**The Fed’s New Digital Currency**

The forge to cast another connecting rod for the Global Syndicate’s siege engine rolling toward the fortress of the middle class was fired up recently. Creating an official digital version of the U.S. dollar could give Americans more, and speedier, payment options. It would mean the end of privacy as we know it. It would also present financial stability risks and privacy concerns, the U.S. Federal Reserve said in a long-awaited discussion paper released on Thursday.

The paper made no policy recommendations and offered no clear signal on where the Fed stands on whether to launch a central bank digital currency (CBDC), a digital form of cash in your pocket. The Fed said it would not proceed with creating one "without clear support from the executive branch and from Congress, ideally in the form of a specific authorizing law."

The paper tiptoes around a subject that has sparked debate inside the Fed's top ranks, even as other central banks across the globe are exploring the adoption of digital currencies.

Nevertheless, it sets the stage for the central bank to collect public feedback on the potential costs and benefits of a CBDC, which could ultimately advance legislation long-term.

"While a CBDC could provide a safe, digital payment option for households and businesses as the payments system continues to evolve, and may result in faster payment options between countries, there may also be downsides," Fed officials wrote.

Challenges include maintaining financial stability and making sure the digital dollar would "complement existing means of payment," the Fed said. The central bank also needs to tackle major policy questions such as ensuring a CBDC does not violate Americans' privacy and that the government maintains its "ability to combat illicit finance."

Unlike cryptocurrencies, which are typically run by private actors, a CBDC would be issued and backed by the central bank. It would differ from electronic transactions that happen through large commercial banks in that it could give consumers a direct claim to the central bank, similar to physical cash.

About 90 countries are exploring or launching their own CBDCs, according to the Atlantic Council. A widely used digital euro, yuan or dollar may still be years away, but the projects could dramatically disrupt the global financial system.

Despite steering clear of policy recommendations, the Fed did shed some light on how a digital dollar might function.

Critically, it said a digital dollar would "best suit" U.S. needs if it were intermediated through the current financial system. That means individuals would not have CBDC accounts directly with the Fed, an approach backed by some Democrats who say a digital currency could help the unbanked. Banks worried that such an approach would eat into their deposit base.

Still, Fed officials said they are not ruling anything out.

The central bank will collect comments on the issue via [an online form](http://https/www.federalreserve.gov/apps/forms/CBDC) for 120 days.

Thursday's paper is separate from research the Boston Fed has been working on with the Massachusetts Institute of Technology to explore the technological aspects of a CBDC. That research, including coding that could be used for a potential U.S. CBDC, will be released as early as next month.

**BOARD DIVISIONS**

The paper partially echoed the views of Fed Chair Jerome Powell, who has said such a project must have broad support and ideally be mandated by Congress.

Fed Governor Lael Brainard, meanwhile, has said it is not "sustainable" for the United States to hold off on pursuing a digital dollar at time when competing economies are moving ahead.

Others, including Fed Governor Christopher Waller, are more skeptical and point out that many dollar transactions are already digital.

Jonathan McCollum, chair of federal government relations for Davidoff Hutcher & Citron, said some in Washington worry the United States could weaken its position as the holder of the global reserve currency if it does not move ahead.

"The U.S. has the opportunity to set the rules for how digital currencies function in the international financial system, but it is critical we start now," he said.

**We are the Cure**

First, let me get something out of the way. Herd immunity for the flu is usually not possible, simply because of the spherical macrophage that facilitates a high probability of effectors for connecting to human cells. Humans have been exposed to the corona virus for millennia. We are fairly confident that a good portion of our DNA is the result of encounters with various viral stresses placed on the race.

We are the cure. We always have been. Were it not so, the species would have been wiped out long ago. No one likes getting the flu, but we get it a dozen times in as lifetime, and the older we get the more vulnerable we get to getting run down and killed by pneumonia.

A slow-reacting immune system will get you dead from toxemia if pneumococci blooms in your lungs. It only takes a few hours to kill a human with those toxins. That being said, the CDC consumes more than $55 billion a year in taxpayer funds, and I doubt there is anyone within the sound of my voice tonight that is happy with the way our money is being spent. We feel that the CDC has become a propaganda arm of the Global Syndicate and a card-carrying member of the DNC. With nearly a million Americans dead, and 50 million more now poisoned with a clot shot, we feel that some of the personnel should be arrested and tried under the Nuremburg protocols.

Faucists [have dismissed the power of natural immunity](https://www.wnd.com/2021/09/4944784/) from a previous COVID infection, a new Centers for Disease Control and Prevention study found natural immunity was orders of magnitude superior to vaccine-produced immunity during the delta surge. In fact, the world is now totally resisting even calling the chemical weapon a vaccine. They know full well big pharma has cloaked themselves behind vaccine legalities while hundreds die every day from the effects of these chemicals. It appears Remdesivir is nothing more than a street sweeper to kill patients who become too sick too quickly for the Syndicate’s planned genocide.

[The study,](https://www.cdc.gov/mmwr/volumes/71/wr/mm7104e1.htm) released Wednesday, concluded "infection-derived protection was higher after the Delta variant became predominant, a time when vaccine-induced immunity for many persons declined because of immune evasion" and declining immune protection.

Among the caveats, the CDC pointed out, was the fact that the data used in the study ended in November, before delta was replaced by omicron. However, even the CEO of Pfizer has acknowledged that his vaccine provides little protection, if any, from omicron.

