphere is for creativity, and the left is for rational thinking. It's an urban myth that stems from a classical view of how our brain works, namely that we have several brain regions that all have a specific function. Even though this 'modular' view of the brain is superseded, it can still be found in many textbooks.

However, we should look at brain function differently, according to neuroscientists Stephanie Forkel at Radboud University and Michel Thiebaut de Schotten at the University of Bordeaux. Brain functions are not localized in individual brain regions but rather emerge from the exchange between these regions.

Essential for speaking and reading

"Look at language as an example", says Forkel. "Here, the result is greater than just the sum of the parts. To communicate, you need to very quickly understand what is said within a given context and consider the emotional intentions that depend on whom you talk to. If the brain worked in a modular fashion, it would not allow us to have all these different language computations in such a short time frame."

Connections can amplify or reduce brain signals and determine the structure and function of the brain, according to neuroscientists. There is a strong relationship between the pattern of connections of brain regions and their activity during cognitive tasks. It is possible to predict where a function in the brain will appear based on brain connections. Forkel: "If you look at a children's brain before they acquire literacy, you see that the white matter, which consists of nerve pathways, is already connected to the 'classical' reading area."

More insight into brain differences

An important gap in the classical view of the modular brain is that it cannot explain the variability between individuals. "Everyone has a different brain, which isn't anything like the textbook brain we all know. That's something I realised when I worked on postmortem brains. Neuroimaging research, most of the time, makes all the brains of participants fit a standard brain, leading to a loss of insight into the variability between people. That's a big topic in neuroscience at the moment", says Stephanie Forkel.

With the new network approach, scientists can model the variability between our brains, for example, in the light of evolution. "If you look at the white matter, we see that older parts in our brain (the 'reptile' brain) are more or less the same. Parts that are more recently evolved are more variable between us. This puts brain evolution in a new framework."

Furthermore, the new approach to investigating brain function could have a large impact on clinical treatments. "There are patients with brain lesions without any symptoms or symptoms that you wouldn't expect. In a study, we looked at how the lesions affected the whole brain network, and we could show that we could use the network pattern to predict which symptoms patients had or which symptoms they would develop one year later."

Professional networks

To update the work with this new model, it will be necessary for researchers to create professional networks to integrate multiple fields of neuroscientific research, according to the research team. This will push the current boundaries and lead to advanced neuroimaging methods, personalized anatomical models, and significant clinical impact.

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Camile Saint Saëns (1835-1921)

Saint-Saëns was a musical prodigy, making his concert debut at the age of ten. After studying at the Paris Conservatoire, he followed a conventional career as a church organist, first at Saint-Merri, Paris and, from 1858, La Madeleine, the official church of the French Empire. After leaving the post twenty years later, he was a successful freelance pianist and composer, in demand in Europe and the Americas.

He was a scholar of musical history, and remained committed to the structures worked out by earlier French composers.

His best-known works include Introduction and Rondo Capriccioso (1863), the Second Piano Concerto (1868), the First Cello Concerto (1872), Danse macabre (1874), the opera Samson and Delilah (1877), the Third Violin Concerto (1880), the Third ("Organ") Symphony (1886) and The Carnival of the Animals (1886).

Danse Macabre Op 40 https://youtu.be/qNMzBnuBC6Y?list=RDMM&t=3
The Swan https://youtu.be/3qrKjywjo7Q?t=1 Yo-Yo Ma, Kathryn Stott
Rondo Capriccioso https://youtu.be/NKBdozolVts Yuka Ishizuka & Simon Lane

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The Economics of Gas Stations has Little to do with Gas

https://youtu.be/ZJBn3SYmoMY

One of my last articles for Distributed Energy Magazine tackled this subject. It's not just the Mom & Pop operations who have been drafted into the convenience store business.

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Drone Deliveries May Be Taking a Giant Baby Step Forward

By Mark Phelps for AVweb

Walmart

More conservative observers and analysts have long noted that one of the pitfalls of the unmanned-aircraft movement has been a tendency to unrealistically overreach. Experts say that in the competition for investment dollars, the loudest claims too often catch the ears of a naïve financial community, frequently with little basis in actual, practical potential. Baby steps need not apply.

But DroneUp, founded in 2016 by CEO Tom Walker and based in Virginia Beach, Virginia, has taken a more measured approach and recently announced a partnership with Walmart to expand modestly sized drone delivery services to six states. DroneUp does not manufacture its vehicles, but rather uses third-party products with an eye toward tailoring its services to the clients' specific needs, Walker said. According to an article on fastcompany.com, DroneUp's customers reportedly include the likes of Brookfield Properties, Quest Diagnostics, NATO Allied Command—and now Walmart, in an expanded capacity.

