**Buy American**

Turns out many well-known American brands are no longer American-owned.

When you spend your hard-earned dollars hoping to support the good ol’ US of A, you might actually be lining the pockets of a giant conglomerate based in another country.

To help you figure out who owns what, here’s a list of 25 “American” companies that are now under foreign control. The question on everyone’s mind is how far are you willing to take the cancel culture? Neil Young took it so far, he cancelled himself.

There’s nothing more American than sipping a crisp Budweiser beer, right? Well, not anymore.

While Budweiser is still portrayed as the beer of the Yankees, it’s actually owned by Belgian beer conglomerate Anheuser-Busch InBev, a company that also owns the brands Corona, Stella Artois, Hoegaarden, Beck’s, Goose Island and Leffe.

The Busch family had to part ways with Budweiser in 2008 in a $52 billion sale. Many Busch family members resisted selling, but since the family owned only 5 percent of shares at the time, they had no choice — especially since Warren Buffett, one of Anheuser-Busch's top shareholders, supported the InBev takeover.

Home of the Whopper, Burger King originally started as “Insta-Burger King” in Jacksonville, Fla., in the 1950s. The brand has changed hands several times since then.

In 2010, private equity firm 3G Capital purchased BK for $3.26 billion. And in 2014, a $12.5 billion merger combined BK with Tim Hortons to form the Canadian fast-food company Restaurant Brands International.

3G Capital is still pulling the strings, attempting to grow the world’s leading restaurant brand. They have since added Popeyes to their portfolio and enjoy tax savings since the move across the border to Canada.

Despite its (now slightly misleading) name, American Apparel is not an American brand. Famous for its “Made in the USA” slogan, the retailer once claimed to be the largest clothing manufacturer in the U.S.

Times have changed.

In 2017, the Canadian clothing company Gildan Activewear purchased American Apparel for $88 million, two years after it filed for bankruptcy.

Since then, the “Made in USA” tags have disappeared from the inside of garments, and now the company uses the slogan “Ethically Made — Sweatshop Free.”

Holiday Inn was born in 1952 in Memphis, Tenn., after Kemmons Wilson, the founder, struggled to find an affordable place to stay while on vacation.

Soon after, the midscale hotel brand won a reputation for its balance of comfort and value. But in the late 1980s, demographic shifts and changes in the competitive arena led the company to start losing market dominance and they decided to sell.

In a complex transaction lasting from 1988 to 1990, Bass PLC, the makers of Bass beer, took over. They later sold the beer company and formed the InterContinental Hotels Group (IHG), the British company that now owns Holiday Inn.

Ever since the first store opened in California in 1967, Trader Joe’s has been known for its high quality and hard-to-find brands.

The original Trader Joe, Joe Coulombe, purposely stocked discontinued products in order to compete with the dominant 7-Eleven.

In 1979, Theo Albrecht, the owner of the German supermarket brand Aldi Nord, bought out Trader Joe’s, but the tradition of unique, high-quality products continued.

Ben & Jerry’s ice cream is as American as it gets. Or at least, it used to be.

After taking a $5 ice-cream-making course, two BFFs, Ben Cohen and Jerry Greenfield, started a humble ice cream parlor in 1978.

It must have been a good course, because the quality ice cream, heavy mix-ins and clever flavor names were a hit.

The brand exploded and enjoyed decades of success. But in the late 1990s, stock prices started to slip. After refusing offers to sell out to Dreyer’s Grand Ice Cream, they finally caved and sold to the Dutch-British consumer goods company Unilever for $325 million in 2000.

If you think you’re supporting the U.S. by catching a flick at AMC (American Multi-Cinema) Theatres, you’d be wrong.

In 2012, Dalian Wanda — a Chinese conglomerate run by real estate tycoon and billionaire Wang Jianlin — took over AMC for $2.6 billion.

Dalian Wanda was the majority shareholder for almost 10 years. But in 2021, when AMC stock prices skyrocketed around the time of the Reddit GameStop incident, Wanda sold the majority of its shares.

According to Yahoo, AMC now has about 3 million individual shareholders, and none of them owns more than 10 percent of the company.

At its peak, Hoover was the Kleenex of vacuum cleaners in America.

Originally called the “suction sweeper,” the Hoover vacuum was born in 1907 when an allergy-ridden janitor got fed up sweeping dust into the air. Since its humble beginnings, Hoover has expanded into a leading multinational floor-care company.

Hoover has had multiple owners over the past century. In 2007, the company changed hands from Whirlpool Corp. to Hong Kong-based Techtronic Industries for $108 million.

At the time, Hoover was struggling due to high costs and lagging innovation. It also fit nicely into Techtronic’s’ vacuum brand portfolio — which includes Dirt Devil and Regina — and allowed Whirlpool to refocus on its main offering, home appliances.

Forbes is one of the most-read business publications in the U.S., but it’s no longer entirely American-owned.

After almost 100 years of operating independently, Forbes was taken over in 2014 by Hong Kong’s Integrated Whale Media Investments. The exact sale price was not disclosed, but Forbes was valued at $475 million at the time.

Although Forbes has grown since the Hong Kong company took over, several of its contributors say its China-related content has become biased and censored, according to the *Washington Post.*

Hellmann’s mayonnaise — also known as Best Foods in some parts of the country — is the best-selling mayonnaise in the United States. The company started in New York City in 1905 and stayed on American soil for 95 years.

In 2000, Unilever, the same Dutch-British company that acquired Ben & Jerry’s ice cream, snatched up Hellmann’s for $20.3 billion.

Today, the famous mayonnaise is still sold under two separate brand names — Hellmann’s east of the Rockies, and Best Foods to the west.

Dirt Devil is another famous American-bred vacuum company that has been around for more than a century.

The brand is now synonymous with “vacuum cleaner,” and the company’s hand-held model was once the top-selling such model in the U.S.

But in 2002, Dirt Devil moved to Hong Kong. Techtronic Industries, the same company that later bought out Hoover, started its vacuum-cleaner-company-acquiring rampage by purchasing Dirt Devil for $105.5 million.

According to PR Newswire, after buying these vacuum companies, Techtronic became the largest floor care business in North America.

General Electric (GE) has been supplying America with home appliances since the late 1800s. From the first patented electric fan to refrigerators, irons, sewing machines and more, GE is an appliance brand widely trusted by Americans.

But most Americans don’t realize that GE’s appliance business was sold to a Chinese-run company.

As time passed and electricity evolved, so did GE. The company grew into more than just an appliance brand and started branching into software applications.

Due to this shift in focus, it sold the appliance business to Haier, a Chinese company, for $5.4 billion in a deal that was finalized in 2016. GE Chairman and CEO Jeff Immelt explained that saying goodbye to the appliances division would allow them to be a more competitive company in the digital-industrial space.

Firestone is a (formerly) American tire company that has been supplying Americans with car tires since 1901. Harvey Firestone, the company’s founder, was even a buddy of Henry Ford and produced tires for the Model T.

But in 1988, Firestone moved overseas. To prevent an unsolicited takeover by the Italian tire company Pirelli, Firestone agreed to a $2.6 billion acquisition by Tokyo’s Bridgestone Corp.

This purchase made Bridgestone the second-largest tire manufacturer in the United States. Today, Bridgestone is the largest tire manufacturer worldwide.

Gerber baby food began in 1927 in the small town of Fremont, Mich., when Dorothy Gerber’s pediatrician recommended that she strain solid foods for her baby. The Gerbers already ran a canning business, and they quickly saw the business opportunity.

Since then, Gerber has grown to dominate the baby food market in the United States.

In 1994, Gerber combined forces with Swiss-owned Sandoz Ltd. to expand the brand internationally. Later, in 2007, Nestlé, another Swiss company, took over in a $5.5 billion acquisition.

Originally built in 1893, then rebuilt in 1931, the Waldorf Astoria is an iconic hotel that takes up an entire city block in Manhattan. In those days, it was the largest hotel in the world.