The finding confirms [an Israeli study in August](https://www.medrxiv.org/content/10.1101/2021.08.24.21262415v1.full.pdf) demonstrating "that natural immunity affords longer lasting and stronger protection against infection, symptomatic disease and hospitalization" compared to vaccine immunity.

The CDC tried to cover for their pharmaceutical masters by issuing a statement Wednesday insisting that while previous infection offers protection, vaccination is the only safe way to ensure lasting protection. However, the CDC study acknowledged vaccine immunity waned within months during delta. And it's been known for more than a century that natural immunity confers protection against a respiratory virus's outer coat proteins, with strong evidence for the persistence of antibodies.

For example, nearly two decades after the outbreak of SARS-CoV-1, which is about 90% similar to SARS-CoV-2, natural immunity has persisted, according to studies. [Researchers have found](https://www.contagionlive.com/view/emerging-data-support-lasting-covid19-immunity-t-cells) that as many as 50% of people with no known exposure to the novel coronavirus have an effective response to the virus from their T cells, the part of the immune system that attacks foreign particles.

Further, many studies forecast long-term immunity for people who have had COVID-19. Long term implies that we may see effective immune responses for a decade from natural immunity, which is non-existent with the current chemical mandates.

A [study published in February 2021 by Science magazine](https://www.science.org/doi/10.1126/science.abf4063) found "substantial immune memory is generated after COVID-19." And an [article in Nature magazine in May](https://www.nature.com/articles/d41586-021-01442-9) 2021 reported researchers believe "people who have been infected with SARS-CoV-2 will probably make antibodies against the virus for most of their lives. " A study by Emory University and the Fred Hutchinson Cancer Research Center that was funded by the National Institutes of Health – for which Fauci works – [predicted "long-lived immunity to SARS-CoV-2 after natural infection."](https://news.emory.edu/stories/2021/07/covid_survivors_resistance/index.html)

And, in fact, the new CDC study released Wednesday stated: "Whereas French and Israeli population-based studies noted waning protection from previous infection, this was not apparent in the results from this or other large U.K. and U.S. studies."

**'The evidence shows'**

Last fall, the CDC released a study claiming the COVID-recovered are five times more likely to be hospitalized for COVID than the vaccinated. But Dr. Martin Kulldorf, formerly a Harvard faculty member, was [among many epidemiologists who quickly pointed out the CDC study's fatal flaws](https://www.wnd.com/2021/11/harvard-epidemiologist-dismantles-cdc-immunity-study/).

Bottom of Form

Kulldorf compared the CDC research with [the Israeli study](https://www.medrxiv.org/content/10.1101/2021.08.24.21262415v1.full.pdf), which found people vaccinated for COVID-19 were 27 times more likely to have a symptomatic COVID infection than those previously infected by the virus.

During the coronavirus pandemic, Fauci has ignored research affirming the longtime consensus of immunologists prior to the pandemic [that natural immunity is superior](https://www.businessinsider.com/fauci-why-covid-vaccines-work-better-than-natural-infection-alone-2021-5). But the [White House coronavirus adviser was stumped last fall](https://www.wnd.com/2021/09/4944784/) when CNN chief medical correspondent Dr. Sanjay Gupta asked him why people who already have been infected with the novel coronavirus should get a COVID vaccine, citing the Israeli research.

Fauci said he didn't have a "firm answer," but insisted the Israel study didn't address the issue of the durability of natural immunity compared to the vaccine.

"So it is conceivable that you got infected, you're protected, but you may not be protected for an indefinite period of time," Fauci said.

A former health adviser to the federal government, Dr. Paul Elias Alexander, has teamed with Dr. Harvey Risch of the Yale School of Medicine and others to [compile a list of 146 studies indicating natural immunity to COVID-19 from a previous infection is superior to immunity afforded by vaccines.](https://brownstone.org/articles/79-research-studies-affirm-naturally-acquired-immunity-to-covid-19-documented-linked-and-quoted/)

"We should not force COVID vaccines on anyone when the evidence shows that naturally acquired immunity is equal to or more robust and superior to existing vaccines. Instead, we should respect the right of the bodily integrity of individuals to decide for themselves," Alexander writes for the Brownstone Institute.

He is a former assistant professor at McMaster University in Hamilton, Ontario, in evidence-based medicine and research methods; a former adviser to WHO-PAHO in Washington, D.C., and a former senior adviser for COVID pandemic policy at Health and Human Services.

Alexander charges that public health officials, the medical establishment and establishment media are "misleading the public with assertions that the COVID-19 shots provide greater protection than natural immunity."

He notes CDC Rochelle Walensky claimed in a statement published October 2020 in the British journal The Lancet that "there is no evidence for lasting protective immunity to SARS-CoV-2 following natural infection" and "the consequence of waning immunity would present a risk to vulnerable populations for the indefinite future."

Somehow, he says, the CDC recognizes natural immunity for chicken-pox, measles, mumps and rubella but not for COVID-19.

**EDITOR'S NOTE:** *Last year, America's doctors, nurses and paramedics were celebrated as frontline heroes battling a fearsome new pandemic. Today, under Joe Biden, tens of thousands of these same heroes are denounced as rebels, conspiracy theorists, extremists and potential terrorists. Along with massive numbers of police, firemen, Border Patrol agents, Navy SEALs, pilots, air-traffic controllers, and countless other truly essential Americans, they're all considered so dangerous as to merit termination, their professional and personal lives turned upside down due to their decision not to be injected with the experimental COVID vaccines. Biden's tyrannical mandate threatens to cripple American society – from law enforcement to airlines to commercial supply chains to hospitals. It's already happening. But the good news is that huge numbers of "yesterday's heroes" are now fighting back – bravely and boldly.*

**The IRS**

The Internal Revenue Service (IRS) will soon require taxpayers to submit a scan of their face in order to access certain features and tax records.

