

Ode to E Pluribus Unum for Sunday January 1 2023

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Nearly There

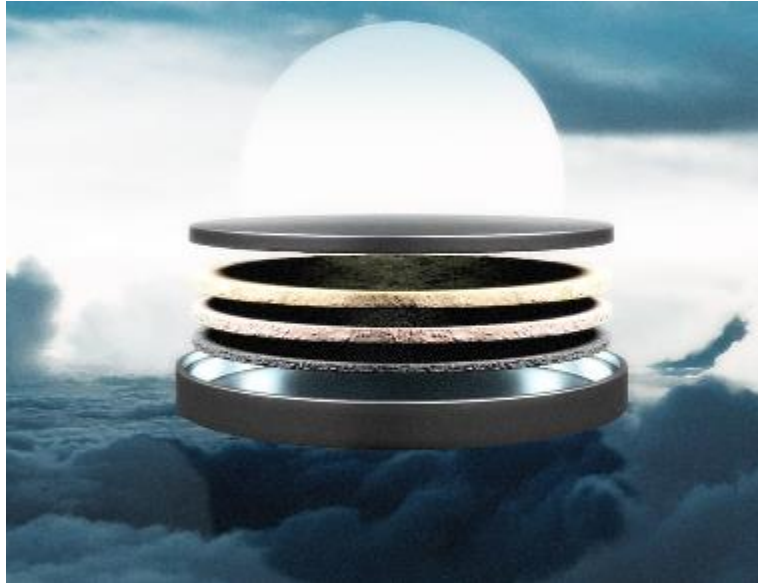


By Dear Friend Barbara Medaille

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NASA's New Wonder Battery Could Power Electric Flight Someday

NASA is testing a new graphene battery that could be a game changer for aviation and electric vehicles.



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

Some interesting perspectives

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McDonald's Digital Drive-Through in Texas

McDonald's concept restaurant has no seating and no ball pits—just a conveyor belt that will deliver you a burger and fries.



<https://bit.ly/3V0RksE>

Do you think they'll let some of the cost savings flow down to the customer?

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Iter: Fusion and the Future of Energy Production

ITER, which in Latin means 'the way,' will be the world's biggest experiment on the path to fusion energy. It will be the first fusion device to generate more heat than used to start the fusion reaction, relying on an impressive range of technologies that are essential to deliver fusion power in future.



<https://fusionforenergy.europa.eu/iter/>

A small step but one filled with promise.

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Follow me for more recipes



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Flameproofing Lithium-Ion Batteries with Salt

A polymer-based electrolyte makes for batteries that keep working – and don't catch fire – when heated to over 140 degrees F.



Standard battery materials (left) catch fire when exposed to flame, but a new material designed by SLAC and Stanford researchers (right) does not.
(Jian-Cheng Lai/Stanford University)

<https://bit.ly/3uQ49eV>

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New Device Can Control Light at Unprecedented Speeds

Researchers have developed a programmable optical device for high-speed beam steering.



Orders of magnitude faster than existing devices,
Credit Sampson Wilcox

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

Known as a spatial light modulator, the device could be used to create super-fast lidar (light detection and ranging) sensors for self-driving cars, which could image a scene about a million times faster than existing mechanical systems.

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Cigarette Smoking Rates Down Sharply Among U.S. Young Adults



<https://bit.ly/3iJx5IH>

E-cig usage on the rise...ditto marijuana.

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Sarasota Orchestra Flash Mob



<https://youtu.be/gv3xRrqJ9a8>

Musicians of the Sarasota Orchestra and Pops Conductor Andrew Lane perform Bizet's "Carmen" in a flash mob at Sarasota Bradenton International Airport.

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Who in the Family Really Wore the Togas?

By Joanna Thompson



Roman marble sarcophagus with togate men, known as the Sarcophagus of the Brothers, from the middle of the third century A.D., on display in the National Archaeological Museum in Naples, Italy.

(Image credit: Azoor Photo / Alamy Stock Photo)

If you went to a college with an active Greek life scene, you may have wrapped up in a bedsheet and attended at least one toga party. But what did togas actually look like? Were they nothing more than glorified sheets? And who wore them historically?

Wearing a toga would have been a sweaty undertaking. Traditionally, togas were long pieces of fabric, about 12 to 20 feet in length, which were draped over a plain tunic. And they were usually made of wool. "I can only imagine what it must feel like to be swamped in wool in an Italian summer. It must have been really terrible," Kelly Olson, a fashion historian at the University of Western Ontario in Canada, told Live Science.

Still, that's not so different from fashions throughout the ages.

"Humans have always worn things that were uncomfortable, especially for status reasons," said Ursula Rothe, an archaeologist and a senior lecturer at the Open University in England.

Wealthy Roman men wore togas as a sign of both status and citizenship. However, togas probably weren't worn all the time. Rothe said that they likely filled a role similar to that of the modern business suit, donned for 9-to-5 administrative work or special occasions like weddings and funerals. "You probably didn't see many out in the countryside," she told Live Science.

And togas weren't worn by ancient Greek people at all — at least, not until after they'd been colonized by the Roman Empire. Instead, the Greeks favored a garment known as a himation, which was also put on by draping. One of the main differences between the himation and the toga was the bottom hem; the himation's was straight, while the toga's was curved. Additionally, people of all genders in ancient Greece wore himations, while mainly wealthy men with full Roman citizenship wore togas.