Today, parts of it are considered official New York City landmarks. Yet the hotel itself is Chinese-owned.

In 2014, the Chinese company Anbang Insurance Group purchased it for $1.95 billion, making it the most expensive hotel sale in history at the time.

In 2018, the Chinese government seized control of the hotel for a year. So much for an American historical landmark.

International Business Machines Corp. (IBM) got its start in the late 1800s producing tabulation equipment used in the 1890 U.S. census. For the first 30 years of business, it operated under an equally tongue-twisting name — the Computing-Tabulating-Recording Company.

As technology evolved, so did IBM. In the 1960s, when computers weighed more than adult humans, IBM was the largest computer manufacturer in America (and the world).

But as computers shrank in size and were marketed to consumers, IBM struggled to keep up. Finally, Lenovo, a Chinese company, bought its PC business for $1.25 billion in 2005.

Legendary Entertainment Group is a giant media company most recognizable for its knot logo that appears at the beginning of such films as *Jurassic World, The Hangover* and *Inception.*

In 2016, this American company changed hands and is now owned by China’s Dalian Wanda Group. The $3.5 billion acquisition makes Dalian Wanda, a real estate and investment conglomerate, one of the biggest international entertainment companies to date.

In addition to owning China’s largest movie theatre company, Wanda also picked up American-owned AMC Theatres in 2012. So not only does Wanda own the media company that produces big-budget flicks, but it also owns the theatres where everyone goes to watch them.

Popsicle is so popular that the brand name now has its own dictionary definition.

Founded in California in 1924, this American brand refreshed consumers for 65 years before selling to Good Humor, which is now a subsidiary of Unilever, the Dutch-British consumer goods company.

Even though the word “popsicle” found its way into the dictionary and has essentially replaced the generic term “ice pop,” it is still a trademarked term. That means Unilever has the unfortunate duty of protecting it, and it regularly sends out trademark-infringement letters to ice pop startups like People’s Popsicles.

Motorola, founded in Chicago in 1928, is credited with blessing America (and the world) with several inventions — the first car radio, walkie-talkie and mobile phones.

As Motorola grew, the company became more complex. To keep things simple for investors, it split into two firms in 2011: Motorola Mobility and Motorola Solutions.

Motorola Mobility, the arm focused on mobile devices such as smartphones and tablets, was taken over by China’s Lenovo for $2.9 billion in 2014.

The John Hancock Life Insurance Company was founded more than 150 years ago in Massachusetts. The 1850s were notorious for dishonest business dealings, so to instill trust in the brand, its creators named their new company after the Massachusetts-native founding father.

Their strategy worked, as John Hancock is the only life insurance company from that era that still exists.

But it’s no longer an American company. In 2004, the Canadian insurance company Manulife Financial Corp. acquired John Hancock for $15 billion, making it the largest Canadian cross-border transaction at the time.

The year 1918 was an exciting time in Indiana — a local startup, Guardian Frigerator Company, had just released the world’s first self-contained refrigerator (just in time to keep those Popsicles cold in 1924).

Soon after, the company was acquired by General Motors and renamed Frigidaire, which later gained recognition for producing quality air conditioners, washers and dryers.

In 1979, General Motors passed Frigidaire over to Ohio-based White Sewing Machine Company, which later sold it to Electrolux, a Swedish firm.

Saks Fifth Avenue is an American luxury department store chain that was established in Manhattan nearly 100 years ago. The original store offered top-notch customer service and sold high quality clothes. It’s now considered a New York landmark.

Today, it has 40 stores across North America, and despite changing ownership several times over the past decade, the store’s luxury standards remain.

In 2013, Canada’s oldest company, the Hudson’s Bay Company, bought Saks Inc. from its parent company, Proffitt’s Inc., for $2.9 billion.

**Ballot Mules**

You might think the 2020 Election is over. Oh, far from it. We have 9 months to decertify Virtual Joe and his gang of criminals. And the truth dam is about to break. True the Vote may have finally cracked the code behind the undercover massive voter fraud in the 2020 presidential election.

It's apparently through the use of "mules" – or delivery people – who dropped off harvested ballots into absentee-ballot boxes like one in Georgia. True the Vote, a non-partisan effort, says they have similar cases from five other contested states.

Advertisement - story continues below

Former President Donald Trump thanked Catherine Englebrecht, founder of True the Vote, who was sitting in the crowd at his rally in Conroe, Texas. Trump explained Englebrecht and her team uncovered "massive illegal ballot harvesting and other forms of ballot fraud, the scheme with 2,000, they call them ballot 'mules,' these are people, they call them 'mules,' people – and they walk in early in the morning with thousands and thousands of ballots, and they stuff the ballot boxes in Georgia and other states."

"And they [True the Vote] have it on tape – now all they have to do is release the tape."

*BREAKING! GEORGIA!🚨 Video appears to show illegal ballot harvester in Gwinnett County on Oct 12, 2020! He fans out ballots, takes a photo, & places them in the dropbox. It's been reported that illegal ballot harvesters were paid $10 per ballot, & had to show proof.*[*@RealAmVoice*](https://twitter.com/RealAmVoice)[*pic.twitter.com/dEejRiSrX7*](https://t.co/dEejRiSrX7)

*— Heather Mullins - Real America's Voice (RAV-TV) (@TalkMullins)*[*January 29, 2022*](https://twitter.com/TalkMullins/status/1487299420752334848)

Advertisement - story continues below

The video shows the ballots being fanned out before a man takes a photo and places the ballots in the dropbox. It's been reported other "mules" got paid $10 per ballot and had to show proof.

True the Vote has compiled evidence of organized ballot tracking in six states. In Georgia, the group alleges there were 242 traffickers who made 5,662 trips to ballot drop-boxes between the early morning hours of midnight and 5 a.m., "potentially unloading hundreds of thousands of illegally harvested ballots over the course of several weeks," according to [Citizens Free Press](https://citizenfreepress.com/breaking/true-the-vote-releases-first-video-of-illegal-ballot-trafficking-in-georgia/).

**We are Not Alone**

Do you think of **"Life on Mars?"** as not just a song by David Bowie but as a legitimate question? Is "I want to believe" not just another pop culture quote to you but a personal conviction? Then, [as Statista's Florian Zandt details below](https://www.statista.com/chart/26707/share-of-us-respondents-belief-in-other-intelligent-life-in-the-galaxy/), you're a **part of the majority of people in the United States at least.**

In a [survey conducted by scientists at the transnational Outer Space Institute](http://www.outerspaceinstitute.ca/outerspacesurvey2022.html) (OSI) at the University of British Columbia and the Angus Reid Forum USA, **71 percent of respondents claimed they believe in intelligent life in the Milky Way**. As the chart shows, the hardline skeptics make up only a fraction of the representative sample surveyed.



*You will find more infographics at*[*Statista*](https://www.statista.com/chartoftheday/)

While the OSI's survey mainly revolved around militarization of space, satellite launches and orbital debris, it also included some more colorful questions. For example, **26 percent of respondents thought that current**[**NASA missions**](https://www.statista.com/topics/5049/space-exploration/)**were not ambitious enough and that humanity should aim to travel to Mars**, while 30 percent saw the Moon as a viable target. Interestingly, **71 percent wouldn't go on a trip to Mars when offered a one-way ticket.**

When pressed further on life forms in space, 75 percent thought it was likely to detect living microorganisms in our solar system and 77 percent saw a high-to-medium probability of discovering living microorganisms in our galaxy.

The issue of satellite light pollution and debris in the Earth's orbit has become more pressing in the last couple of years. According to ESA estimates, **30,000 pieces of debris are floating through orbit as of now,** and Elon Musk's company SpaceX has been launching more than 1,700 [Starlink satellites](https://www.statista.com/topics/7707/satellite-internet/) over the course of two years. In 2022, Starlink satellites alone are likely to surpass the total number of 2,000 satellites in orbit in 2019.

