

Ode to E Pluribus Unum for Sunday September 17 2023

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Stewards of the Moon



September 7 at 3.33 AM.

Dira Saha

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Did You Know Today is Constitution Day?

On September 17, 1787, delegates to the Constitutional Convention in Philadelphia signed the new legal foundation of our nation, the U.S. Constitution.



Isn't it high time to make its precepts a signature part of our education curricula?

Free Constitution Day Lessons and Activities

Now a federal holiday also known as Citizenship Day, this commemoration of the world's oldest functional constitution serves as an ideal launching point for a year of civics and U.S. history instruction.

These free Constitution Day lessons and activities will inspire students to understand, question, and debate the most important issues of our day.

<https://bit.ly/44ScX3k>

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The Ancient Origins of Glass

Featuring ingots, shipwrecks, pharaohs and an international trade in colors, the material's rich history is being traced using modern archaeology and materials science.



Blue glass ingots from the Uluburun shipwreck.

Credit: Panegyrics of Granovetter / Flickr

Today, glass is ordinary, on-the-kitchen-shelf stuff. But early in its history, glass was bling for kings. In a hierarchy of materials, glass would have sat slightly beneath silver and gold and would have been valued as much as precious stones were.

<https://knowablemagazine.org/article/society/2021/ancient-origins-glass>

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What The Heck Is CRISPR, Anyway?

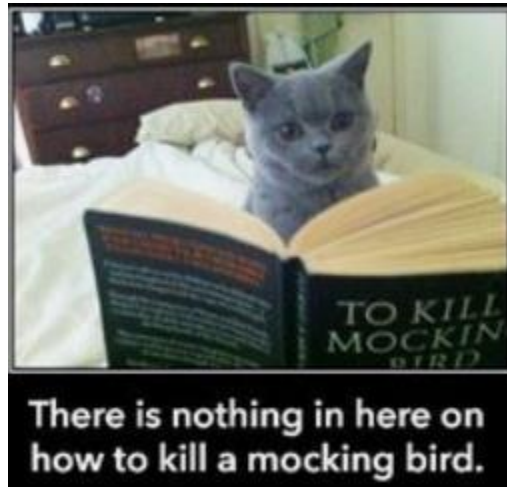


If you haven't heard of CRISPR yet, the short explanation goes like this: In the past nine years, scientists have figured out how to exploit a quirk in the immune systems of bacteria to edit genes in other organisms — plants, mice, even humans. With CRISPR, they can now make these edits quickly and cheaply, in days rather than weeks or months.

A big concern is that while CRISPR is relatively simple and powerful, it isn't perfect. Scientists have recently learned that the approach to gene editing can inadvertently wipe out and rearrange large swaths of DNA in ways that may imperil human health.

<https://youtu.be/2pp17E4E-O8>

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African Elephants May Use Names or Each Other

The elephants seem to address each other with individual vocal labels, and not by simply copying each other's calls.



*Think only humans give each other names? You might need to think again.
Image credit: MPH Photos/Shutterstock.com*

Names are universal throughout human cultures and across different languages. They form a huge part of our identity and help us communicate with each other, but personal names are considered a uniquely human thing. Now, new research has suggested that wild African elephants could address each other with individual specific calls – the equivalent of a name – with fascinating implications for the evolution of language.

The new research, which has been posted as a preprint and has not yet been certified by peer review, analyzed calls from wild elephants in two areas of Kenya: the greater Samburu ecosystem to the north, and the Amboseli National Park to the south.

The final dataset contained 625 separate calls, 597 of which occurred between members of the same family group. There were 114 unique callers and 119 unique receivers. The researchers only included calls directed at a single individual elephant, and for which the receiver could be identified.

The team measured the acoustic features of the elephant sounds and ran a series of statistical tests on the data, to see if it was possible to predict the identity of the receiver from the call. And indeed, this was found to be the case, as the team writes: “[R]eivers of calls could be correctly identified from call structure statistically significantly better than chance.”

One aspect the team were particularly interested in was whether the calls mimicked the receiver’s own vocalizations. This has been observed in other species, such as dolphins, which can learn each other’s individual vocal labels and respond to their own label when they hear it.