Different togas signified different things. The standard toga was a plain off-white, and any variation said something specific about the wearer. The children of rich Romans wore togas with a crimson border, meant as a symbol of protection, until they reached puberty. Dark gray or black togas were reserved for funerals, while purple and gold-embroidered togas were worn by triumphant generals, according to the World History Encyclopedia. Elected political figures were instantly recognizable by their toga's wide purple trim. And potential politicians even had their own distinctive dress.

When a Roman citizen decided to run for office, he (*and it was always a he*) would announce his campaign by whitening his toga with chalk, a process called "candidus," which means spotless. "That is where we get our word 'candidate' from," said Olson.

Toga length and drape styles also went in and out of fashion. In the Roman Republic, the period before Imperial Rome, togas were "quite skimpy affairs," Olson said. But when the Emperor Augustus rose to power in A.D. 27, togas became long, flowing and voluminous, a possible nod to the state's supposed prosperity, Olson said. Toga styles changed constantly. "By the time you get to the third century, it's a total free-for-all," Olson told Live Science.

Certain reliefs and bits of pottery from ancient Rome even seem to depict toga accessories, such as small weights around the hem in strategic points, Olson said. Unfortunately, scholars haven't yet determined whether these accessories were actually worn in real life, or whether they were simply an artistic flourish. While academia hasn't traditionally studied classical fashion, that's changing. Today, scholars like Rothe and Olson are helping to foster a new appreciation for ancient clothing and finally take the toga out of the frat house and into the history books.

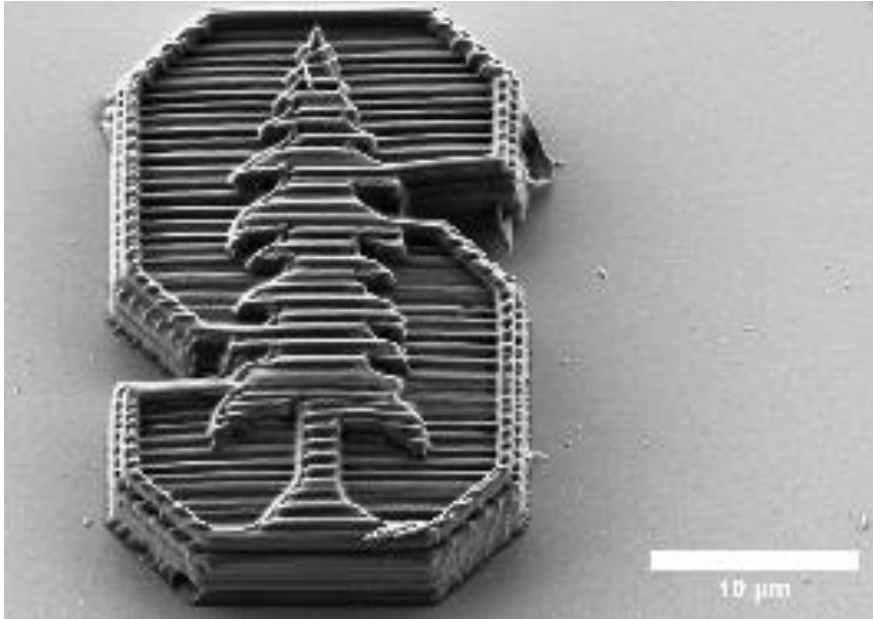
I suspect that Roman 'candidates' were at heart no more spotless than today's crop.

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New Nanoscale 3D Printing Material

Engineers have designed a new material for nanoscale 3D printing that is able to absorb twice as much energy and could be used to create better lightweight protective lattices.

By Laura Castañón



*Tiny but strong Stanford logo made using nanoscale 3D printing.
Image by John Kulikowski*

Science fiction envisions rapid 3D printing processes that can quickly create new objects out of any number of materials. But in reality, 3D printing is still limited in the properties and types of materials that are available for use, especially when printing at very small scales.

Researchers at Stanford have developed a new material for printing at the nanoscale – creating structures that are a fraction of the width of a human hair – and used it to print minuscule lattices that are both strong and light. In a paper published in *Science*, the researchers demonstrated that the new material is able to absorb twice as much energy than other 3D-printed materials of a comparable density. In the future, their invention could be used to create better lightweight protection for fragile pieces of satellites, drones, and microelectronics.

“There’s a lot of interest right now in designing different types of 3D structures for mechanical performance,” says Wendy Gu, an assistant professor of mechanical engineering and a corresponding author on the paper. “What we’ve done on top of that is develop a material that is really good at resisting forces, so it’s not just the 3D structure, but also the material that provides very good protection.”

Introducing metal nanoclusters

To design a better material for 3D printing, Gu and her colleagues incorporated metal nanoclusters – tiny clumps of atoms – into their printing medium. The researchers are printing with a method known as two-photon lithography, where the printing material is hardened through a chemical reaction initiated by laser light. They found that their

nanoclusters were very good at jump-starting this reaction and resulted in a material that was a composite of the polymer printing medium and metal.

“The nanoclusters have very good properties for taking in the laser light and then converting that to a chemical reaction,” Gu says. “And they’re able to do this with several classes of polymers, so they’re even more versatile than I expected.”