The change, first [reported](https://krebsonsecurity.com/2022/01/irs-will-soon-require-selfies-for-online-access/) on by Krebs on Security, will force users to sign into the IRS website through an account with third-party firm ID.me, and provide a government identification document with their photo alongside a selfie to verify their identity, [according](https://www.irs.gov/payments/your-online-account) to the IRS website.

The IRS first [announced](https://www.irs.gov/newsroom/irs-unveils-new-online-identity-verification-process-for-accessing-self-help-tools) its partnership with ID.me in November, arguing the arrangement would “improve accessibility” and security for users.

“Identity verification is critical to protect taxpayers and their information. The IRS has been working hard to make improvements in this area, and this new verification process is designed to make IRS online applications as secure as possible for people,” IRS Commissioner Chuck Rettig said at the time.

The IRS did not respond to the Daily Caller News Foundation’s request for further comment on the arrangement. An agency spokesperson [told](https://www.cnbc.com/2022/01/20/irs-will-soon-require-a-selfie-to-access-some-of-its-online-tools.html) CNBC that while a facial scan was not needed to file taxes, users would have to submit one to access tax records, view or manage payment plans, and/or access the Child Tax Credit Update Portal.

“The IRS emphasizes taxpayers can pay or file their taxes without submitting a selfie or other information to a third-party identity verification company,” the spokesperson said. “Tax payments can be made from a bank account, by credit card or by other means without the use of facial recognition technology or registering for an account.”

The IRS’ decision to adopt facial recognition technology has worried privacy advocates, who argue the collection of biometric data could enable widespread surveillance.

“This announcement signals one of the largest expansions of facial recognition technology in the U.S. and there is no question that it will harm peoples’ privacy and ability to successfully complete their taxes,” Caitlin Seeley George, campaign director for Fight for the Future, said in a statement shared with the Daily Caller News Foundation.

“This will essentially create a new, massive database for law enforcement to use to track people without their knowledge,” Seeley added.

**Never Mess with Truckers**

The Rebel Alliance attacked the Global Syndicate with lower gears this week. Truckers caused serious disruptions at crossing points between the United States and Canada on Monday to protest COVID-19 vaccine mandates that threaten their livelihoods -- and that experts warn could have major ramifications for trade between our two countries.

Dozens of big rigs slow-rolled along Highway 75 near the U.S.-Canada border, clogging access to the border checkpoint and causing delays, to protest mandates that could leave thousands out of work and exasperate problems for an already precarious [supply chain](https://www.westernjournal.com/bidens-inability-deal-supply-chain-clog-lead-crying-children-christmas/) in North America.

Starting Saturday, Canada’s federal government ordered that all unvaccinated [Canadian truckers](https://www.westernjournal.com/us-extends-border-restrictions-mexico-canada-part-coronavirus-response/) returning from the U.S. must quarantine for two weeks and foreign drivers who are unvaccinated no longer can cross into Canada, according to [CBC](https://www.cbc.ca/news/canada/manitoba/manitoba-truckers-vaccine-protest-international-border-1.6317604).

Meanwhile, Beginning on Tuesday, the Biden administration will require all foreign drivers to show proof of vaccination to enter the U.S., [Reuters](https://www.reuters.com/business/canada-us-supply-chain-still-could-face-disruptions-due-vaccine-mandates-2022-01-13/) reported.

Truckers say these mandates could have “detrimental” impacts on their industry.

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"We need to end all of these totalitarian mandates that our government has imposed on us for the last two years," Rick Wall, president of a trucking firm and the organizer of Monday’s protest, told CBC.

"This is put on by truckers, but we are calling to end all [mandates](https://www.westernjournal.com/breaking-2-major-heartland-us-cities-unveil-plans-sweeping-vaccine-mandates/) for every single human being in this country, not just for us," he said. "It's extremely frustrating."

Displaying signs opposing the vaccine requirement with slogans such as “Stop Mandates,” “Stop Fascists” and “Freedom to Choose,” truckers and some other vehicles moved in a slow loop between the Emerson, [Manitoba](https://www.westernjournal.com/still-feeling-aftershocks-non-essential-worker-restrictions-now-invented-something-even-worse/), port of entry and the weigh scales.

The slow-roll protest did not block any lanes but slowed traffic considerably in the area, according to CBC.

**The Invasion-Election**

If you cannot get your votes from Ballots-R-Us, then import your voters from outside the country. The challenge is getting them through the line without starting a war. **The recent New York City**[**law**](https://www.theepochtimes.com/800000-noncitizens-allowed-to-vote-in-nyc-elections_4203732.html)**to allow at least 800,000 noncitizens to vote in municipal elections is unconstitutional and likely to be overturned in court**, said Hans von Spakovsky, manager of the Heritage Foundation’s election law reform initiative and former member of the Federal Election Commission.

“**It’s actually pretty clear that it violates the New York State Constitution**—it has a provision that specifically says that **you have to be a citizen to vote in all elections in the state of New York, and that includes local elections**,” Spakovsky told The Epoch Times on Jan. 19.

“I also think it is bad from a policy point of view, because it basically cheapens and diminishes the concept of citizenship.

“**It ought to be something that makes American citizens mad, particularly because of the potential number of aliens that’s involved**.”

New York City Mayor Eric Adams allowed the measure to become law on Jan. 9, which includes the provision that voting noncitizens must be in the city for 30 days or more and have authorization to work.