In 2021, DroneUp provided on-demand deliveries at three locations in the retail giant's home state of Arkansas. That partnership has now expanded to include locations in

Arizona, Florida, Texas, Utah and Virginia. Certified pilots operate within FAA guidelines between 8 a.m. to 8 p.m. from delivery hubs at participating Walmart stores seven days a week.

In announcing the partnership last May, David Guggina, Walmart U.S. senior vice president of innovation and automation, said, "Customers will be able to order from tens of thousands of eligible items, such as Tylenol, diapers and hot dog buns, for delivery by air in as little as 30 minutes. For a delivery fee of $3.99, customers can order items totaling up to 10 pounds. So, simply put; if it fits safely, it flies."

"There was a clear need for a forward-thinking sustainable solution that complemented what was currently in place," Walker said. "Drones checked the box for everything needed to make last-mile delivery better for everyone. They are fast, efficient, safe, reduce greenhouse emissions, and rapidly becoming cost-effective for businesses to implement."

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First Look at What Fully Upgraded B-52 Bombers will Look Like

A new rendering from Boeing shows a future B-52 with new engines, a revised nose section, and other additions.

https://www.thedrive.com/the-war-zone/our-first-look-at-what-fully-upgraded-b-52-bombers-will-look-like

https://www.airandspaceforces.com/image-of-new-b-52-cockpit-shows-a-cleaner-layout/

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Arlington National Cemetery

https://bit.ly/3hbX3Op

https://education.arlingtoncemetery.mil/

Every time I go to Washington, I make it a practice of walking the hallowed grounds. It provides me with a bond with those who have preserved our nation with their lives.

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FAA Proposes Overhaul of Airliner Certification

By Russ Niles -for AVweb

Boeing

The FAA has published its response to the 737 MAX certification debacle in the form of a 117-page Notice of Proposed Rulemaking (NPRM) that aims to rid the system of loopholes and regulatory gaps that played a role in the tragic crashes of the aircraft shortly after it was signed off. "The FAA proposes revised and new safety standards to reduce the likelihood of potentially catastrophic risks due to latent failures in critical systems," the agency says in its overview of the NPRM. "With this action, the FAA seeks to reduce risk associated with airplane accidents and incidents that have occurred in

service, and reduce risk associated with new technology in flight control systems." The overhaul is directed at Part 25 transport category aircraft.

The NPRM focuses mainly on what it terms "latent failures," which it defines as failures that are "not apparent to the flightcrew or maintenance personnel" and can combine with other failures with catastrophic results. In the case of the MAX, bad data from angle of attack indicators caused a hidden software system designed to improve handling characteristics to push a Lion Air and an Ethiopian Airlines aircraft into unrecoverable dives. A total 346 people were killed.

Because much of the technology is new, the way systems can fail are also new and that, says the FAA, requires an overhaul of the certification process. Fundamental to that overhaul is the standardization of safety criteria not only at the FAA but with regulators in other countries, the NPRM says. The document is likely to prompt much discussion among regulators and the industry, but the agency says it's work that has to be done so that accidents can be prevented rather than serve as a primary source of data on aircraft flaws. "The proposed standards would also improve the likelihood that operators discover latent failures and address them before they become an unsafe condition, rather than discovering them after they occur and the FAA addressing them with airworthiness directives (ADs)," the NPRM says.

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Water Vapor from Tonga's Eruption Could Warm Earth for Years

By Mindy Weisberger

The explosive event increased atmospheric water vapor by 5%.

The underwater Hunga Tonga-Hunga Ha'apai volcano eruption on Jan. 15, 2022.
(Image credit: Tonga Geological Services)

More than eight months after the underwater volcano near Tonga erupted on Jan. 14, scientists are still analyzing the impacts of the violent blast, and they're discovering that it could warm the planet.

Recently, researchers calculated that the eruption of Hunga Tonga-Hunga Ha'apa spewed a staggering 50 million tons (45 million metric tons) of water vapor into the atmosphere, in addition to enormous quantities of ash and volcanic gases. This massive vapor injection increased the amount of moisture in the global stratosphere by about 5%, and could trigger a cycle of stratospheric cooling and surface heating — and these effects may persist for months to come, according to a new study.