The researchers were able to combine metal nanoclusters with acrylates, epoxies, and proteins – several common classes of polymers that are used in 3D printing. Moreover, the nanoclusters helped to speed up the printing process. By combining the nanoclusters with proteins, for example, Gu and her colleagues were able to print at a rate of 100 millimeters per second, which is about 100 times faster than had previously been achieved in nanoscale protein printing.

The researchers tested their new material with several different lattice structures, prioritizing the ability to carry a heavy load in some and the ability to absorb an impact in others. With the nanocluster-polymer composite, all the structures demonstrated an impressive combination of energy absorption, strength, and recoverability – essentially the ability to squish and spring back.

“The lattice structure certainly matters, but what we’re showing here is that if the material it’s made out of is optimized, that’s more important for performance,” Gu says. “You don’t have to worry about exactly what the 3D structure is if you have the right materials to print with.”

Copying the natural world

In some ways, Gu and her colleagues are trying to mimic what nature has already perfected. Bone, for example, gets its resilience from the combination of a hard exterior, nanoscale porosity, and small amounts of soft material. This combination of a 3D structure and multiple, well-designed materials allows our bones to transfer energy without breaking (most of the time) and still remain relatively lightweight. Ideally, 3D-printed protective structures would also have multiple types of material within them, some harder and some softer, to better disperse an impact and resist crushing.

“Since the nanoclusters are able to polymerize these different classes of chemicals, we may be able to use them to print multiple materials in one structure,” Gu says. “That’s one thing we’d like to aim for.”

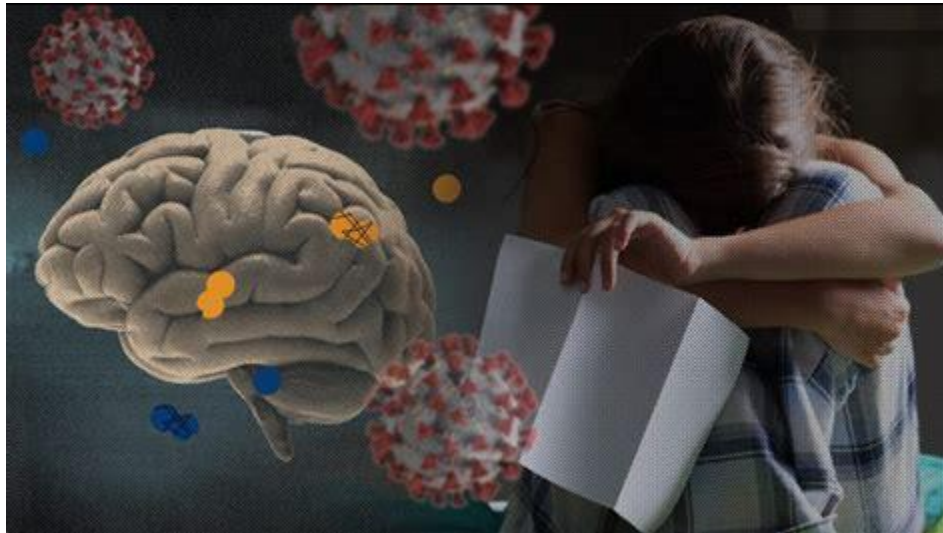
Additional Stanford co-authors of this research include postdoctoral scholars Qi Li and Ottman A. Tertuliano, as well as graduate students John Kulikowski, David Doan, and Melody M. Wang. Other coauthors are from Northwestern University. Gu is also a member of Stanford Bio-X.

This work was funded by the National Science Foundation, the American Chemical Society Petroleum Research Fund, and a Stanford Graduate Fellowship.

Related: Wendy Gu, assistant professor of mechanical engineering

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Pandemic Stress Physically Aged Teens' Brains, New Study Finds



The brains of adolescents who were assessed after the pandemic shutdowns ended appeared several years older than those of teens who were assessed before the pandemic. Until now, such accelerated changes in “brain age” have only been seen in children experiencing chronic adversity, such as neglect and family dysfunction.

By David Levin

A new study from Stanford University suggests that pandemic-related stressors have physically altered adolescents’ brains, making their brain structures appear several years older than the brains of comparable peers before the pandemic. The study was published on Dec. 1, 2022, in *Biological Psychiatry: Global Open Science*.

In 2020 alone, reports of anxiety and depression in adults rose by more than 25 percent compared to previous years. The new findings indicate that the neurological and mental health effects of the pandemic on adolescents may have been even worse.

“We already know from global research that the pandemic has adversely affected mental health in youth, but we didn’t know what, if anything, it was doing physically to their brains,” said Ian Gotlib, the Marjorie Mhoon Fair Professor of Psychology in the School of Humanities & Sciences, who is the first author on the paper.

Changes in brain structure occur naturally as we age, Gotlib notes. During puberty and early teenage years, kids’ bodies experience increased growth in both the hippocampus

and the amygdala, areas of the brain that respectively control access to certain memories and help to modulate emotions. At the same time, tissues in the cortex, an area involved in executive functioning, become thinner.

By comparing MRI scans from a cohort of 163 children taken before and during the pandemic, Gotlib's study showed that this developmental process sped up in adolescents as they experienced the COVID-19 lockdowns. Until now, he says, these sorts of accelerated changes in "brain age" have appeared only in children who have experienced chronic adversity, whether from violence, neglect, family dysfunction, or a combination of multiple factors.

Although those experiences are linked to poor mental health outcomes later in life, it's unclear whether the changes in brain structure that the Stanford team observed are linked to changes in mental health, Gotlib noted.