“I believe that New Yorkers should have a say in their government, which is why I have and will continue to support this important legislation,” Adams said in a statement. “I believe allowing the legislation to be enacted is by far the best choice, and look forward to bringing millions more into the democratic process.”

The following day, the Republican National Committee [filed a suit](https://www.theepochtimes.com/republicans-sue-new-york-officials-over-allowing-noncitizens-to-vote_4204363.html) in the New York Supreme Court along with City Council Minority Leader Joseph Borrelli, Rep. Nicole Malliotakis (R-N.Y.), and other Republicans.

The law applies to legal aliens, but Spakovsky said New York City’s sanctuary policies that shield illegal aliens would open the floodgates.

“**Does anybody really believe that the election department is going to investigate the lawful status of any alien who registers to vote?**” he said.

“And so that means, of course, that lots and lots of illegal aliens will also get registered to vote.”

Although he doesn’t think any states will try to change their election laws to include voting rights for noncitizens, Spakovsky said there’s a push from the progressive left to change the concept or definition of “citizen.”

“The whole point of the open borders crowd is to do two things: one, extinguish the line between legal and illegal aliens in this country. And second, to frankly, get rid of the whole concept of citizenship,” he said.

New York City Councilwoman Margaret Chin, a Democrat, told colleagues before the recent vote that many noncitizens struggle to become citizens but should still be able to vote in the meanwhile because they pay taxes and live and work in the city.

“They want to be citizens, they want to be able to vote for the president, but at least we have the opportunity to allow them to vote for the elected officials that are representing them in the city,” said Chin.

However, Spakovsky said paying tax doesn’t make someone a citizen.

“**My response to that is that first of all, the vast majority of illegal aliens do not pay taxes. In fact, they get free rides from many jurisdictions**,” he said.

“This is being pushed by the progressive left today because they believe that aliens will vote for them … and keep them in power.”

Spakovsky said the inability for the Trump administration to get a question placed on the 2020 Census about [citizenship status](https://www.theepochtimes.com/mkt_app/the-latest-supreme-court-blocks-census-citizenship-question_2980998.html) was a major win for the progressive left to blur the lines between citizen and noncitizen.

“One of the main reasons they wanted that done is for apportionment purposes, they did not want congressional seats apportioned based on citizen population—if they did, places like California would lose congressional seats,” he said.

“That’s why California probably has four or five more congressional seats than they should have, because of the huge population of illegal aliens in the state.”

The Biden administration [supports](https://www.theepochtimes.com/trump-and-biden-policy-stances-2_3483640.html) the creation of a citizenship pathway for millions of illegal immigrants in the United States. A decade-old estimate puts the number of illegal aliens at 11 million, and since then, millions more have crossed the southern border.

**The Absurd Truth**

wildly unreasonable, illogical, or inappropriate.

At the end of the Second World War, Gaullists and Communists insisted that the majority of the French people had played a part in the Resistance. Actual figures for those who actively opposed the Nazis vary between 400,000 and 75,000. Something not entirely dissimilar is happening now as the Government prepares to lift Plan B restrictions next week, and fervent advocates of lockdown try to distance themselves from its dire consequences. Scientists whose mathematical models persuaded anxious ministers to impose drastic restrictions on human freedom not even seen during the Blitz are suddenly keen to emphasize that these were merely worst-case “scenarios”, not something on which you’d want to base actual policy.

Did they mention that at the time, I wonder? Or has the Eddie-the-Eagle reliability of their predictions given rise to a certain hasty revisionism? Sorry, that’s unfair. Eddie the Eagle never predicted up to 6,000 Covid deaths a day this winter (actual number: 250).

Michael Gove, the Cabinet’s most hawkish lockdown supporter, admitted last week to the 1922 Committee of Tory MPs that he was a “bedwetter” who got things badly wrong (unlike Boris) when he called for further restrictions over Christmas. Wes Streeting, the shadow Health Secretary, now says that we must never lock down again without explaining why the useless, No-opposition Opposition party not only failed to challenge any of the destructive rules, but continually called for them to be stricter.

[Cracks are even opening up in the wonkish façade of the Behavioural Insights Team, the so-called Nudge Unit](https://archive.vn/o/lZAFo/https:/www.telegraph.co.uk/politics/2022/01/13/downing-streets-controversial-nudge-unit-accused-exploiting/), which bears much of the responsibility for terrifying the British people into complying with measures so cruel that I predict future generations will refuse to believe we ever allowed them to happen. Simon Ruda, co-founder of the team, told Unherd: “In my mind, the most egregious and far-reaching mistake made in responding to the pandemic has been the level of fear willingly conveyed on the public.” Eh? It’s a bit like the kid who drops a banger in the tin of fireworks, claiming he never meant to start a fire. Honest, guv!

**For those who were part of the lockdown Resistance, it is gratifying, but also oddly unbearable, to see the people who attacked us admitting that the “misinformation” we were accused of spreading 18 months ago turns out to be remarkably close to the truth.** I am not a particularly rebellious person, and certainly not a brave one, but if I encounter any kind of injustice, my inner Welsh dragon starts breathing fire. I can’t help it. During the lockdowns, Idris the Pearson dragon seldom stopped fuming at the thousands of harrowing stories which readers shared with me. Like the lecturer who emailed about one of his students, a glorious young man, who fell to his death after hiding on the roof when police raided his house because a small party there breached lockdown regulations and the lad didn’t want to get into trouble. He paid with his young life for the stupid rules that were made – and repeatedly broken, as we now know – by middle-aged men in Westminster.