Tonga's eruption, which began on Jan. 13 and peaked two days later, was the most powerful witnessed on Earth in decades. The blast extended for 162 miles (260 kilometers) and sent pillars of ash, steam and gas soaring more than 12 miles (20 km) into the air, according to the National Oceanic and Atmospheric Administration (NOAA).

Big volcanic eruptions typically cool down the planet by belching sulfur dioxide into the upper layers of Earth's atmosphere, which filters solar radiation. Particles of rock and ash can also temporarily cool the planet by blocking sunlight, according to the National Science Foundation's University Corporation for Atmospheric Research. In this way, widespread and violent volcanic activity in Earth's distant past may have contributed to global climate change, triggering mass extinctions millions of years ago.

Huge Tonga underwater volcano eruption captured in stunning satellite video

Recent eruptions have also demonstrated volcanoes' planet-cooling powers. In 1991, when Mount Pinatubo in the Philippines blew its top, aerosols spewed by this mighty volcanic blast lowered global temperatures by about 0.9 degrees Fahrenheit (0.5 degrees Celsius) for at least one year, Live Science previously reported.

Tonga expelled approximately 441,000 tons (400,000 metric tons) of sulfur dioxide, about 2% of the amount spewed by Mount Pinatubo during the 1991 eruption. But unlike Pinatubo (and most big volcanic eruptions, which happen on land), underwater Tonga's volcanic plumes sent "substantial amounts of water" into the stratosphere, the zone that extends from around 31 miles (50 km) above Earth's surface down to around 4 to 12 miles (6 to 20 km), according to the National Weather Service (NWS).

In underwater volcanoes, "submarine eruptions can draw large parts of their explosive energy from the interaction of water and hot magma," which propels huge quantities of water and steam into the eruption column, scientists wrote in a new study published Sept. 22 in the journal Science. Within 24 hours after the eruption, the plume extended over 17 miles (28 km) into the atmosphere.

The researchers analyzed the amount of water in the plumes by evaluating data gathered by instruments called radiosondes, which were attached to weather balloons and sent aloft into the volcanic plumes. As these instruments rise through the atmosphere, their sensors measure temperature, air pressure and relative humidity, transmitting that data to a receiver on the ground, according to the NWS.

Atmospheric water vapor absorbs solar radiation and re-emits it as heat; with tens of millions of tons of Tonga's moisture now adrift in the stratosphere, Earth's surface will be heating up — though it's unclear by how much, according to the study. But because the vapor is lighter than other volcanic aerosols and is less affected by gravity's pull, it will take longer for this warming effect to dissipate, and surface warming could continue "over the months to come," the scientists said.

Prior research into the eruption found that Tonga ejected enough water vapor to fill 58,000 Olympic-size swimming pools, and that this prodigious amount of atmospheric moisture could potentially weaken the ozone layer, Live Science previously reported.

In the new study, the scientists also determined that these enormous quantities of water vapor could indeed modify chemical cycles that control stratospheric ozone, "however, detailed studies will be required to quantify the effect on the amount of ozone because other chemical reactions may play a role as well."

Originally published on Live Science.

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Car History: A Tour of Art Deco Cars From the '30s and '40s

By Neil Barbulescu

The automobiles of the 1930s and '40s were mysterious machines. They had evolved from clunky motorized carriages to comfortable, reliable forms of transportation. Yet they were still far removed from their full potential. Looking to the future for inspiration, a group of engineers from Europe and North America set out to design vehicles that would redefine the paradigm. Tapping into the Art Deco artistic movement of the era, these engineers tinkered and dreamed, producing vehicles that were both beautiful and ahead of their time.

Hispano-Suiza H6B "Xenia," 1938.
Photo © 2016 Peter Harholdt.

https://bit.ly/3Hi9zXo

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Kids Don’t Know How to Read. John Branyan

https://youtu.be/SwZWaw2NCrM?t=1

Kids don't know how to read, or at least they don't know how to read as well as kids from the 16th century according to this full Dry Bar Comedy special from John Branyan.

The truth is our vocabulary isn't what it used to be, and the writings of Shakespeare are proof of that. Whether you're someone who has an extensive vocabulary, or someone who just gets by with the words they know, John Branyan's retelling of the three little pigs is sure to keep you laughing from start to finish.

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Jitterbug Team Champs

https://youtu.be/mDGxFB9uxPU?t=1

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Rose of York

b17flyingfortress.de

https://youtu.be/qGeUK6brJCY;

During the Second World War, an American bomber crew decided to name their plane "Princess Elizabeth" after the future Queen of England. It seemed like a good idea too -- until someone asked "What if it gets shot down?"