What was fascinating about the elephant data, though, was that the authors found limited evidence that the callers were imitating each receiver’s own call. “To our knowledge, this study presents the first evidence for vocal addressing of conspecifics without imitation of the receiver’s calls in nonhuman animals,” they write.

The authors also took 17 of the elephants and played them recordings of calls that were originally addressed to them to see how they responded. “Further supporting the existence of vocal labels,” the authors write, “subjects approached the speaker more quickly [...] and vocalized more quickly [...] in response to test playbacks than control playbacks.”

Overall, the authors concluded that this could well be the first evidence of a non-human species using a human-like naming system to refer to other individuals. As to why this might arise in elephants specifically, there are some clues we can glean from their social structures.

“Due to their fission-fusion social dynamics, elephants are often out of sight of their closely bonded social partners and produce contact rumbles to communicate over long distances,” the authors explain, referring to elephants’ tendency to split themselves up into smaller parties that can then aggregate together to form large groups, sometimes hundreds-strong.

“Vocal labels could enhance coordinating ability while out of sight of one another,” the authors continue, also noting that the labels only cropped up in a minority of vocalizations, likely because in many contexts there is no need to use them.

There’s also a cuddlier aspect to all this: calling each other by their names could be a way of enhancing social bonding, the authors posit, as is the case with humans.

As a preprint study, it’s important to remember that this research is yet to be subjected to peer review. However, the authors do note that the “findings raise intriguing questions about the complexity of elephant social cognition,” and thus open up a fascinating new avenue for researchers to explore.

Even if peer reviewed, it’s still speculation...yet I speculate there’s something here.

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Shinedown - Dead Don't Die



Shinedown released "Dead Don't Die" as the third single from Planet Zero on January 17, 2023. The band composed and recorded the album at Big Animal Studio in Charleston, South Carolina. Eric Bass produced and mixed it, just as he had done with their previous release, Attention Attention, which came out in 2018.

https://youtu.be/CScIXCl_u7U

A little heavy metal to get your juices flowing.

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German Magic



https://youtu.be/T3mfWd_K_gs

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Why Mathematical Proof Is a Social Compact

Number theorist Andrew Granville on what mathematics really is — and why objectivity is never quite within reach.