**When the Resistance dared to suggest that some lockdown measures were disproportionate, crazy and unsupported by science, let alone common sense, we were reviled.**That is no exaggeration. I regret to say your columnist was called, in no particular order, a Covid denier (I nursed my entire family through the virus), a granny killer (I didn’t see my own mother for 18 months) and a spreader of disinformation. When I protested on social media that putting padlocks on the gates of playgrounds was a terrible idea, back came a fusillade of vicious accusations: “You want people to die!”

**To question the official narrative that nothing mattered except keeping people safe from Covid was heresy.**Witches like me had to be burnt at the stake before we could spread our subversive ideas to all Sage-fearing people. Funny how things turn out, isn’t it? It is now widely acknowledged that the NHS was never overwhelmed (that’s why the Nightingales were shut without being used). And even those prophets of doom at the BBC finally acknowledged this week that half of “Covid deaths” since Christmas are not actually “from” Covid but “with” Covid.

That is not to deny that some of us came up with occasional wrong answers.

Admittedly, the lockdown tragedy did have its moments of unintentional comedy. Who can forget the immortal exchange between Sky News’s Kay Burley and the then Health Secretary, Matt Hancock?

Burley: “How long will the ban on casual sex last?”

Hancock [serious face]: “Sex is OK in an established relationship, but people need to be careful.”

Careful, unless you were the Secretary of State for Health, of course, [in which case sex outside your established relationship was fine and dandy because, well, it was with a colleague](https://archive.vn/o/lZAFo/https:/www.telegraph.co.uk/news/2021/06/25/matt-hancock-refuses-comment-pictures-appearing-show-affair/). What No 10 would doubtless call a “work event”.

**How did we listen to that bonkers, ahem, advice with a straight face? With the UK set to be one of the first countries to come out of the pandemic, I thought it was worth starting to compile a list of the most lunatic measures. Lest we forget.**

Here are some other absurd questions that people came up with on social media?

1. “Church yesterday. Wafer but no wine for communion. Service followed by wine and biscuits to mark the vicar’s retirement.”

2. “The one where you could work in a control room with multiple people for 12 hours then be breaking the law if you sat on a bench drinking coffee with one of them.”

3. “Forming a socially distanced queue at the airport before being sardined into a packed plane with the same people, two hours later.”

4. “Swings in our local park put into quarantine or removed – even though children were barely at risk from Covid as swings were outside.”

5. “No butterfly stroke allowed while swimming.”

6. “Pubs with no volume on the TV.”

7. “Not allowing people to sit on a park bench. My elderly aunt kept fit by walking her dog every day, but she needed to rest. Since that rule, she stopped going out. She went downhill and died last April.”

8. “I got thrown out of a McDonald’s for refusing to stand on a yellow circle. I was the only customer.”

9. “Yellow and black hazard tape across public seats and benches outdoors.”

10. “I’m stuck in the infant in-patient ward with my nine-day-old sick baby, post C-section, unable to look after him. My husband (same household) is not allowed to be here with us. I’m having panic attacks, which is preventing me from producing milk for the baby.”

11. “I was advised by a council worker to keep my dog on a lead because people might stop to pet her and congregate too closely.”

12. “My bed-ridden mother-in-law with dementia in a care home where only ‘window visits’ were allowed. Mum was on the first floor. Had to wait for someone to die on the ground floor so she could be moved down there and finally seen by her family. After 12 months.”

13. “Two people allowed to go for a walk on a golf course. If they took clubs and balls, it was a criminal offence.”

14. “The one-way system in my local pub, which meant that to visit the loo you had to make a circular journey through the building, ensuring you passed every table.”

15. “My dad was failing in his care home. We weren’t allowed to visit him until the doctor judged he was end-of-life care because of one positive case in the home. We had 24 hours with him before he passed.”

16. “People falling down the escalator on the Underground because they were frightened of touching the handrails – even though you couldn’t get Covid from surfaces.”

17. “Rule of Six. My wife and I have three children so we could meet either my wife’s mum or her dad, but not both at the same time.”

18. “Nobody solved an airborne virus transmission with a one-way system in Tesco.”

19. “How about not being allowed for several months – by law – to play tennis outdoors with my own wife? We’d have been further apart from each other on court than in our own home.”

20. “On two occasions, I was stopped and questioned while taking flowers to my mother’s grave. One time, a police officer even asked for my mum’s name. No idea what he would have done with that information.”

21. “Birmingham City Council cutting the grass in two-metre strips – so the weeds could social-distance?”

22. “Northampton police checking supermarket baskets for non-essential items.”

23. “All the children at school were asked to bring in a favourite book, but it had to be quarantined for two days before being ‘exposed’ to the rest of the class.”

24. “Dr Hilary on Good Morning Britain advising people to wear masks on the beach – and that it would be a good idea to swim in the sea with one on, too.”

25. “Gyms and exercise classes forced to close, but fast-food outlets remained open.”

26. “They taped off every other urinal in my workplace.”

27. “Sign on the inside of work bathroom door: close toilet lid before flushing to prevent plumes of Covid-19.”

28. “We held our carol service in a local park, but had to send out invitations by word of mouth, rather than email, so we’d have plausible deniability if stopped by police.”

29. “Having to wear a disposable apron and gloves while visiting my mother in a care home, while she was on the other side of a floor-to-ceiling Perspex wall.”

30. “Scotch eggs. You couldn’t drink in a pub unless you also had a ‘substantial’ meal.”