"It's also not clear if the changes are permanent," said Gotlib, who is also the director of the Stanford Neurodevelopment, Affect, and Psychopathology (SNAP) Laboratory at Stanford University. "Will their chronological age eventually catch up to their 'brain age'? If their brain remains permanently older than their chronological age, it's unclear what the outcomes will be in the future. For a 70- or 80-year-old, you'd expect some cognitive and memory problems based on changes in the brain, but what does it mean for a 16-year-old if their brains are aging prematurely?"

Originally, Gotlib explained, his study was not designed to look at the impact of COVID-19 on brain structure. Before the pandemic, his lab had recruited a cohort of children and adolescents from around the San Francisco Bay Area to participate in a long-term study on depression during puberty – but when the pandemic hit, he could not conduct regularly-scheduled MRI scans on those youth.

"Then, nine months later, we had a hard restart," Gotlib said.

Once Gotlib could continue brain scans from his cohort, the study was a year behind schedule. Under normal circumstances, it would be possible to statistically correct for the delay while analyzing the study's data – but the pandemic was far from a normal event. "That technique only works if you assume the brains of 16-year-olds today are the same as the brains of 16-year-olds before the pandemic with respect to cortical thickness and hippocampal and amygdala volume," Gotlib said. "After looking at our data, we realized that they're not. Compared to adolescents assessed before the pandemic, adolescents assessed after the pandemic shutdowns not only had more severe internalizing mental health problems, but also had reduced cortical thickness, larger hippocampal and amygdala volume, and more advanced brain age."

These findings could have major implications for other longitudinal studies that have spanned the pandemic. If kids who experienced the pandemic show accelerated

development in their brains, scientists will have to account for that abnormal rate of growth in any future research involving this generation.

“The pandemic is a global phenomenon – there’s no one who hasn’t experienced it,” said Gotlib. “There’s no real control group.”

These findings might also have serious consequences for an entire generation of adolescents later in life, added co-author Jonas Miller, who was a postdoctoral fellow in Gotlib’s lab during the study and is now an assistant professor of psychological sciences at the University of Connecticut.

“Adolescence is already a period of rapid reorganization in the brain, and it’s already linked to increased rates of mental health problems, depression, and risk-taking behavior,” Miller said. “Now you have this global event that’s happening, where everyone is experiencing some kind of adversity in the form of disruption to their daily routines – so it might be the case that the brains of kids who are 16 or 17 today are not comparable to those of their counterparts just a few years ago.”

In the future, Gotlib plans to continue following the same cohort of kids through later adolescence and young adulthood, tracking whether the COVID pandemic has changed the trajectory of their brain development over the long term. He also plans to track the mental health of these teens and will compare the brain structure of those who were infected with the virus with those who weren’t, with the goal of identifying any subtle differences that may have occurred.

The study was supported by funding from the National Institutes of Health (R37MH101495 to Ian Gotlib).

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Would You Like to Join in the Leaf Fun?



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https://youtu.be/D6S_TMd7Jkw?t=1

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Fernando Sor—Emperor Alexandre Funeral March



This recording was presented by guitarist Patrik Kleemola who explains, that pianist Maria Männikkö performs the world premiere recording of Fernando Sor's (1778-1839) *Marche Funèbre à la mort de S.M. l'Empereur Aléxandre*.

In October 2022, as an artistic director of the Turku Guitar Festival, I organized a concert in Sibelius museum (In Turku, Finland) dedicated to the chamber music of Fernando Sor. As some of you may have noticed, I've myself recorded a lot of Sor's guitar music in recent years on my YouTube channel, so I felt necessary to document these chamber works on my channel as those included also world premiere performances/recordings. I was happy that my fellow Lecturer at the Turku Conservatory the concert pianist Maria Männikkö, who has done a Doctorate of Music on the Spanish piano music, agreed to take part in this project of the Spanish composer Sor.

As far as I know, "*Marche Funèbre à la mort de S.M. l'Empereur Aléxandre*" is recorded here for the first time. This Funeral March displays Sor's profound knowledge of the tradition of military music and funeral music traditions going back to 17th century Tombeau compositions by French lutenists. The work, originally written for military instruments, was commissioned from Sor by the Imperial family to be performed at Tsar's funeral processions In March 1826 with the version for piano solo published at the same time. The piano score itself is quite fascinating in its written dramaturgy next

to the music: Des instruments belliqueux annoncent la nouvelle fatale – Affliction – Expression générale de douleur – L'armée pleure son bien aimé... and so on. It's also interesting to compare this Funeral March written for a Tsar of Russia to the more personal ones Sor composed for guitar (Fantaisie Élégiacque op. 59) or harpolyre (Marche Funèbre pour harpolyre), as it showcases the composer's ability and diversity depending on the task given.

Following the success of Sor's ballet Cendrillon (first performance in London, 1822) Sor found himself heading to Russia in October 1823 with the ballet company. Sor ended up staying in Moscow and St. Petersburg until the spring of 1827 when he returned to Paris. The years in Russia were successful ones with Cendrillon chosen for the grand opening of the Bolshoi Theatre in 1825 and his previous ballet Alphonse et Léonore ou l'amant peintre was revised and distributed into three acts instead of one for further performances.