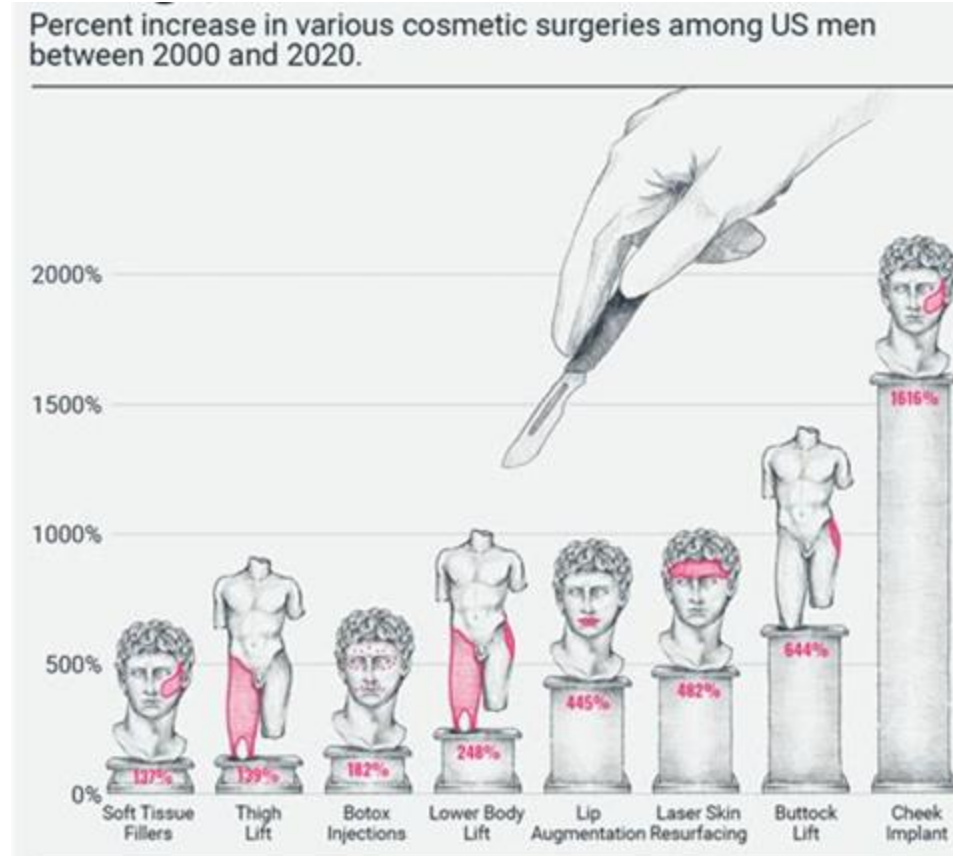
Andrew Granville

What is a mathematical proof? We tend to think of it as a revelation of some eternal truth, but perhaps it is better understood as something of a social construct.

<https://bit.ly/45Vr3ln>

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'Brotax' Is Just One Sliver in the Men's Cosmetic Procedure Boom



Sure, Barbie is the hit of the summer. Sure, Ryan Gosling looks dreamy in it. But don't be fooled by those blaming Ken's chiseled looks for a sudden rise in male aesthetic procedures like "brotax" (botulinum toxin injections, but for men).

Dudes had already been making smooth moves in that direction, per American Society of Plastic Surgeons data. American men opting for "minimally-invasive" cosmetic procedures increased 29% between 2000 and 2020, long before Gosling added a new wrinkle.

Where'd this come from?

It's a comparative drop in the bucket — over the same period, women notched a 114% uptick — but female dominion over the aesthetics business is nothing new. Male cosmetic enhancements, on the other hand, make for a stigma-busting trend.

A med-spa owner told the New York Post she has "observed a steady increase in male patients," crediting it to a "changing attitude towards self-care and grooming."

The Guardian cheekily, but accurately, notes the beauty industry is resetting men's standards because it's "reached a point of total saturation when it comes to making women feel insecure about their appearance."

One plastic surgeon put it simply for The Post: "Men want to look good too!"

Back to "brotox"

While treatments like laser skin resurfacing and microdermabrasion have also taken off, "brotox" — a play on popular injection brand Botox — is the most common cosmetic procedure among men.

American men had 265k+ total botulinum toxin injections in 2020 — a 182% increase compared to 2000 — adding to a \$6.4B Botox market. Dousing this trend in gasoline: TikTok and celebs, naturally. On TikTok, the hashtag #brotox has accumulated 18.1m views, while Joe Jonas is playing spokesmodel, saying injectables are "not a big deal."

Oh, but they are, Joe: Patients can't lay down for 2-4 hours after getting Botox shots. The Jonas Brothers must not be big fans of napping like we are.

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Inside the American Money Factory



Here's the US dollar banknotes production process

https://youtu.be/A_0dWzGh0n8

Think of just one of these bins with pictures of Salmon P Chase.

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Timpanogos High Choir Sings William Tell Overture



The Timpanogos High School Show and Chamber Choir was obviously well aware of this fact when they began practicing for their performance of the "William Tell Overture" in Orem, Utah. When they took the stage, not only did they show off their incredible talent, but they also made sure to keep their audience on their toes!

The students appear to be taking each note seriously, but it doesn't take long for the facade to fade!