31. “Testing of totally healthy people and making them stop work based on a questionable positive test result, when they have no symptoms, creating NHS staff shortages, cancelled operations. Things that, you know, actually kill people…”

32. “My son works in the NHS on the Covid ward and could go to the local Sainsbury’s for his lunch. But when we were ill and isolating at home, he had to isolate as well – for 10 days.”

33. “My eight-year-old granddaughter telling me they weren’t allowed to sing Happy Birthday at school for her friend’s ninth birthday.”

34. “It was illegal to see your parents in their back garden, but legal to meet them in a pub garden with lots of other people.”

35.  “I had to abandon my weekly choir practice – but my husband was allowed to sing as a spectator at a football match.”

36. “They removed all the bins in Regent’s Park and Hampstead Heath.”

37. “Having a flask of tea or coffee on a walk meant it was classified as a picnic – and thus verboten.”

38. “Bring your own biro to a dental appointment to fill in a form declaring you do not have Covid.”

39. “My neighbour refused to hang the washing out to dry – they thought the sheets might catch Covid and infect them.”

40. “My 12-year-old had to sit alone at her grandfather’s funeral – her first experience of one – even though we drove there together and hugged outside. There were three officials watching us all to ensure we didn’t break the rules.”

41. “We could only go outdoors once a day for exercise.”

42. “In pubs, wearing a mask to get from the door to the table, and the table to the toilet – but not wearing a mask while sitting down.”

43. “People in a Tier 3 area walking two minutes down the road for a pint in Tier 2.”

44. “In Wales, supermarkets were allowed to stay open, but the aisles containing children’s clothing and books were taped off.Because buying a baby’s jumper is so much more perilous than picking up a pint of milk.”

45. “The pallbearers all but threw my mother’s coffin in the grave and ran away. They had her down as a Covid death, but she died of cancer.”

46. “The one-way systems around supermarkets that led to people being forced into parts they didn’t want to be in, making them spend more time in the shop – while Covid simply circulated over the top of the shelves.”

47. “Children abandoned by social services and left in the clutches of terrible parents.”

48. “Police breaking into our student house and pinning my girlfriend by the neck up against the wall. I said: ‘This is England – you’re not allowed to do that.’”

49. “Residents of care homes forgetting who they were during the long months when family were not allowed to visit them.”

50. “Dying alone. How many died alone? How many?”

**The Great Reset: Prepare for Truth**

In January 2021, [Reuters announced](https://www.reuters.com/article/rpb-wef-davos-agenda-connect/reuters-partners-with-the-world-economic-forum-for-exclusive-content-distribution-on-reuters-connect-idUSKBN29U0Y3) "a partnership with the World Economic Forum for exclusive content distribution unit’s award-winning digital content marketplace, Reuters Connect."

[A Reuters fact check in December](https://www.reuters.com/article/factcheck-coronavirus-netherlands/fact-check-world-economic-forum-letters-show-51st-annual-meeting-invites-idUSL1N2T6137) missed the core concern about the "Great Reset" when it pointed out that it is not a secret plot. Its critics, in fact, agree that it's an open plot to "reset capitalism," with [its own web page](https://www.weforum.org/great-reset/).

The fact check focused on invitations for Dutch politicians to the WEF virtual summit that was held this past week.

Reuters said the invitations "have been misrepresented online to claim they are 'leaked' letters and evidence of secret collusion between the Swiss organization and the Dutch government to push 'The Great Reset,' a proposed economic plan at the centre of widespread conspiracy theories."

Earlier this week, [another Reuters fact check](https://www.reuters.com/article/uk-factcheck-reset/fact-check-multiple-misleading-suggestions-made-in-documentary-on-the-covid-19-pandemic-idUSKBN29O228) addressed an hour-long documentary that suggests "world leaders and society’s elite are working together to create a world with 'harsh tyrannical rules governed by a centralised totalitarian state.'"

Reuters describes the Great Reset initiative benignly as "a sustainability plan proposed by the World Economic Forum."

However, WEF founder and Executive Chairman Klaus Schwab made it clear in June 2020 that the COVID-19 pandemic should be exploited as an opportunity to advance the globalist agenda promoted by his Davos conferences, which have pushed for numerous proposals, such as a worldwide carbon tax, to redistribute wealth and shift sovereignty from nation states to global entities. [Schwab wrote](https://www.weforum.org/agenda/2020/06/now-is-the-time-for-a-great-reset/) that "the world must act jointly and swiftly to revamp all aspects of our societies and economies, from education to social contracts and working conditions" and bring about a "'Great Reset' of capitalism."

Schwab has given a prominent place in recent Davos events to Chinese Communist Party leader Xi Jinping, having Xi lead off the conference one year ago and again this week. In his introduction of Xi on Monday, Schwab said the world "must narrow the gap between the rich and the poor to achieve more sustainable global development."

As [WND reported](https://www.wnd.com/2021/01/4887684/), kicking off WEF's [Great Reset](https://www.weforum.org/great-reset/) initiative in January 2021, Schwab commended China for its "many initiatives" undertaken "in the spirit of creating a world where all actors assume a responsible and responsive role."

"Mr. President, I believe this is the time to reset our policies and to work jointly for a peaceful and prosperous world," Schwab said to Xi.

**'Capitalism as we have known it is dead'**  
At the 2021 Davos meeting, a Fortune 500 CEO [affirmed WEF's assertion that "capitalism as we have known it is dead."](https://www.weforum.org/agenda/2020/01/quotes-on-the-future-of-capitalism-davos-2020/)

[Marc Benoiff, the CEO of Salesforce, which is regarded as a pioneer of cloud computing, said](https://www.wnd.com/2021/06/g7-affirms-anti-capitalist-great-reset-exploit-covid-crisis/) the "obsession" with "maximizing profits for shareholders alone has led to incredible inequality and a planetary emergency."