Sor gained fame also as a guitarist and in St. Petersburg he performed for the Imperial family and was in close contact with them. So much so, that when the Tsar Alexander I died on 1st of December in 1825, it was from Sor the Funeral March was commissioned for the Tsar's Funeral processions in March 1826. Sor arranged this March for piano solo for the Empress Alexandra, wife of the new Tsar Nicholas I, and received censor's permission to publish it several days before the funeral took place. This arrangement and also the one for piano four-hands were published and made available for sale in St. Petersburg and Moscow. After that this magnificent work was forgotten and lost, until it was found again from the Russian archives in the early 1990s...

<https://youtu.be/aQmqH6IqekE?list=PLETJzegkWdsF8S0QwmcslhSVatQQZ044L&t=1>

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The Shimmering Unearthly Bodies of Larval Fish



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

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Shoes for the Denizens of Rodeo Drive



<https://youtu.be/LPLWTT3ZVMo>

Fashion for the Tinseltown elite.

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The Quiet Disappearance of the Safe Deposit Box OBJ



*A man accessing his safe deposit box in the 1930s
(H. Armstrong Roberts/ClassicStock/Getty Images)*

Once revered as the safest way to store physical valuables, safe deposit boxes are now being phased out by major banks. The move is already starting to backfire.

By Michael Waters

In the opening sequence of *The Bourne Identity*, a young Matt Damon wakes up with no idea who he is. All he has is a code — the account number for a safe deposit box in Switzerland.

At the bank, an attendant leads him into an elaborate steel vault, where he's presented with a safe deposit box. Inside are the first clues to his identity: a gun, a watch, stacks of cash, and a series of passports under different nationalities, including one bearing the name "Jason Bourne."

Over the years, safe deposit boxes have become iconic — a staple not only of the banking industry but also of heist movies and spy flicks. *Inside Man*, *The Dark Knight*, *Casino*, and *The Da Vinci Code* all feature pivotal safe deposit box scenes.

In Hollywood, safe deposit boxes are so prominent, in fact, that it's easy to miss the seismic changes racking the industry: In the wake of the 2008 financial crisis, big banks have quietly abandoned the safe-deposit business.

Both HSBC and Barclays have shuttered their safe-deposit services in many countries, and Capital One joined them in 2016. Most recently, this past September, JPMorgan Chase announced it was phasing out its safe deposit boxes, too. In the coming decade, other major banks seem likely to join them.

What went so wrong?

The rise of the safe deposit box

The Civil War was just days away when a New York businessman named Francis Jenks stumbled on an idea that would change the face of the banking industry.

In March 1861, while on a trip to England, Jenks — the moneyed son of a Harvard professor — began to wonder what he was supposed to do with his valuables while he was out of town.

He decided to create a company that would store items for New York's "fashionable inhabitants," who wanted to, say, decamp to Europe for the summer.

Rather than worry about burglaries, Jenks suggested that the urban elite store their books, wills, jewelry, tea sets, and silver with him.

He opened a massive, marble building in lower Manhattan, complete with a thick steel vault. Inside, he offered 500 safe deposit boxes to customers.

To ensure the safety of the boxes, Jenks required two keys to unlock a box: one key for the customer and one key for his employees. Guards armed with muskets stood in front of the building at 146 Broadway through the night.

He called it the Safe Deposit Company of New York.

It was the first company of its kind — and as the Civil War broke out, demand soared. Bold-faced names like the Vanderbilts, the Guggenheims, the Roosevelts, and more began storing their valuables with Jenks. Hetty Green, the millionaire businesswoman, maintained a private vault so big that it could fit a desk inside of it.

It was such a success that copycat safe deposit box companies began proliferating across the US, with names like the Mercantile Safe Deposit Company and the Lincoln Safe Deposit Company.

While the first safe-deposit companies were stand-alone organizations, dedicated solely to safekeeping, major banks soon got involved. By the early 20th century, nearly every bank in America had a safe-deposit arm.

The tricky economics of safe deposit boxes

In the decades after Francis Jenks created the Safe Deposit Company of New York, the safe deposit box industry had a clear internal logic.

Stockpiles of gold and jewelry were a staple among the wealthy, and so were wills and stock ownership documents. In an era in which fires were common and home security systems weren't very complex, the choice was simple: store your valuables with your local bank.

People began dumping all kinds of prized possessions into safe deposit boxes, including:

- A Honus Wagner baseball card that later sold for \$220k
- An Abraham Lincoln campaign button
- Purple Heart medals
- A supposedly forged Van Gogh painting
- An NFL ticket from the 1950s
- Sets of false teeth
- Albert Einstein's eyeballs (once owned by the physicist's eye doctor)

Even famous authors used safe boxes: Harper Lee's lost book *Go Set A Watchman* was found in her safe deposit box, potentially alongside other unpublished works.

"We end up insuring first-edition book manuscripts, movie paraphernalia — it's kind of all over the place," said Jerry Pluard, a former lawyer who now sells insurance policies on safe deposit boxes through his company Safe Deposit Box Insurance Coverage. "Certain clients are insuring Olympic medals with us."

Yet the economic logic of safe deposit boxes quickly began to erode. In the early 1900s, bank executives confronted a troubling problem. Safe deposit boxes weren't actually raking in big profits.

In 1941, one industry expert admitted, "It is not inconceivable that a vault might be 100 per cent rented and still be operating at a loss, due to low rental rates."

One problem was that the cost of building a vault for safe deposit boxes put companies in the red almost immediately.