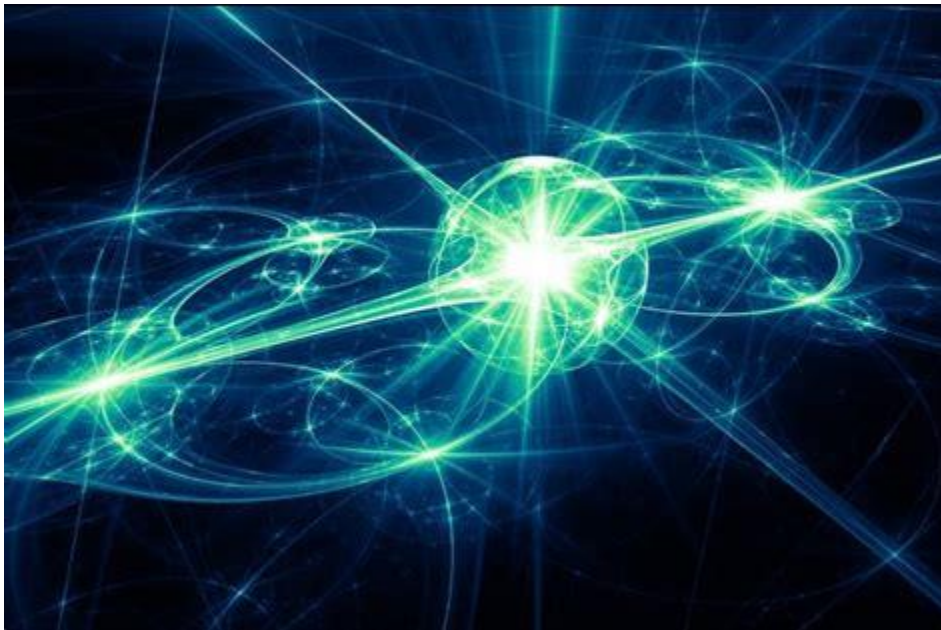
As soon as it does, they start hopping around like they're riding actual horses in time with the song. Then they spread out, striking theatrical poses, staring off into the distance, and even plopping down on the stands like they're exhausted by all the "bum bum bum-ing" they have to do to create the tune.

<https://youtu.be/LIsP6zZgjT8>

These kids seem to have more fun in Utah than the masked man did in Texas.

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How the Standard Model of Particle Physics Was Developed

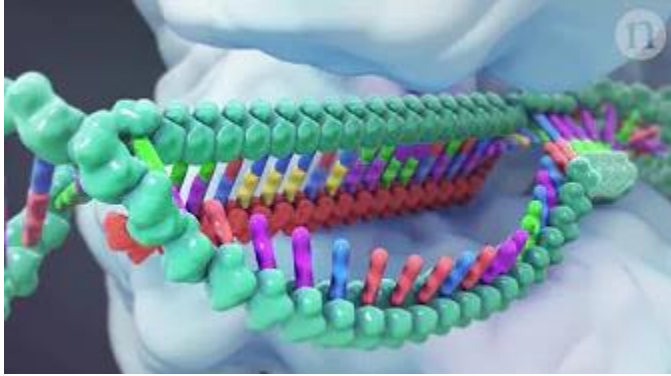


The Standard Model of physics posits that everything in the universe is made up of a discrete set of subatomic particles and forces. Among the elementary particles are quarks, leptons, and bosons, which can be further broken down into smaller particles. Despite being a highly technical field, the particles and forces can be visually described fairly simply. Learn about the history and development of the model here.

<https://youtu.be/Unl1jXFzgo>

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CRISPR-Cas9 System: Gene Editing and Beyond



Cutting specific dna sections

The CRISPR-Cas9 system has revolutionized gene-editing, but cutting DNA isn't all it can do. From turning gene expression on and off to fluorescently tagging sequences, this animation explores some of the exciting possibilities of CRISPR.

<https://youtu.be/4YKFw2KZA5o>

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J. S. Bach - Toccata and Fugue in D Minor on the Glass Harp



dailypositiveinfo

Johann Sebastian Bach - Toccata and Fugue in D minor played on the glass harp by GlassDuo at the "Festival di Santo Stefano" in Bologna, Italy.

GlassDuo have created an exceptional musical instrument from a set of custom made wine glasses. The result is the biggest professional #GlassHarp in the world.

<https://youtu.be/gDm4IphrYg>

Do you think Maria Magdalena would have risked the family crystal when an organ was close at hand? Maybe not, but good old Jack would probably have been all for it.

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A Quick Look at Country Credit Ratings



Annualized debt payment

This isn't the first time the U.S. has been downgraded by one of the big three credit rating firms, as in 2011 S&P Global Ratings downgraded the U.S. to its current "AA+" status.

The reason back then? Concerns over the government's budget deficit and debt burden.