WEF and its allies advocate "stakeholder capitalism," meaning that rather than pursuing profits, companies would "pursue the wellbeing of all people and the entire planet."

Notice that this is a banker telling the guy with the guns and the satellites what he expects of the Reset. We win, and you lose.

Ahead of the January meeting, [Schwab published an op-ed about the need for a "Davos Manifesto" for "a better kind of capitalism."](https://www.weforum.org/agenda/2019/12/why-we-need-the-davos-manifesto-for-better-kind-of-capitalism/)

"Business leaders now have an incredible opportunity. By giving stakeholder capitalism concrete meaning, they can move beyond their legal obligations and uphold their duty to society," the WEF founder wrote. "They can bring the world closer to achieving shared goals, such as those outlined in the Paris climate agreement and the United Nations Sustainable Development Agenda. If they really want to leave their mark on the world, there is no alternative."

After the November 2020 election, [WND reported](https://www.wnd.com/2020/11/4871642/), former Secretary of State John Kerry and European Commission President Ursula von der Leyen said in a WEF panel that a Joe Biden presidency would help propel the "Great Reset" plan.

"The notion of a reset is more important than ever before," Kerry said. "I personally believe ... we're at the dawn of an extremely exciting time."

Kerry, who has since been appointed Biden's climate czar, said the rejoining of the Paris Climate Accord by Biden would help drive the "Great Reset." But rejoining Paris is "not enough," Kerry said.

"The Biden administration will focus on every sector of the American economy," he said. "There will be a 2035 goal to achieve net neutrality with respect to power and production.

Kerry said the U.S. is "ready to come back in and help to lead and raise the ambition in Glasgow to accelerate this incredible capacity for a transformation in the private sector."

Last June, [the White House published a statement](https://www.whitehouse.gov/briefing-room/statements-releases/2021/06/11/fact-sheet-president-biden-and-g7-leaders-to-announce-steps-to-forge-a-more-fair-and-inclusive-global-economy/) announcing Biden was set to meet with G7 leaders "to discuss ways to forge a more fair, sustainable, and inclusive global economy that meets the unique challenges of our time." Among the White House initiatives toward that end is pushing for a "global minimum tax" on multinational corporations of at least 15%.

Last year, America's doctors, nurses and paramedics were celebrated as frontline heroes battling a fearsome new pandemic. Today, under Joe Biden, tens of thousands of these same heroes are denounced as rebels, conspiracy theorists, extremists and potential terrorists. Along with massive numbers of police, firemen, Border Patrol agents, Navy SEALs, pilots, air-traffic controllers, and countless other truly essential Americans, they're all considered so dangerous as to merit termination, their professional and personal lives turned upside down due to their decision not to be injected with the experimental COVID vaccines.

Biden's tyrannical mandate is designed to cripple American society – from law enforcement to airlines to commercial supply chains to hospitals. It's already happening. But the good news is that huge numbers of "yesterday's heroes" are now fighting back – bravely and boldly. The rebel alliance can defeat the Global Syndicate, because we are the ones flying the planes and sewing up the injuries. We are the ones making the gasoline and transporting food and keeping the lights on; not them. We must use the weapons we have to beat this enemy of humanity.

**The NATO War: Ending Before it Begins**

Apparently invoking the International Law of Responsibility To Protect (R2P), Moscow early on Sunday morning,  issued a statement saying: Moscow will not allow its citizens to be killed in Donbass. All measures of international law will be applied to protect Russian citizens against deadly weapons brought by NATO to Kiev forces.

This is literally priceless; Russia is using the weapons supplied by NATO as the pretext for a "Responsibility To Protect" the Russians in The Donbas (The Oblasts of Luhansk and Donetsk inside Ukraine.)

As a matter of International Law, NATO basically slit its own throat by providing so much lethal weaponry, and doing so publicly.  NATO was fully aware that Ukraine was sending most of that weaponry to the line of control at the Donbass, (Luhansk and Donetsk) which is where all those 500,000 or so Russian citizens reside.

**Now, Russia has the legal means by which to justify entry into Ukraine with its military:** **Responsibility To Protect.  They may actually commence military entry TODAY!**

The Amateurs in the Biden regime are about to find out how their lack of experience, ignorance of history, and arrogant presumption, has now backfired on them completely.

An air cargo jet operating under US Transportation Command, took off from Kiev, Ukraine after delivering 200,000 pounds of Ammunition.  It then violated the air space of Belarus, violated Russian Air Space and "disappeared" from flight tracking as it entered Kazakhstan.  Was it shot down?

The flight, National Airlines Charter Flight NCR574 for STATE/DOD, landed late last night in Kiev, Ukraine to offload two hundred thousand pounds of ammunition; part of the "lethal" aid being given to Ukraine by the United States.

But when the plane took off from Kiev this morning, instead of heading back toward Germany where it originated, the plane flew due north and violated Belarus air space.   It then turned sharply eastward and violated Russia air space, and continued to do so for several HUNDRED miles!  **It overflew the precise region of Russia where all the Russian troops are massed for potential action against Ukraine!  Spy much?**

Shortly thereafter, the plane turned east again and entered the air space of Kazakhstan, where it "disappeared" from flight tracking.

Is this the "provocation" people have been waiting for which will be used as an excuse to drag the US into a war with Russia?