These vaults are made with heavy concrete and layers of reinforced steel, and they are built to withstand the unimaginable. One bank vault, made by the American company Mosler Safe Company, survived the nuclear bomb in Hiroshima in 1945.

But the ability to withstand a nuclear explosion comes at an incredible financial cost.

Safe-deposit vaults are "the most expensive square footage you can put in a branch location," said David McGuinn, who has educated banks on safe deposit boxes through his consultancy Safe Deposit Specialists for over thirty years.

Though some banks have tried to compensate for the costs by upping their rates, it rarely works for long. In the 1980s, a crop of new safe-deposit businesses began charging as much as \$600 per year for boxes that customers could get for \$60 elsewhere. Many of these quickly crashed and burned.

The issue? Competition from home security. If bank boxes are much more expensive than, say, a home safe or a home security system, customers will opt for the latter.

Safe deposit also came with a handful of legal headaches. Banking industry executives fretted over hypothetical scenarios about when they would let a customer in to see their valuables.

In 1937, Bankers' Magazine asked if bank staff should let a customer in if she or he arrived at a bank drunk and intended to take out valuables. Experts couldn't agree.

But banks made peace with these financial and legal quandaries. The point of safe-deposit services, they decided, was not to turn a profit on safekeeping itself. Instead, banks saw them as a way to build customer loyalty.

"It's the hardest account for a consumer to close," said McGuinn.

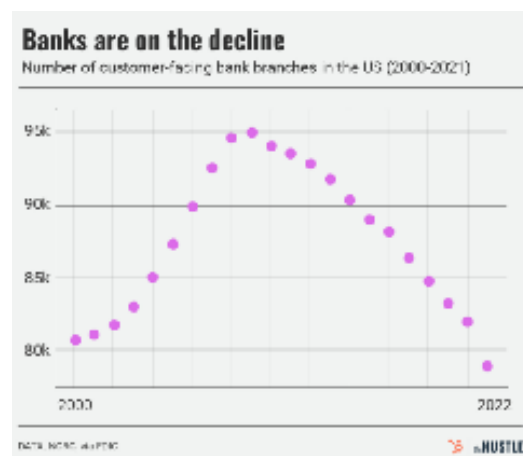
Unlike with a regular deposit account, you generally can't just close a safe deposit box online or over the phone. You have to show up to the bank branch in person with the keys, fill out paperwork, and then empty the contents of your box.

Shuttering a safe deposit box is such a hassle, in fact, that if a customer signs up for one, "it's an incentive for these people to stay with the financial organization," according to McGuinn.

The final straw for the big banks

The economics of safe deposit boxes started to break, at least for the major banks, as the cost of commercial real estate ballooned. The number of bank branches peaked around the time of the 2008 recession, and have plummeted ever since.

Between 2017 and 2021 alone, the number of bank branches in the US fell by 9%. With big banks focusing on fewer — and smaller — physical locations, safe deposit boxes were among the first to go.



Zachary Crockett / The Hustle

At the same time as bank branches are disappearing, more people are turning to digital assets. New asset classes, like crypto, are supplanting physical commodities, and a

growing number of people have digital wills that don't need to be tucked in a safe deposit box.

The ultra-wealthy, meanwhile, seem to have abandoned traditional bank vaults. In recent years, high-end, independent safe-deposit companies have popped up to court the world's wealthiest consumers.

Rather than store their valuable art in a box at a downtown bank, rich people can turn to ultra-secure, steel-lined vaults built in converted mansions. One vault, offered by companies like International Bank Vaults (IBV), is accessed by a corporate Rolls-Royce. Guests then scan their fingerprints and irises before stepping inside.

"It's a relic. The business is fading away," the executive director of the New York State Safe Deposit Association said in 2013 — shortly before the trade group itself folded.

An ironic legal quandary has been equally detrimental to the safe-deposit business: Safe deposit boxes aren't actually safe.

FDIC insurance began in 1933 as a part of the New Deal, around when the safe-deposit industry was at the height of its power. But unlike regular deposit accounts, safe deposit boxes are not FDIC-insured — meaning that if a valuable item disappears or is destroyed, safe-deposit customers have little way to get their money back.

That lack of protection is a hassle for customers, but also for banks themselves. They often face lawsuits about lost or misplaced items, which can be expensive to settle.

Through his consultancy, "I'm talking to bankers at Wells Fargo and Bank of America," said McGuinn. He often hears grumbling about the state of the business. The feedback he gets from the big banks is simple: "They don't really want this service."

Though no industry group tracks safe deposit boxes nationwide, Pluard thinks it's safe to say that the number of available boxes has been dropping.

He conducted an informal study of the industry in 2011, when he was preparing to launch his safe deposit box insurance company. At the time, he estimated that about 40 million safe deposit boxes had been rented.

Pluard guesses that there has been "probably a 25% decline" in the number of rented boxes over the last decade.

The accidental safe-deposit shortage

For big banks, operating safe deposit boxes no longer makes financial sense. But as the likes of Chase and Capital One exit the safe-deposit business, they have accidentally created an intractable problem for consumers.

People still want safe deposit boxes — and now it's nearly impossible to get one.

“While the total amount of boxes available to be granted is shrinking, the usage isn’t shrinking as fast,” Pluard said. In cities, “there are shortages of large boxes. People on lists wait years to get a box, whether it’s in New York, whether it’s in Miami, whether it’s Charlotte.”