The burden of ever-increasing debt and the associated interest payments has only grown, with the U.S. government's interest payments on its debt reaching \$970 billion in Q2 2023.

<https://bit.ly/3OWM2yH>

I'm not sure debt service is a wonderful use of tax dollars.

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The Pileated Woodpecker Thang



*In most of our forests lives a really big bird
Often not seen before he is heard.
Feathers are black, under his wings are white,
Easily identified when he comes into sight.
Bright red pileum is where he gets his name.
The crest at the top in a word is the same.
Deadwood is what this woodpecker knows best.
Insects and beetles are his favorite quest.
Twenty inches long, almost a pound in weight,
30 inch wingspan, an undulating magnate.
This woodpecker drums with dedicated will,
Excavating a tree trunk with his strong bill.*

*Mating established, the two stay together
Throughout a year, in all seasons' weather.*

*Large, colorful, imposing personality,
A persistent drummer is this bird's reality.
His high energy is how he makes a good day,
By sight and sound, every whichy-way.*

*The best that we have to enjoy every day
Is seeing and hearing every whichy-way.*

Francie Troy

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Carney Piano, Caesar Sax, Carson on Drums...Who Knew?



<https://youtu.be/Pyv0xbc4fBw?t=1>

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Prison Money: The Thriving Underground Economy Behind Bars



How people in prison earn money, how much they spend, and the lengths to which they go to secure basic needs and comforts.

<https://bit.ly/47HIZCO>

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A New Phobia in Case You Need One



Nomophobia, or "NO MOBILE PHOne PhoBIA" is the relationship between anxiety disorders and the extensive use of mobile phones.

Don't believe it? This will give you hope that your tax dollars are being put to good use.

<https://bit.ly/45waexu>

I don't know what to call it, but I've got a phobia about not having a Dino Ferrari in my driveway. I'm waiting for Social Security to take care of the problem for me.

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Photographs Reveal the Astounding Diversity of Ocean Life



Photo by Laurent Ballesta

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

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Bird Photographer of the Year 2023 Winners – In Pictures

Winners of the world's largest bird photography competition, which had more than 20,000 entries from all over the world competing for a £5,000 grand prize

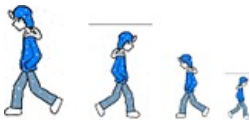


*Southern boobooks (Ninox boobook), the smallest Australian owl species, are often brought to veterinary hospitals after car accidents. Their large, outward- projecting eyes, which are adapted for low-light hunting, make them vulnerable to injury. In this image, Dr Luke Gregory is examining an owl named Rocket, focusing on the posterior eye, where injuries can be less visible. Location: Bonorong wildlife hospital, Brighton, Tasmania, Australia
Photograph: Michael Eastwell/Bird photographer of the year 2023*

<https://bit.ly/3P1v8xE>

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My Walking Thoughts



For Sunday September 17 2023

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My Proposed Memoir, Perfection and How I Achieved It," Bites the Dust

Pooh. After my 'Humility' portrait failed to make muster, I was set to get down to business with 'Perfection,' when I received reminders from supposed friends of things in my past they felt fell short of perfection. My immediate thought was to fight back, but...well you know the futility of that, so instead, I went back to the drawing board to come up with a suitable replacement.

As I went down the list of sterling traits and saw them bite the dust one after another, it finally dawned on me that I might be better off starting at the bottom and working my way up...a sound decision.

So, what did I decide on?

Are you ready?

How about "*Mediocrity, and How I Achieved It?*"

That should give me plenty of leeway to get the memoir underway, so look for its beginning next week.

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Now for a change of direction.

You know how I think music should be a part of our everyday life. It's why I tend to get misty-eyed at ad hoc performances...especially those that involve children. To that end, take a look at these examples.

Chris Martin of Coldplay Surprises the Crowd and Joins 8th Grade Rock Band



https://youtu.be/4zll_BR6hNE?list=RD4zll_BR6hNE&t=14

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Pachelbel's Canon (Canon in D) performed by 7-16 year old kids



<https://youtu.be/eW-bDcqQgrI?t=3>

If you don't think there is magic in music, I dare you to look at these kids' faces.

There's something so universal in such sharings.

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