**Regular Exercise**

**Physical activity can do wonders for the body.** Exercise can trim weight, chisel muscles, and strengthen the lower back, among many other benefits. Less overt, but no less consequential, physical activity can also buff up your brain. Science is increasingly revealing that the brains of those who regularly work out can look very different compared to the brains of people who don't.

[24 Hour Fitness Weighted Group Exercise Class (Photo: 24 Hour Fitness)](https://www.zerohedge.com/s3/files/inline-images/566388_6_.jpg?itok=0zbVdhQu)

**Changes can start to occur in adolescence**. [Reviewing the scientific literature in 2018](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5973814/), researchers from the University of Southern California found that **for teens aged 15-18, regular exercisers tended to have larger hippocampal volumes as well as larger rostral middle frontal volumes compared to healthy matched control teenagers**. The [hippocampus](https://en.wikipedia.org/wiki/Hippocampus#Function) is most commonly associated with memory and spatial navigation, while the rostral middle frontal gyrus has been [linked to](https://openscholarship.wustl.edu/art_sci_etds/714/) emotion regulation and working memory. Studies suggest that these structural changes translate to improved cognitive performance and better academic outcomes.

**Exercise's brain augmenting qualities extend into adulthood**, even though the brain tends to be less 'plastic' (easily changed) as we get older. Rutgers University scientists beautifully demonstrated this [in a study published early last year](https://sasn.rutgers.edu/news-events/news/exercise-rewires-brain-be-more-flexible-only-those-right-genes):

The researchers recruited older African Americans, all previously sedentary, to complete twenty weeks of twice-weekly cardio-dance exercise classes held at local churches and senior centers. As compared to the control group comprised of community members of similar age and background who did not exercise, those in the program showed significant improvements in dynamic brain connectivity (or “neural flexibility”) in their hippocampus and surrounding medial temporal lobe, as measured using resting-state functional MRI.

[In another study](https://journals.humankinetics.com/view/journals/jpah/16/8/article-p637.xml), published in August 2019, **scientists looked at 45 sets of adult identical twins, who, within their pair, all differed greatly in physical activity levels. "More active co-twins showed larger gray matter volumes in striatal, prefrontal, and hippocampal regions, and smaller gray matter volumes in the anterior cingulate area than less active co-twins," the researchers found.**

The scientists also probed the twins' cognitive abilities.

"More physical activity may expedite preconscious processing of visual stimuli and, in somatosensory domain, improve selective attentional processing by dampening the strength of unattended deviant somatosensory signals," [they added](https://www.sciencedirect.com/science/article/pii/S0149763419306402).

The brain alterations do appear beneficial, but current twin studies are too small, and the participants too young, to find whether exercise-induced changes can actually reduce the risk of cognitive disorders or improve outcomes such as education or income.

Researchers have also tried exercise interventions on much older adults, even those with Alzheimer's disease, to see if physical activity could repair their stricken brains. In 2016, a team of scientists [recruited 68 older individuals](https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0170547) with probable Alzheimer's disease to determine whether moving more could help with their symptoms. Some subjects aerobically exercised for 150 minutes per week while others underwent a less rigorous control regimen of stretching and toning for 26 weeks. **Compared to the control group, the aerobic exercise group improved more on the Disability Assessment for Dementia at the study's conclusion**. Boosts to cardiorespiratory fitness were also linked to improvements in memory and reduced atrophy of the hippocampus.

Working out also augments the brains of otherwise healthy older adults. Getting thirty minutes of physical activity each day does seem to preserve brain volumes in adults over age 70 compared to sedentary individuals, [according to a study](https://www.dovepress.com/effect-of-5-years-of-exercise-intervention-at-different-intensities-on-peer-reviewed-fulltext-article-CIA) published in August of last year. Moreover, higher cardiorespiratory fitness was linked to lower levels of brain atrophy in the research.

[One way](https://theconversation.com/exercise-and-the-brain-three-ways-physical-activity-changes-its-very-structure-150203) exercise can induce changes in the brain is by increasing levels of the protein brain-derived neurotrophic factor (BDNF) in the blood, which is linked to neurogenesis. More BDNF may mean more new neurons in the brain. Regular exercise also increases the growth of additional blood vessels in the brain and helps maintain current ones, leading to boosted blood flow for the oxygen-hungry organ. Lastly, physical activity seems to keep microglia in good working order. Microglia "constantly check the brain for potential threats from microbes or dying or damaged cells and clear any damage they find," Áine Kelly, a Professor in Physiology at Trinity College Dublin [wrote](https://theconversation.com/exercise-and-the-brain-three-ways-physical-activity-changes-its-very-structure-150203) for The Conversation.

**Regularly moving one's body may be the closest thing there is to a**[**health panacea**](https://www.realclearscience.com/blog/2020/12/08/what_if_all_americans_exercised_regularly_651289.html)**, for both outside the skull and inside.**

**We Have a 'Sixth Sense' That Is Key to Our Wellbeing, But Only if We Listen to It**

JENNIFER MURPHY AND FREYA PRENTICE, THE CONVERSATION

23 JANUARY 2022

Most people are familiar with the five senses (touch, sight, hearing, smell, and taste), but not everyone knows that we have an additional sense called interoception.

This is the sense of our body's internal state. It helps us feel and interpret internal signals that regulate vital functions in our body, like hunger, thirst, body temperature, and heart rate.

Although we don't take much notice of it, it's an extremely important sense as it ensures that every system in the body is working optimally.

It does this by alerting us to when our body may be out of balance – such as making us reach for a drink when we feel thirsty or telling us to take our jumper off when we're feeling too hot.

Interoception is also important for our [mental health](https://www.nature.com/articles/nrn3950). This is because it contributes to [many psychological processes](https://www.sciencedirect.com/science/article/pii/S0149763421003456) - including decision making, social ability, and emotional wellbeing.

Disrupted interoception is even reported in many mental health conditions – including [depression](https://www.sciencealert.com/depression), anxiety, and [eating disorders](https://theconversation.com/understanding-body-signals-could-be-a-key-factor-in-eating-disorders-111559). It may also explain why many mental health conditions [share similar symptoms](https://www.sciencedirect.com/science/article/pii/S0149763421003456) – such as disturbed sleep or fatigue.

Despite how important interoception is to all aspects of our health, little is known about whether men and women differ in how accurately they sense their body's internal signals.

So far, studies that have investigated whether cisgender men and women (a person whose gender identity aligns with their biological sex) sense and interpret interoceptive signals from their heart, lungs, and stomach differently [have found](https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1469-8986.1993.tb03347.x) [mixed results](https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1469-8986.2009.00859.x). Finding out if differences exist is important, as it may improve our understanding of differences in mental and physical health.

To get a clearer picture, we combined data from 93 studies looking at interoception in men and women. We focused on studies that looked at how people perceive heart, lung, and stomach signals across a range of different tasks.

For example, some studies had participants count their heart beats, while others asked participants to determine whether a flashing light happened when their stomach contracted, or tested if they could detect a difference in their breath while breathing into a device that makes it more difficult to do so normally.

Our [analysis found](https://www.sciencedirect.com/science/article/pii/S0149763421005248) that interoception does in fact differ between men and women. Women were significantly less accurate at heart-focused tasks (and to some extent lung-focused tasks) compared with men. These differences do not seem to be explained by other factors – such as how hard participants tried during the task, or physiological differences, such as body weight or blood pressure.

Though we found significant differences across heartbeat tasks, results for other tasks were less clear. This might be because only a small proportion of studies have looked at lung and stomach perception. It might be too early to tell whether men and women differ in their perception of these signals.

**Mental health**

Our findings may be important for helping us understand why many common mental health conditions (such as anxiety and depression) are [more prevalent in women than men](https://www.sciencedirect.com/science/article/pii/S2215036616302632) from puberty onward.

Several theories have been proposed to explain this – such as genetics, hormones, personality, and exposure to stress or childhood adversity.