Many regional banks and credit unions are promoting their safe-deposit services, mostly because it aligns more closely with their goals. Big banks are pushing people toward increasingly elaborate mobile banking apps. Credit unions, on the other hand, deal with customers face to face.

But if you don’t have an account with a local credit union, you might be out of luck.

For people with valuables they want to store at a bank, finding safe deposit boxes to rent can feel a bit like the Hunger Games.

In New York City especially, it’s not unusual to visit multiple bank branches — and find that none has the capacity for new safe-deposit customers.

On Yelp, one user reported walking into a bank in Brooklyn. When he said he wanted a box, he was dumbfounded by the response: The wait, the teller told him, would be about nine years.

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Bud Anderson Promoted To Brigadier General

By Kate O'Connor for AVweb



Image: U.S. Air Force/Nicholas Pilch

World War II triple ace Clarence E. "Bud" Anderson received an honorary promotion to the rank of brigadier general during a ceremony at the Aerospace Museum of California last Friday. Anderson flew 116 combat missions during WWII and is credited with shooting down 16 ¼ enemy aircraft. He joined the U.S. Army in 1942 and retired from the Air Force in 1972 at the rank of colonel. Anderson went on to join the McDonnell Aircraft Company, serving as manager of the company flight test facility at Edwards Air Force Base for 12 years.

"To all the young people that have the ambition to join the Air Force, have at it!" Anderson said during the ceremony. "You can be what you want to be and you should know that when you like what you do, you can excel, be a better person at your job to do it better."

At 100 years of age, Anderson is currently the oldest living American fighter ace and the last surviving WWII triple ace. Among the decorations he has received are two Legion of Merit awards, five Distinguished Flying Crosses, 16 Air Medals and the Bronze Star Medal. Anderson flew over 130 different types of aircraft and logged more than 7500 flight hours over the course of his flying career.

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BENEFITS OF A GOOD VOCABULARY!

I recently called an old Engineering buddy of mine and asked what he was working on these days.

He replied that he was working on "Aqua-thermal treatment of ceramics, aluminum and steel under a constrained environment."

I was impressed until, upon further inquiry, I learned that he was washing dishes with hot water under his wife's supervision.

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Your Cow Having Trouble Sleeping? Here May Be the Answer



<https://youtu.be/L2cAtaufSxo?t=1>

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Alan King in His Prime



https://youtu.be/PypsMk_0QxY?t=102

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Earth's Tectonic Plates



<https://www.visualcapitalist.com/cp/explainer-earths-tectonic-plates/>

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Negroni

Bill Warner Scores again.



Here's one more, only if you think it appropriate. Don't want to encourage anyone to be drinking who shouldn't, and this is a powerful drink. That said, I think the Negroni is certainly one of the very finest cocktails ever invented, and here's a good basic formula for one -- including my own modification of club soda in place of prosecco. My drinking

habit is pretty moderate these days, so I tend to shy away from drinks like Negronis (although I somehow manage to lap up about three gallons of the stuff whenever we happen to visit Italy). So, for moderate drinkers, be aware.

Ingredients

- Ice
- 1 ounce gin
- 1 ounce Campari
- 1 ounce sweet vermouth
- 1 ounce freshly squeezed orange juice
- 1 ounce sparkling white wine or prosecco (or substitute club soda).
- Orange slice for garnish

Instructions

Stir gin, Campari, sweet vermouth and orange juice in a mixing glass with ice until chilled. Strain that into a chilled cocktail glass filled with ice. Top it all off with the sparkling wine and garnish with a slice of orange.

Warner's warning: sip these guys cautiously. Negronis are genuinely nerve-shattering concoctions, rendered all the more deadly by the quality of being utterly delicious. So... in the interest of a kinder, gentler Negroni, I dispense with the sparkling wine, opting instead for a splash of club soda, which I believe makes the drink even tastier.

And who'd a thunk it? Not only is *Ciro Hurtado* a great composer, but he appears to be a fairly decent bartender to boot. Here's a video of his Negroni technique.

<https://www.youtube.com/watch?v=8uoxizGX0Zk>

<https://en.wikipedia.org/wiki/Negroni>

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Is a Park Bench in Boise the Future of Orange Bag Plastics?



When the Hefty EnergyBag recycling program was announced in Boise about three years ago, it asked residents to separate those hard-to-recycle No. 4-7 plastics into orange bags.

The bags were shipped to a Utah company which planned to chemically deconstruct the plastic into diesel fuel. Equipment problems quickly forced the end of that destination, and ever since, the bags have been sent to be incinerated, producing power for concrete production in Utah.



byFusion

About 20% of Ada County residents dutifully fill orange bags with about 30 tons each month of hard-to-recycle, No. 4-7 plastics: foam, bubble wrap, plastic grocery bags and most food containers. After nearly two years of incinerating the bags as fuel for concrete production, a new company wants to turn our plastic scraps into building materials.

The Hefty EnergyBag program worked with the city of Boise and Los Angeles-based ByFusion to establish a pilot program last year, diverting several truckloads of plastic away from the incinerator and into a machine called a ByBlocker.

In go the orange bags, and out comes a 22-pound multi-colored plastic block which bears a strong resemblance to a lego.

"It's a 16"x8"x8" unit," ByFusion CEO Heidi Kujawa describes. "The exact same physical dimension as a hollow cement block, but it's about 10 pounds lighter."