This story is dedicated in memory of Queen Elizabeth. Whether you like or dislike the Royal Family, this story tells the history of an event from the Second World War that is historic, interesting, and speaks volumes of her mindset, even from when she had only just turned 18 years old and was still a princess.

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Economics has separated into those with complex formulae and Milton Friedman."

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No One Will Ever Come Close to Lancer

June 11, 1982
Vol. 39 No. 23
24 Pages

Flight Jacket

MAG-11 CO sets Phantom safety mark

By Cpl. Cindy Reid

Col. Michael P. Sullivan, MAG-11 CO, recently became the first Marine Corps pilot to achieve 4,000 accident-free flight hours in the F-4 Phantom, according to McDonnell-Douglas Corporation, manufacturers of the aircraft.

A plaque was awarded by McDonnell-Douglas and represents flight time logged in the F-4 from 1962 through 1981. Col. Sullivan has logged an additional 3,000 hours in various aircraft throughout his 25 year career.

"It is a rare occurrance when a pilot can achieve this many hours in one type of tactical aircraft," said Capt. Joe Durda, acting ground safety officer.

Sullivan attributes the large number of F-4 flight hours to the enlisted Marines who maintained these aircraft in superb condition throughout the 20 years the Phantoms have been in service.

The major portion of Sullivan's F-4 hours have been flown as a member of MAG-11 or one of the three squadrons now in that group.

"Those squadrons (VMFAs-314, 323 and 531) have done more for Marine fighter attack aviation than any other Marine Corps VMFA squadrons since the inception of the Phantom in 1962," Sullivan said.

To justify this claim, Sullivan cited the fact that MAG-11 Phantom squadrons have, in the last nine years, won five Hanson Awards for fighter attack squadron of the year.

SSgt. O. C. McBride

Record-setter

Col. Michael P. Sullivan with Cpl. Dwaine Beck, VMFA-531 plane captain. Sullivan attributed his feat to the enlisted Marines who have kept his aircraft in tip-top shape over the years.

Mike Sullivan, Major General, USMC, is the real deal, in my humble opinion more than a match as the consummate fighter pilot for the storied Robin Olds of Air Force fame. It was my fortune to follow Lancer as VMFA-314's Maintenance Officer back in our Vietnam days.

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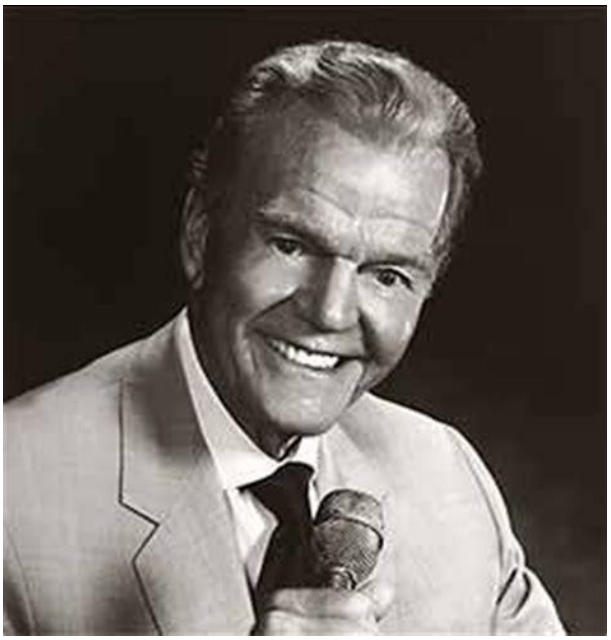
Paul Harvey's Letter to His Grandchildren



We tried so hard to make things better for our kids that we made them worse. For my grandchildren, I'd like better.

I'd really like for them to know about hand me down clothes and homemade ice cream and leftover meat loaf sandwiches.. I really would.

I hope you learn humility by being humiliated, and that you learn honesty by being cheated.

I hope you learn to make your own bed and mow the lawn and wash the car.

And I really hope nobody gives you a brand new car when you are sixteen.

It will be good if at least one time you can see puppies born and your old dog put to sleep.

I hope you get a black eye fighting for something you believe in.

I hope you have to share a bedroom with your younger brother/sister. And it's all right if you have to draw a line down the middle of the room, but when he wants to crawl under the covers with you because he's scared, I hope you let him.