But because we know that interoception is important for wellbeing, it could be possible that [differences in interoception](https://psycnet.apa.org/record/2019-45521-001) may partly explain why more women suffer from anxiety and depression than men.

This is because [difficulties with interoception](https://www.sciencedirect.com/science/article/pii/S0149763421003456) can affect many areas, including emotional, social, and cognitive function, which are all known risk factors for many mental health conditions.

Knowing the differences in how men and women sense interoceptive signals may also be important for treating mental illness.

While [new studies suggest](https://www.sciencedirect.com/science/article/pii/S2589537021003229) improving interoception improves mental health, [studies also suggest](https://www.frontiersin.org/articles/10.3389/fnbeh.2020.00067/full?report=reader) that men may use interoceptive signals – for example from their heart – more than women when processing their emotions.

Other differences have also been reported, with [studies suggesting](https://www.sciencedirect.com/science/article/pii/S1053810016303221) that women pay more attention to interoceptive signals than men.

This could mean that treatments that target or seek to improve interoception may work better for some people, or that different techniques may work better for others. This is something future research will need to investigate.

But while we know these differences exist, we still don't know what causes them. Researchers have a few theories, including the distinct [physiological](https://psycnet.apa.org/record/2019-45521-001) and hormonal changes most men and women experience. It may also be caused by differences in how many men and women [are taught to think](https://www.researchgate.net/profile/Tomi-Ann-Roberts/publication/273218118_Toward_a_His_and_Hers_Theory_of_Emotion_Gender_Differences_in_Visceral_Perception/links/5902644e4585156502a303c6/Toward-a-His-and-Hers-Theory-of-Emotion-Gender-Differences-in-Visceral-Perception.pdf) about their emotions or interoceptive signals, like [pain](https://academic.oup.com/jpepsy/article/44/4/403/5273626?login=true).

Better understanding all the factors that affect interoceptive ability may be important for someday developing better treatments for many mental health conditions.

**Space-X Rocket to Crash Into the Moon**

A chunk of a SpaceX rocket that blasted off seven years ago and was abandoned in space after completing its mission will crash into [the Moon](https://www.sciencealert.com/moon) in March, experts say.

The rocket was deployed in 2015 to put into orbit a NASA satellite called the Deep Space Climate Observatory (DSCOVR).

Since then, the second stage of the rocket, or booster, has been floating in what mathematicians call a chaotic orbit, astronomer Bill Gray told AFP Wednesday.

It was Gray who [calculated the space junk's new collision course](https://www.projectpluto.com/temp/dscovr.htm) with the Moon.

The booster passed quite close to the Moon in January in a rendezvous that altered its orbit, said Gray.

He is behind Project Pluto, software that allows for calculating the trajectory of asteroids and other objects in space and is used in NASA-financed space observation programs.

A week after the rocket stage whizzed close to the Moon, Gray observed it again and concluded it would crash into the Moon's far side on March 4 at more than 5,500 miles per hour (9,000 kilometers per hour).

Gray appealed to the amateur astronomer community to join him in observing the booster, and his conclusion was confirmed.

The exact time and spot of impact may change slightly from his forecast but there is widespread agreement that there will be a collision on the Moon that day.

"I've been tracking junk of this sort for about 15 years. And this is the first unintentional lunar impact that we've had," Gray told AFP.

**'Time to start regulating'**

Astronomer Jonathan McDowell told AFP it's possible similar impacts have taken place unnoticed.

"There're at least 50 objects that were left in deep Earth orbit in the '60s, '70s and '80s that were just abandoned there. We didn't track them," he said.

"Now we're picking up a couple of them... but a lot of them we're not finding and so they're not there anymore," he added. "Probably at least a few of them hit the Moon accidentally and we just didn't notice."

The impact of the SpaceX rocket chunk weighing four tons on the Moon will not be visible from Earth in real time.

But it will leave a crater that scientists will be able to observe with spacecraft and satellites like NASA's Lunar Reconnaissance Orbiter or India's Chandrayaan-2, and thus learn more about the geology of the Moon.

Spacecraft have been intentionally crashed into the Moon before for scientific purposes, such as during the Apollo missions to test seismometers.

In 2009, NASA sent a rocket stage hurling into the Moon near its south pole to look for water.

But most rockets do not go so far from Earth. SpaceX brings its rocket boosters back through the Earth's atmosphere so they disintegrate over the ocean. The first stage is recovered and reused.

Gray said there could be more unintentional crashes into the Moon in the future as the US and Chinese space programs leave more junk in orbit.

McDowell noted these events "start to be problematic when there's a lot more traffic".

"It's actually no one's job to keep track of the junk that we leave out in deep earth orbit," he added. "I think now's the time to start regulating it."

SpaceX did not immediately respond to request for comment from AFP.

[Elon Musk](https://www.sciencealert.com/elon-musk)'s company is currently developing a lunar lander that should allow NASA to send astronauts back to the Moon by 2025 at the earliest.

**The History of Secession**

I respect Dinesh D’Souza. I have watched all his films. I think he expresses his thoughts well, and he crafts his stories with skill and design. I do not agree with everything he says. I will quote from his website about the election of President Donald Trump and the association with Lincoln:

***“Not since 1860 have the Democrats so fanatically refused to accept the result of a free election. That year, their target was Lincoln. They smeared him. They went to war to defeat him. In the end, they assassinated him. Now the target of the Democrats is President Trump and his supporters. The Left calls them racists, white supremacists and fascists. These charges are used to justify driving Trump from office and discrediting the right “by any means necessary.” But which is the party of the slave plantation? Which is the party that invented white supremacy? Which is the party that praised fascist dictators and shaped their genocidal policies and was in turn praised by them? Moreover, which is the party of racism today? Is fascism now institutionally embodied on the right or on the left?”***

I have researched Lincoln myself. I came to a different conclusion. Lincoln was not a very skilled statesman. He actually refused all compromise (and torpedoed negotiations) with Southerners and Confederates. He was responsible for the most egregious violations of *habeas corpus* and constitutional liberties in American history. His ability to convince the Northern States to stop forcing the South to pay for their industrial empire was so anemic, that he chose instead to unleash a scorched earth war that took the lives of at least 620,000 Americans and maimed and handicapped for life hundreds of thousands more. Lincoln used military force to radically altered the original American Constitution and set the stage for the growth of powerful and unchecked government, and the emergence of the fascist State that put congressmen in jail, rather than let them vote against his demands.

D’Souza compares Lincoln’s election to that of Donald Trump’s. The way Lincoln saved America is far different than the way Trump saved America. Lincoln used blood and destruction. Trump used faith and patriotism and focused on America first.

Lincoln made it clear to the world that he considered American blacks different than white Americans, and his publicly repeated desire was that blacks be sent back to Africa. Lincoln declared to *New York Tribune* editor Horace Greeley, August 22, 1862, scarcely three months prior to the formal issuance of the Emancipation Proclamation:
***“If I could save the Union without freeing any slave, I would do it, and if I could save it by freeing all the slaves, I would do it, and if I could save it by freeing some and leaving others alone, I would also do that. What I do about Slavery and the colored race, I do because I believe it helps to save this Union, and what I forbear, I forbear because I do not believe it would help to save the Union.”***

He did not fight the war to free slaves. He fought the war because the Global Syndicate wanted him to destroy the nation. It was their money that financed the war. It was their politicians who enacted the Tariffs of Abominations in the first place. Lincoln fought the war against Congress and the 13 States who wanted out from under Federal oppression. It was Democrats who brought slavery to America. It was the Democrats who owned slaves. All free blacks were Republican, and all black Congressmen were Republicans. They aligned themselves with the ideology of Donald Trump, not with that of Abraham Lincoln.

Four slave states did not leave the union, and Lincoln’s reasons for attacking the Southern states were far more economic and power-driven than anything else. The South wanted freedom from the confiscatory tariffs, and they were willing to fight to make that so. Lincoln only made desperate anti-racism propaganda appeals to war-weary Northerners, to gin up the sagging war effort.