ByFusion's machines use a combination of steam and compression to create the blocks, which they say have an equal insulating R-value to concrete blocks, but a much better K-value, which means the blocks don't absorb and radiate heat like concrete does.

Each is a kaleidoscope of single-use plastic.

"Every block is uniquely different. Not in the integrity of the block or how it performs, but in its composition and how it looks. We don't add any colors to it," Kujawa said.

The bricks are solid, and the sides, while flat, are not smooth. ByFusion's process doesn't require sorting or cleaning.

That's a huge benefit considering that recycling's biggest obstacle is often that consumers put inappropriate or dirty items into recycling bins.

Boiseans can see the blocks for themselves at Manitou Park, where a base for a new bench has been constructed from the plastic blocks. The mix of materials is evident, with remnants of yogurt containers, plastic utensils, and even a fully readable barcode visible.

I noticed a piece of corrugated cardboard in another block, soaked from the recent snow. It was ready to flake off the block and join several pieces of loose plastic on the ground. Though perhaps messy, the rough finish doesn't seem to take away any of the overall durability.

Kujawa said ByFusion's proprietary carbon-neutral process doesn't melt the plastic to make smooth edges. While many of the recycled block pilot project uses are proposed for outdoors — landscaping, dumpster enclosures or sound walls — ByFusion's online presence has mainly promoted the block's potential for regular construction use.

"It's intended to be clad, so it's smooth enough that drywall or siding or tile can be applied to it without issue," Kujawa said.

While the city participates in the program, Boise doesn't choose exactly what happens to the plastics residents recycle. The EnergyBag program does that, one of the reasons the orange bags are more costly than regular trash bags. But the thought of keeping some or all of the single-use plastics for reuse locally is exciting for Peter McCullough, Materials Management Program Manager with the city of Boise.

"That's really sort of the ultimate goal of any of our recycling," McCullough said.

"There's not the transportation costs and there's not the transportation greenhouse gases. That's really what we're always looking for, and it's not easy."

He said the partnership with ByFusion doesn't cost the city anything, but future expansion of the pilot project will depend on whether there's a market for the blocks.

"Our role is to try it out," he said. "We're going to try out some of the initial projects and let people look at them and hopefully inspire the public or other businesses to give it a shot, and see the different things that they can do with it."

If the pilot does expand, the city does not plan to host the ByBlocker machines on city property. McCullough compared ByFusion to Western Recycling — both are private companies that take recyclable materials and resell them or create new items.

Boise Parks and Rec will complete the bench in Manitou Park next month, and blocks made during the pilot project will be used in other public installations in and around Boise this spring. ByFusion is also piloting its technology in Tucson, Ariz., Hawai'i and Guam.

By Troy Oppie

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Single Black Female



This has to be one of the best singles ads ever printed. It is reported to have been listed in The Atlanta Journal.

SINGLE BLACK FEMALE seeks male companionship, ethnicity unimportant. I'm a very good-looking girl who LOVES to play. I love long walks in the woods, riding in your pickup truck, hunting, camping, and fishing trips, cozy winter nights lying by the fire. Candlelight dinners will have me eating out of your hand. I'll be at the front door when you get home from work, wearing only what nature gave me. Call (444) 444-4444 and ask for Daisy, I'll be waiting..

Over 15,000 men found themselves talking to the Atlanta Humane Society about an 8-week-old black Labrador retriever. (Men are so easy).

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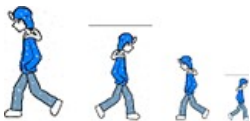
Some Idle Thoughts.....

- The ability to speak several languages is an asset, but the ability to keep your mouth shut in any language is priceless.
- Be decisive. Right or wrong make a decision. The road is paved with flat squirrels who couldn't make a decision.
- Happiness is not having to set the alarm clock.
- When I get a headache I take two aspirin and keep away from children just like the bottle says.
- Just once, I want the prompt for username and password to say, "Close enough."
- Becoming an adult is the dumbest thing I've ever done.
- If you see me talking to myself, just move along. I'm self-employed. We're having a meeting.
- "Your call is very important to us. Please enjoy this 40-minute flute solo".
- Does anyone else have a plastic bag full of plastic bags, or is it just me?
- I hate it when I can't figure out how to operate the iPad and my tech support guy is asleep. He's 5 and it's past his bedtime.
- Today's 3-year-olds can switch on laptops and open their favorite apps. When I was 3, I ate mud.
- Tip for a successful marriage: Don't ask your wife when dinner will be ready while she's mowing the lawn.
- So, you drive across town to a gym to walk on a treadmill?
- I didn't make it to the gym today. That makes five years in a row.
- I decided to stop calling the bathroom "John" and renamed it the "Jim". I feel so much better saying I went to the Jim this morning. Old age is coming at a really bad time.
- If God wanted me to touch my toes, He would've put them on my knees.
- Last year I joined a support group for procrastinators. We haven't met yet.
- Why do I have to press *one* for English when you're just going to transfer me to someone I can't understand anyway?

Now, I'm wondering . . . did I send this to you, did you send it to me or have I only sent one copy?

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My Walking Thoughts



For New Years Day

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My One Fervent Hope for 2023

We've got a reprieve from all the election hyperbole—what an opportunity--so let's be friends for the entire twelve months. Who knows, if we do a really good job at it, perhaps 2024 will not be a total write-off.

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