When you want to see a movie and your little brother/sister wants to tag along, I hope you'll let him/her.

I hope you have to walk uphill to school with your friends and that you live in a town where you can do it safely.

On rainy days when you have to catch a ride, I hope you don't ask your driver to drop you two blocks away so you won't be seen riding with someone as uncool as your Mom.

If you want a slingshot, I hope your Dad teaches you how to make one instead of buying one.

I hope you learn to dig in the dirt and read books.

When you learn to use computers, I hope you also learn to add and subtract in your head.

I hope you get teased by your friends when you have your first crush on a boy / girl, and when you talk back to your mother that you learn what ivory soap tastes like.

May you skin your knee climbing a mountain, burn your hand on a stove and stick your tongue on a frozen flagpole.

I don't care if you try a beer once, but I hope you don't like it... And if a friend offers you dope or a joint, I hope you realize he/she is not your friend.

I sure hope you make time to sit on a porch with your Grandma/Grandpa and go fishing with your Uncle.

May you feel sorrow at a funeral and joy during the holidays.

I hope your mother punishes you when you throw a baseball through your neighbor's window and that she hugs you and kisses you at Christmas time when you give her a plaster mold of your hand.

These things I wish for you - tough times and disappointment, hard work and happiness. To me, it's the only way to appreciate life.

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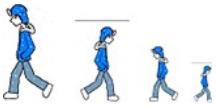
My Walking Thoughts



For Sunday December 11 2022

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Spending an Evening with Hélène Grimaud

Last month I spoke of the Juilliard String Quartet's visit to Santa Barbara. This past Wednesday we were graced by the appearance of Hélène Grimaud whose power and lyrical interpretations of a wide variety of piano masterworks place her among the superstars on the concert stage.

Her program (capped by not one but two encores) was decidedly eclectic, featuring works by Debussy, Satie, and Bartok (my favorite), and capped by Robert Schumann's Kreisleriana, Op.16, a piece moving rapidly from bombast to quiet reflection…a tour de force in eight movements.

It was another of those magic nights that serves as a placekeeper in my life's richest memories. How lucky we are to have people like Ms. Grimaud to remind us that such talent and dedication exists among us.

A passionate wildlife conservationist, Grimaud established the Wolf Conservation Center in upper New York State, which offers education about wolves, their relationship to the environment, and the human role in protecting their future.==========

Outtakes from Ghost of War

Prolog IV

(The three preceding pieces described Gordon's introduction to flight)

Now 20 years later with more than 3,000 hours of flight time under his belt, Gordon still experienced the same wonderment and reverence for the banquet flying set before him.

Though he never fully comprehended it, flying fighters--indeed the very act of engaging in combat--served to heighten rather than diminish these feelings. Part of it lay in the intensity of the activity so that as the level of danger rose, so too his awareness of the world around him. Colors deepened in saturation, seemingly isolated features evolved into sets, and from sets into meaningful wholes…order emerged from chaos.

Caught in the thrall, Gordon's heightened awareness grew from a sense of serenity and detachment that allowed him to observe from a remote vantage point that the number of events between ticks of his internal clock increased as a function of and in proportion to the level of danger he perceived.

In the midst of an attack on an antiaircraft site south of Vinh one morning, Gordon caught sight of a rabbit scampering across the complex heading for a hole. His airplane was inverted at the time, ripping along at 600 knots 2,000 feet above the ground, and Gordon was in the process of pulling the nose down through the horizon to pick up the gun emplacements when the rabbit broke cover. For just an instant the rest of the area was a blur--a kaleidoscope of interspersed green and umber lozenges--yet this trifling creature stood out in bold relief, hind feet even with his ears in mid-stride. As he uncoiled and stretched for his next grip of earth, Gordon saw the burrow and realized that the Jack would make his goal between the revetments several bounds before the bombs would erase his footprints. Conventional wisdom says that given the circumstances--height, speed, hostile ground fire, and distance of nearly a mile--Gordon couldn't have visually acquired that running rabbit, much less assessed the situation... but he did. It was just a minute flash of recognition but satisfying in an odd sort of way.

Gordon was one of the lucky few who understood that it was nice to change vantage points from time to time and allow his perspectives the chance to shake out a little. Flying encourages this, partially because of the spatial aspect, but also because of a unique involvement that contains an undercurrent of risk and challenge. Gordon accepted its hold on him as an addiction; one made positive if for nothing more than as an antidote to complacency.

All that was about to change.

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