As noted economist Frank Taussig has detailed in his classic study, *Tariff History of the United States*(1967 edition), tariffs were the chief revenue source for the Federal government. The Morrill Tariff more than doubled American tariffs and greatly expanded the list of taxable items. Abraham Lincoln had campaigned vigorously on a platform of strong support for the Morrill Tariff. While the South would be paying nearly 80 % of the tariff, most of the revenues would be spent in the North. With the Southern states seceding, such a loss of revenue would be devastating to the Federal treasury and could not be allowed to stand.

Before the War of Northern Aggression, there was almost no political support for denying the right of secession or for the Constitutional right to suppress it. Of the pre-war presidents, it is true, Andrew Jackson threatened South Carolina in 1833 over Nullification of the “Tariff of Abominations,” but that crisis was resolved, as it should have been, through compromise. Even staunch anti-slavery unionist President John Quincy Adams advocated secession over the annexation of Texas, and in his April 30, 1839, speech “The Jubilee of the Constitution,” commemorating the 50th anniversary of George Washington’s inauguration as the first American president, he affirmed:
***“…if the day should ever come, (may Heaven avert it) when the affections of the people of these states shall be alienated from each other; when the fraternal spirit shall give away to cold indifference, or collisions of interest shall fester into hatred, the bands of political association will not long hold together the parties no longer attracted by the magnetism of conciliated interests and kindly sympathies; and far better will it be for the people of the disunited states, to part in friendship from each other, than to be held together by constraint.”***

In his address to Congress in January of 1861, lame duck President James Buchanan, while deploring secession, stated frankly that he had no right to prevent it: “I certainly had no right to make aggressive war upon any State, and I am perfectly satisfied that the Constitution has wisely withheld that power even from Congress.” Former President John Tyler served in the Confederate Congress, and former President Franklin Pierce, in his famous Concord, New Hampshire, address, July 4, 1863, joined Buchanan in decrying the efforts to suppress the secession of the Southern states:

***“Do we not all know that the cause of our casualties is the vicious intermeddling of too many of the citizens of the Northern States with the constitutional rights of the Southern States, cooperating with the discontents of the people of those states? Do we not know that the disregard of the Constitution, and of the security that it affords to the rights of States and of individuals, has been the cause of the calamity which our country is called to undergo?”***

More, during the antebellum period William Rawle’s pro-secession text on Constitutional law, *A View of the Constitution of the United States* (1825,) was used at West Point as the standard text on the US Constitution. And on several occasions the Supreme Court, itself, affirmed this view. In *The Bank of Augusta v. Earl* (1839), the Supreme Court wrote in an 8-1 decision:

***“The States…are distinct separate sovereignties, except so far as they have parted with some of the attributes of sovereignty by the Constitution. They continue to be nations, with all their rights, and under all their national obligations, and with all the rights of nations in every particular; except in the surrender by each to the common purposes and object of the Union, under the Constitution. The rights of each State, when not so yielded up, remain absolute.”***

Can you even imagine the Court making such a statement today? Did Donald Trump divide the country this way? Did he not reveal to the world that there was, in fact, no such thing as Blue States and Red States? He exposed the truth that there are Blue Cities, controlled by Marxist dynasties that dominate the free will of their States. He called out the citizens of those cities to oppose their leftist masters and put America first. He gathered Americans and all people who love America from around the world in a movement like nothing ever seen before. It was a movement of peace and safety where the law was king and God was supreme.

Many people do not know that is James Madison who rejected a
***proposal made during the 1787 Constitutional Convention, that would allow the federal government to suppress a seceding state. He boldly stated, ‘A union of the states containing such an ingredient seemed to provide for its own destruction. The use of force against a state would look more like a declaration of war than an infliction of punishment and would probably be considered by the party attacked as a dissolution of all previous compacts by which it might be bound.’***

“In fact, the ratification documents of Virginia, New York and Rhode Island explicitly said they held the right to resume powers delegated should the federal government become abusive of those powers. The Constitution never would have been ratified if states thought they could not regain their sovereignty through an inherent right to secede.

“On March 2, 1861, after seven states seceded and two days before Abraham Lincoln’s inauguration, Sen. James R. Doolittle of Wisconsin proposed a constitutional amendment that read, “No state or any part thereof, heretofore admitted or hereafter admitted into the union, shall have the power to withdraw from the jurisdiction of the United States.”

“Several months earlier, Reps. Daniel E. Sickles of New York, Thomas B. Florence of Pennsylvania and Otis S. Ferry of Connecticut proposed a constitutional amendment to prohibit secession. Why do you think these proposals were made in the first place? The answer is that secession was, and remains to this very day, Constitutional. It is only the threat of federal war that prevents it.

There is a natural right, which is reserved by all men, and which cannot be given to any Government, and no Government can take it away. It is the natural right of a people to form a Government for their mutual protection, for the promotion of their mutual welfare, and for such other purposes as they may deem most conducive to their mutual happiness and prosperity; but if for any cause the Government so formed should become inimical to the rights and interests of the people, instead of affording protection to their persons and property, and securing the happiness and prosperity, to attain which it was established, it is the natural right of the people to change the Government regardless of Constitutions. For be it borne in mind, the Constitution is an agreement made among the people that the Government formed by it is to be just such a Government as it prescribes; that when it recognizes a right to exist, it must protect the person in the enjoyment of that right, and when it imposes a reciprocal duty upon a portion of the people, the performance of that duty it will have enforced. When a government fails in any of these essential respects, it is not the Government the people intended it to be, and it is their right to modify or abolish it.

So, if the rights of the people of the United States as recognized by the Constitution, are not secured to them by the Government, and the people of any State have no other means to redress their grievances except by separating themselves from their oppressors, it is their undoubted natural right to do so. Now it is unquestionable that one of the rights recognized to belong to the Southern people by the Constitution, and pledged to be respected by the other States, and secured to them by the Government, has nevertheless been violated, wilfully and intentionally by twelve Northern States; and this course towards the South has been virtually approved of by a large majority of the Northern people at the recent election.

An examination of the ratification processes for Georgia, South Carolina, and North Carolina in the late 1780s, reveal very similar discussions: it was the independent states themselves that had created a Federal government (and not the reverse, as Lincoln erroneously suggested), and it was the various states that granted the Federal government certain very limited and specifically enumerated powers, reserving the vast remainder for themselves. As any number of the Framers indicated, there simply would *not* have been any United States if the states, both north and south, had believed that they could not leave it for just cause.

The War of Northern Aggression must be laid squarely at the door of the Lincoln administration: “It was Lincoln, however, who finally eschewed diplomacy and sparked a confrontation. He backed himself into a corner from which he could escape only by mobilizing a national army. When the Confederacy evicted the Union Army from Fort Sumter, without killing a single soldier on either side, it was a slap in the face of Lincoln. The Confederacy changed the gage of its railroad to prevent an industrial Northern Army from steaming to Atlanta. Thus, it was the intransigence of the Lincoln administration fueled by Syndicate industrialists that produced the bloodiest war in American history. They calculated that making the nation hate itself from both sides would ensure it annihilation. Fortunately, they were wrong.

Marxists recognized that Lincoln and his actions furthered their program and ideals. In 1864 Karl Marx sent Lincoln a famous “Address” from his “workingman’s group,” in which he [**declared that**](https://www.jacobinmag.com/2012/08/lincoln-and-marx)***“victory for the North would be a turning point for nineteenth-century politics, an affirmation of free labor, and a defeat for the most reactionary capitalists who depended on slavery and racial oppression,” that is, one more critical step in the projected Marxist historical dialectic. The American ambassador in London, Charles Francis Adams, responded and “thanked them for their support and expressed his conviction that the defeat of the rebellion would indeed be a victory for the cause of humanity everywhere.”***

The truth is that capitalism is the opposite of slavery. The ownership of the labor of one’s own hands is the core of capitalism. The right to trade it for profit is the single greatest catalyst of humanity in the universe. No human works for another man as hard or as long as he will for himself. The sooner every person learns they are self employed for their own individual well-being, the sooner all slavery comes to an end.

It is a self-correcting system of progress. If you do not work, you do not eat. Failure is a necessary step to success, which is ultimately measured in terms of happiness. If you become rich off the labor of others, you will be chased to hell by your own judgement. If you are happy, then how much or little you earn is irrelevant. Wealth is the natural level of life. Money is nothing more than freedom. That freedom can be turned into misery when dipped in one of the three great sins; the lust of the flesh, the lust of the eye, and the pride of life.

Avoid these, and love all men, and the world will be saved.

**Kids: The Happiness Gage**

If your neighbors seem depressed, that’s because they probably are.

Americans are the unhappiest they’ve been in more than half a century, and they’re not [having children](https://www.bbc.com/news/world-us-canada-57003722).

According to new data from the General Social Survey [highlighted](https://thewhyaxis.substack.com/p/new-data-shows-americans-more-miserable) by former Washington Post reporter Christopher Ingraham, just 19 percent of Americans last year said they were “very happy,” down from 31 percent, nearly a third, three years before. The president sets the national mood. President Trump was positive and projected a winning attitude that was infectious. People were happy, and they were earning more than they ever had before. Now, just a year into Virtual Joe’s reign of terror, twenty-four percent in 2021 said they were “not too happy.”

Americans are also having fewer children than ever before, with the nation’s birth rate falling for the sixth consecutive year in 2020 to its lowest ever. Just 3.6 million babies were born, [according](https://www.cdc.gov/nchs/nvss/births.htm) to CDC statistics, down from [3.7 million](https://www.cdc.gov/nchs/fastats/births.htm) the year before. The ceaseless attacks on President Trump from the Global Media Empire suppressed the one best gage of national happiness. Having kids.

There are a lot of reasons why Americans aren’t having more children. Marriage is declining so rapidly that married people will soon be the [minority](https://www.nytimes.com/2021/10/20/opinion/marriage-decline-america.html). The leftist attack on Faith, the bedrock of a moral society that incentivizes children (and [empirically](https://thefederalist.com/2020/05/29/coronavirus-got-you-down-have-faith/) raises levels of happiness), has been dark and so powerful that church membership has already dropped below 50 percent, [according](https://news.gallup.com/poll/341963/church-membership-falls-below-majority-first-time.aspx) to Gallup. The nones are now the biggest affiliation. None of the above. Spiritual, yes. Just not religious. Americans aren’t even having [as much sex](https://www.scientificamerican.com/article/people-have-been-having-less-sex-whether-theyre-teenagers-or-40-somethings/), or even engaging in foreplay which is a clear sign that people have lost their trust in humanity.

[According](https://www.pewresearch.org/fact-tank/2021/11/19/growing-share-of-childless-adults-in-u-s-dont-expect-to-ever-have-children/) to the Pew Research Center in November, no baby boom is expected anytime soon. Barely 25 percent of non-parents under the age of 50 reported they were “very likely” to have children, down from 32 percent in 2018. That was the first real uptick since the mid-nineties, due to the incredible optimism and prosperity of the trump economy. Forty-four percent recently said they were “not too likely” or “not at all likely” to have children whatsoever.



*Graph from Anna Brown, Pew Research Center*

More and more, the childless with no plans to change are blaming Virtual Joe and his gang of criminals for their fear of parenting kids. They don’t know if they will lose everything, or never have anything, just because the government wants everything they have. It is hard to run for your life, when you’re dragging a kid. So much hesitancy has been placed on the totally fabricated myth of human-caused climate change that analysts at Morgan Stanley [warned](https://www.cnbc.com/2021/08/12/climate-change-is-making-people-think-twice-about-having-children.html) investors in August the “movement to not have children owing to fears over climate change is growing and impacting fertility rates quicker than any preceding trend in the field of fertility decline.”

Three years ago, celebrity icon Miley Cyrus, once a Hanna Montana icon for young girls, [graced](https://thefederalist.com/2019/07/16/miley-cyrus-getting-boring/) the cover of Elle Magazine professing her refusal to have children because the “Earth is angry” in a fringe view now creeping into the mainstream. The propaganda is devastating to the human race. Cyrus was a frequent visitor to Epstein’s den of pedophilia when she was a teenager.

You don’t think the Global Syndicate’s tankers are effecting a change in human society? In 2020, a Morning Consult [survey](https://morningconsult.com/2020/09/28/adults-children-climate-change-polling/) showed 1 in 4 adults cited climate change as a motivating reason to remain childless. A [study](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3918955) published by The Lancet in September found nearly 40 percent of Gen Zers aged 16-25 across 10 countries including the United States, said climate change made them hesitant to have kids. Many Americans of childbearing age are even [preemptively self-sterilizing](https://bariweiss.substack.com/p/first-comes-love-then-comes-sterilization). Humans are going to die young and lonely while holding onto their Shih tzu babies.

As civic institutions hollow out, breeding a generation of isolated millennials content to quarantine in their bedrooms and [live online](https://www.vice.com/en/article/wxdd74/zuckerbergs-metaverse-is-screwed-if-it-doesnt-allow-sex), the underlying message a depressed and childless society sends is that life is so miserable, who would want to live it, let alone bring a child into it? My grandfather said the same thing when I was 12 years old. The planet has been exhausted by humans. It’s time for us to go. And if the baby has down syndrome, might as well [abort it](https://www.washingtonpost.com/opinions/i-wouldve-aborted-a-fetus-with-down-syndrome-women-need-that-right/2018/03/09/3aaac364-23d6-11e8-94da-ebf9d112159c_story.html). More black children are aborted than are born alive. Only Asians and Hispanics do not abort their children.

“I think it’s morally wrong to bring a child into the world,” Isabel, a 28-year-old whose last name was kept from print at her request, told Bari Weiss’s Substack newsletter “Common Sense.” “No matter how good someone has it, they will suffer.”

A happy population is one that flourishes with procreation, so enamored by its miracle that it chooses to pay it forward with pride so that future generations may experience the same gift. That no matter its trials, life is worth living, and it’s worth bestowing onto others.

Lucifer wants you to hate your life so badly, that you will end the human race when you die. If you want out of this depression, there is only one way. Turn off the TV. Look for the good in others and help it to grow. It is the only way to save the world.

**The Convention of States**

Here is a way to save the Republic from federal tyranny. The Nebraska legislature passed a resolution on Friday calling for an Article V convention of states, making it the [17th state](https://conventionofstates.com/states-that-have-passed-the-convention-of-states-article-v-application) to do so.

After considering it for the past year, the unicameral body approved the measure in a [32-11 vote](https://www.nebraskalegislature.gov/bills/view_votes.php?KeyID=7512), with six senators abstaining or absent. According to the [resolution](https://www.nebraskalegislature.gov/FloorDocs/107/PDF/Final/LR14.pdf), the Nebraska legislature seeks to call a convention “limited to proposing amendments to the Constitution of the United States that impose fiscal restraints on the federal government, limit the power and jurisdiction of the federal government, and limit the terms of office for its officials and for members of Congress.”

The application also comes with a five-year sunset clause, which notes that the legislature will rescind the measure by Feb. 1, 2027 if efforts to call a convention before then fail.

Under Article V of the [U.S. Constitution](https://constitution.congress.gov/constitution/), state legislatures are permitted to call a convention to propose amendments to the nation’s founding document without the approval of Congress. Two-thirds of states (34) are required for a convention to be called, with three-fourths of states (38) necessary for any amendment proposed to be ratified.

The alternative method, and the only one used thus far, is for Congress to propose amendments. Any amendment successfully passed by two-thirds of the House of Representatives and Senate are then sent to the states, where three-fourths are necessary to ratify.

State Sen. Steve Halloran, who introduced the resolution, [celebrated](https://omaha.com/news/state-and-regional/govt-and-politics/nebraska-lawmakers-call-for-convention-of-states-in-effort-to-rein-in-federal-spending/article_3b36af9c-8060-11ec-a9ba-37f33d4cf844.html) its passage as “encouraging,” noting the bill’s success shows “that we respect the Constitution and the intent of the founding fathers when it comes to states having equal footing with the federal government.”

Nebraska is the second state to call for an Article V convention this week, after the Wisconsin legislature successfully passed a resolution on the matter on Tuesday.

The Amendments:

1. Term limits
2. Rescind the 16th Amendment
3. Define and establish the Commerce Clause
4. Line item veto

These four amendments would balance the powers of the Republic and allow the States to recover rights and duties illegally taken by the federal government.

**Why China Must Invade Taiwan**

**As of 2016,**[China](https://www.theepochtimes.com/t-china)**’s empty apartment units could house New York City 27 times over.**

[*Skyline of Shenzhen in Guangdong Province, China, in this undated photo. (Peter Parks/AFP/Getty Images)*](https://www.zerohedge.com/s3/files/inline-images/shenzhen_buildings-700x420.jpg?itok=ZvChYVuc)

What does this mean to you? There are a lot of carry-on effects from wasting so many resources. As you delve into a thought exercise to get more acquainted with the ruinous consequences of credit bubbles, be grateful that you don’t really have to worry about malicious genies magically tagging you with mortgaged deeds.

**That could be scary.** Imagine that some cruel genie took a perverse dislike to you. What worse instance of malevolent magic could the genie perform than to present you with deeds to the astonishing inventory of 70 million empty apartments structures accumulating dust throughout China.

You might think it would make you a billionaire, a real estate magnate on par with Donald Trump. But think again.

This may be a good moment to retell an uncharacteristically charming story Trump told on himself, dating to the savings and loan crisis (S&L crisis) of the late 1980s and early 1990s. **That was a time when 1,043 out of the 3,234 savings and loan associations in the United States failed as they tried to digest billions in over-mortgaged real estate properties.**

At that time, Trump found himself walking the streets of the Upper East Side of Manhattan one evening with his girlfriend of the moment. As they walked, they came upon a bum in a tattered peacoat lying on a grate. Trump remarked to his companion**,** “That guy has $1 billion more than I do.” She responded, “But he doesn’t look like he has a penny.” Trump replied, “He doesn’t.”

When he said that, Trump’s fortune was hostage to the banks to which he owed about a billion dollars more than his properties would have realized in a fire sale. I describe this “as an uncharacteristically charming story” because Trump is hardly famous for making jokes at his own expense. Nonetheless, he confirmed to me in a conversation that the above account I share with you is valid. It shows Trump humorously acknowledging the implications of double-entry bookkeeping at his best.

With that in mind, **how could you afford to pay the construction mortgages on 70 million apartment units with no residents deeded to you by the evil genie?** A challenging question. You would have to do some fast talking with the Chinese banks of the sort Trump managed with New York banks decades ago during the S&L crisis.

Your only hope of avoiding being sucked into a black hole of debt defaults would be to hire some creative scoundrels disguised as accountants to help you persuade the banks to lend you additional billions (or more probably, trillions) to postpone the day of reckoning. Note that the extent to which you could succeed would only worsen the ultimate malinvestment problem. Your assets would not be enhanced in any way by being encumbered with additional debt. They would just become more costly.

**Could you keep kiting the debt?**

**A $36.4 Trillion Question?**

That is at least a $36.4 trillion question. Maybe a $45.9 trillion, or possibly even a $116.6 trillion question. The correct answer depends on China’s actual debt level. Unlike Trump’s challenge of three decades ago when the systemic debt issue was denominated in billions of dollars, the Chinese bad debt problem is 1,000 times worse.

Forbes reports the estimate of Professor Victor Shih of the University of California San Diego. Shih believes that Chinese official debt figures have proven woefully inadequate.

**A $45.9 Trillion Question?**

In 2017, Shih put total Chinese debt at 328 percent of GDP (reported at $14 trillion), therefore $45.9 trillion. According to Shih, “total interest payments from June 2016 to June 2017 exceeded the incremental increase in nominal GDP by roughly 8 trillion RMB.”

If so, that hints that the end is near. However, as rough as that sounds, the actual situation may be even worse.

**Or a $116.6 Trillion Question?**

If you are a connoisseur of forbidden truths, as I am, you don’t take official figures at face value. You keep digging for tells that reveal the real story. I am convinced that Chinese government statistics are as bogus as those in the United States. And more so.

[*An aerial view shows the Evergrande Changqing community in Wuhan, Hubei Province, China, on Sept. 26, 2021. (Getty Images)*](https://www.zerohedge.com/s3/files/inline-images/Evergrande-Community-1200x799.jpg?itok=jCLna_Jo)

Professor Christopher Balding of HSBC Business School, Peking University, an authority with good sources in the People’s Bank of China’s (PBOC) Financial Stability Board, recently did some subversive arithmetic combining “on balance sheet assets” with “off-balance sheet assets.” Remember, while debts are liabilities to the borrowers, they are assets to the lenders.

He concludes that total debt in China is a breathtaking 833 percent of GDP. That means a debt of roughly $116.6 trillion.

Wow. Just wow!

The actual debt level could be three and a half times higher than suggested by official figures. The National Development and Reform Commission says Chinese debt amounts to 260 percent of GDP ($36.4 trillion). The International Monetary Fund (IMF) accepts a lower official estimate of 230 percent. But suppose Balding’s report of 833 percent is correct. In that case, this is a matter of capital importance to the world economy and your investments.

**Annual Interest Payments of 29 Percent of GDP?**

Remember, interest rates in China are not as minuscule as those in the United States or negative as those in Europe and Japan. Assume the average interest rate paid equals the short-term interbank deposit rate of 3.5 percent. Balding observes, “this would imply financial services costs to the economy of 29% nominal GDP.” A large nut to crack. Even Chinese growth rates would not come close to covering annual carrying costs of 29 percent.

Is it possible that Balding is right?

Yes. I see several hints that he is.

**Are Official Financial Figures Wildly Wrong?**

For one thing, almost every Chinese bankruptcy case brings evidence of undisclosed liabilities of individual companies. Balding observes, “it is common to find enormous amounts of undisclosed debts or (Enron-like) asset management products in Chinese bankruptcies or defaults.”

This underscores the suspicion that the actual level of debt has been low-balled. In Balding’s words, it also means that “official on balance sheet financial figures are wildly wrong with disastrous consequences.” He warns, “This implies that we need to rethink the entire story of Chinese development and finance since probably about 2000.”

Balding continues: “Excessive indebtedness is distributed in virtually every sector of the economy. Before, if there was a shock to the corporate sector, householders and the government could step in and help. However, virtually no sector of the Chinese economy does not have an enormous indebtedness. Distributing it throughout simply lowers the capacity to handle a shock.”

**‘No Good Deed Goes Unpunished’**

Speaking of “shocks,” you should not be shocked to learn that Balding was fired from his post at Peking University after discussing his conclusion—based on PBOC data—that**total debt in China has surged to 833 percent of nominal GDP.**

In a corrupt world, where people have trillions of reasons to lie about the economy (and some have no doubt lost their lives for failing to heed them), the firing of Professor Balding is as close as you can expect to come to official confirmation that his numbers are correct.

A way of restating Balding’s revelations is that no one knows who owes what to whom or how much can be settled before the whole Chinese house of cards collapses. Estimates of bad debt in the Chinese banking system run as high as 50 percent of GDP—or about $7 trillion. Far more than enough to make the banking system insolvent.

A collapse of China’s asset bubble lies ahead. I doubt any Chinese tycoons are strolling the streets of Shanghai with their girlfriends, making jokes about street people being a trillion yuan richer than they are. That underscores a problem when the government of a country enlarges debt to magnitudes beyond the scale of assets held by even the wealthiest persons. That makes it all the more unlikely that mortgaged assets can be redeemed from hock while encumbered by anything like their current level of debt.

**Cooling Earth**

Earth formed 4.5 billion years or so ago. Ever since then, it's been slowly cooling on the inside.

While the surface and atmosphere temperatures fluctuate over the eons (and yes, those external temperatures are currently warming), the molten interior – the beating heart of our planet – has been cooling this entire time.

That's not a glib metaphor. The rotating, convecting dynamo deep inside Earth is what generates its vast magnetic field, an invisible structure that scientists believe protects our world and allows life to thrive. In addition, mantle convection, [tectonic activity](https://www.quantamagazine.org/why-earths-cracked-crust-may-be-essential-for-life-20180607/) and volcanism are thought to help sustain life through the stabilization of global temperatures and the carbon cycle.

Because Earth's interior is still cooling, and will continue to do so, this means that eventually the interior will solidify, and the geological activity will cease, possibly turning Earth into a barren rock, akin to [Mars](https://www.sciencealert.com/mars) or [Mercury](https://www.sciencealert.com/mercury). New research has revealed that may happen sooner than previously thought.

The key could be a mineral at the boundary between Earth's [outer iron-nickel core](https://en.wikipedia.org/wiki/Earth%27s_outer_core) and the molten fluid [lower mantle](https://en.wikipedia.org/wiki/Lower_mantle_%28Earth%29) above it. This boundary mineral is called bridgmanite, and how quickly it conducts heat will influence how quickly heat seeps through the core and out into the mantle.

Determining that rate is not as simple as testing the conductivity of bridgmanite in ambient atmospheric conditions. Thermal conductivity can vary based on pressure and temperature, which are vastly different deep inside our planet.

To surmount this difficulty, a team of scientists led by planetary scientist Motohiko Murakami of ETH Zurich in Switzerland irradiated a single crystal of bridgmanite with pulsed lasers, simultaneously increasing its temperature to 2,440 Kelvin and pressure to 80 gigapascals, close to what we know to be the conditions in the lower mantle – up to 2,630 Kelvin and 127 gigapascals of pressure.

"This measurement system let us show that the thermal conductivity of bridgmanite is about 1.5 times higher than assumed," [Murakami said](https://ethz.ch/en/news-and-events/eth-news/news/2022/01/erdinneres-kuehlt-schneller-ab-als-erwartet.html).

In turn, this means that the heat flow from the core to the mantle is higher than we thought – and, therefore, that the rate at which Earth's interior is cooling is faster than we thought.

And the process could be accelerating. When it cools, bridgmanite transforms into another mineral called [post-perovskite](https://en.wikipedia.org/wiki/Post-perovskite), which is even more thermally conductive and would therefore increase the rate of heat loss from the core into the mantle.

"Our results could give us a new perspective on the evolution of Earth's dynamics," [Murakami said](https://ethz.ch/en/news-and-events/eth-news/news/2022/01/erdinneres-kuehlt-schneller-ab-als-erwartet.html). "They suggest that Earth, like the other rocky planets Mercury and Mars, is cooling and becoming inactive much faster than expected."

As for exactly how much faster, that's unknown. The cooling of an entire planet isn't something we understand very well. Mars is cooling a bit faster because it's significantly smaller than Earth, but there are other factors that may play a role in how rapidly the planetary interior cools.

For example, the decay of radioactive elements can generate heat, [enough to sustain volcanic activity](https://www.sciencealert.com/there-s-a-new-explanation-for-why-the-moon-is-so-lopsided). Such elements are one of the major sources of heat in Earth's mantle, but their contribution [isn't well understood](https://www.berkeley.edu/news/media/releases/2003/12/10_heat.shtml).

"We still don't know enough about these kinds of events to pin down their timing," [Murakami said](https://ethz.ch/en/news-and-events/eth-news/news/2022/01/erdinneres-kuehlt-schneller-ab-als-erwartet.html).

However, it likely won't be a fast process on human scales, either way it falls. In fact, it's possible that Earth will [become uninhabitable by other mechanisms long before then](https://theconversation.com/the-sun-wont-die-for-5-billion-years-so-why-do-humans-have-only-1-billion-years-left-on-earth-37379). So we *might* have a bit of time to work more on the problem to figure it out.

**The Curvature of Spacetime**

In 1797, English scientist Henry Cavendish measured the strength of [gravity](https://www.space.com/classical-gravity.html) with a contraption made of lead spheres, wooden rods and wire. In the 21st century, scientists are doing something very similar with rather more sophisticated tools: atoms.

Gravity might be an early subject in introductory physics classes, but that doesn’t mean scientists aren’t still trying to measure it with ever-increasing precision. Now, a group of physicists has done it using the effects of [time dilation](https://www.space.com/36273-theory-special-relativity.html)—the slowing of time caused by increased velocity or gravitational force—on atoms. In a paper published online today (Jan. 13) in the journal Science, the researchers announce that they’ve been able to measure the curvature of space-time.

The experiment is part of an area of science called atom interferometry. It takes advantage of a principle of [quantum mechanics](https://www.space.com/do-we-live-in-quantum-world.html): just as a light wave can be represented as a particle, a particle (such as an atom) can be represented as a “wave packet.” And just as light waves can overlap and create interference, so too can matter wave packets.

In particular, if an atom’s wave packet is split in two, allowed to do something, and then recombined, the waves might not line up anymore—in other words, their phases have changed.

“One tries to extract useful information from this phase shift,” Albert Roura, a physicist at the Institute of Quantum Technologies in Ulm, Germany, who was not involved in the new study, told Space.com. Roura [wrote a “Perspectives” piece](https://www.science.org/doi/10.1126/science.abm6854) about the new research, which was published online in the same issue of Science today.

[Gravitational wave](https://www.space.com/25088-gravitational-waves.html) detectors work via a similar principle. By studying particles in this way, scientists can fine-tune the numbers behind some of the key workings of the universe, such as how electrons behave and how strong gravity really is—and how it subtly changes over even relatively small distances.

It’s that last effect that Chris Overstreet of Stanford University and his colleagues measured in [the new study](https://www.science.org/doi/10.1126/science.abl7152). To do this, they created an “atomic fountain,” consisting of a vacuum tube 33 feet (10 meters) tall ornamented with a ring around the very top.

The researchers controlled the atomic fountain by shooting laser pulses through it. With one pulse, they launched two atoms up from the bottom. The two atoms reached different heights before a second pulse shot them back down. A third pulse caught the atoms at the bottom, recombining the atoms’ wave packets.

The researchers found that the two wave packets were out of phase—a sign that the gravitational field in the atomic fountain wasn’t completely uniform.

“That … in [general relativity](https://www.space.com/17661-theory-general-relativity.html), can be understood, actually, as the effect of space-time curvature,” Roura told Space.com, referring to one of Albert Einstein’s most famous theories.

Since the atom that went higher was closer to the ring, it experienced more acceleration thanks to the ring’s gravity. In a perfectly uniform gravitational field, such effects would cancel out. That isn’t what happened here; the atoms’ wave packets were out of phase instead, and thanks to the effects of time dilation, the atom that experienced more acceleration was ever so slightly out of time with its counterpart.



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The result is a minuscule change, but atom interferometry is sensitive enough to pick it up. And since the scientists can control the placement and the mass of the ring, Roura told Space.com, “they are able to measure and study these effects.”

Although the technology behind this discovery—atom interferometry—might seem arcane, atom interferometry may one day be used to [detect gravitational waves](https://iopscience.iop.org/article/10.1088/1361-6382/ac0236) and help us [navigate better than GPS](https://wis-wander.weizmann.ac.il/space-physics/navigation-atom-%E2%80%93-coming-vehicle-near-you), researchers have said.