Stay tuned.

**UPDATE 12:42 PM EST --**

As if the situation with the US military-chartered cargo plane above wasn't freaky enough, get a load of this:

**A Russian fifth generation fighter jet, an SU-57 . . .  simply "appeared" over Kiev, Ukraine! ! ! !**   One minute it wasn't there, the next minute it was . . .  and then it was "gone" again.

Radar flight tracking shows the story . . . and check out the ALTITUDE 1150 feet.  Do you have any idea how LOUD that would have been on the ground?  The Sukhoi-57 is Russia's premier Stealth Fighter. Apparently, it can cloak and uncloak in the night sky, showing off its battle advantage at will.

So, did all of us just get to SEE just how awesome the new Russian technology actually is? The Russians managed to sneak a fully armed, fifth generation, stealth fighter jet all the way to the Capital city of Ukraine without being noticed? Did they then turn off the stealth, and turn on the flight tracking to PROVE they were actually there, as a demonstration to Ukraine of what they are actually facing if they continue with their war nonsense?

If this aircraft did sneak all the way into Ukraine unnoticed, what does this say about US and NATO radar capabilities?   Maybe we just got our ass handed to us by Russia technology? The question we need to ask is where else have these jets been that we did NOT see?

Most of you are aware from reports in mass media for several months saying "Russia is massing troops along Ukraine's border."  What those reports completely failed to say is that this was in response to Ukraine massing almost fifty percent of its entire army along the border of two breakaway states: Luhansk and Donetsk.

Those two states in eastern Ukraine, want to leave Ukraine and join Russia, but the government of Ukraine won't allow it.

The reason those two states want to leave Ukraine is that back in 2014, the US, the European Union (NATO) fomented riots and protests inside Ukraine that resulted in their President, Viktor Yanukovich, being **overthrown**.

It all started years earlier when the US/EU tried to "woo" Ukraine into moving away from Russia's sphere of influence, and into the sphere of influence of Europe and the US.   The US/EU spent billions through non-governmental organizations (NGO's) to provide "aid" to Ukraine.  The aid went to citizens and to groups inside Ukraine, NOT to the Ukraine government.

After a number of years of providing this "aid" the US/EU approached the Ukraine government and said "Look, we've supported you and your people, we are the future for Ukraine.  You really have no future if you remain loyal to Russia, we want you to officially come to us and become part of the EU."

Viktor Yanukovich decided not to sign the WEF debt trap and accepted Putin’s deal instead. So Johns McCain and Kerry fomented protests, civil unrest, riots, and Victori Nuland flew in her Army snipers to assassinate more than 100 Ukrainians in the streets to make the point that the country was going to destroy itself through all these troubles. Yanukovich fled the country and the Ukraine government collapsed, almost according to plan.

Quite conveniently, the WEF thugs were right there to lend a hand . . . and backed new government candidates that would be favorable to the West.   A puppet government was installed. We saw what happened and tried to tell you the truth as it happened. They lived through it.  And they - like most free people - did not like that their President, a man THEY voted for, had been forcibly overthrown.  They didn't want any part of this new puppet government.

Now, in southern Ukraine is a peninsula called Crimea.  It sits on the Black Sea.  There's a major Russian Navy Base there and that base is of particular importance to Russia because it is the only warm water port they have in the coldest parts of Winter.  All their other ports freeze. Most of population in Crimea and Ukraine are Russian. They speak Russian. They have relatives in Russia. Crimea voted to be annexed to Russia to keep NATO from advancing their military hardware and troops to their country. They didn’t want to be part of NATO. They did not want to be a target of Russian weapons, so they voted to be annexed to keep NATO out. A Referendum was held asking if citizens in Crimea wanted to return the land to Russia.  About ninety percent of the vote said "Yes."

They established a free trade treaty with Russia.

So it is in the national security interests of Russia to make sure they keep that port.   Keeping the port with a new, puppet government in Ukraine, may not have been possible. Putin used the Treaty they had with Ukraine, to add the number of troops the Treaty allowed, to that port.  They raised their troop presence to about twenty five thousand.

After the Referendum, the Russian Duma (their version of what Americans know as Congress) enacted legislation accepting Crimea back into Russia and the people there would all be granted Russian citizenship.   Done deal, right?  Wrong.

The EU and US refused to accept the results of the Referendum. The EU and US slapped Sanctions upon Russia, calling the Crimea an "invasion" or an "Annexation" and demanding Russia "give back" the land.   McCain and Kerry were almost powerless to stop the people’s action. Almost.

After Crimea was able to return to Russia, two other parts of Ukraine, Luhansk and Donetsk, wanted to return to Russia too.   But **Ukraine wouldn't allow it** and sent troops to take over those two breakaway states.  Heavy fighting ensued as the militias of each state engaged the Ukrainian army in battle. This is why NATAO is importing Nazi troops—which include Al Qaeda fighters and mercs—with heavy weapons into Ukraine.

The fighting went on for a couple years and suddenly "Little Green Men" started appearing in Luhansk and Donetsk.  They were fully trained, professional soldiers, with full gear, but no patches or flags on their uniforms.   It was clear very fast that these were, in fact, troops from the Russian Army, sent in to help the two breakaway states defend themselves from being taken over by the Ukraine puppet government in Kiev, it's capital.

Over 14,000 died in the fighting between the Ukraine Army and the breakaway states of Luhansk and Donetsk. You don’t hear a peep in our news about this. You have to listen to this program to hear this news.

Then in 2016, all the troubles just . . . stopped.   It was like someone flipped a switch.   That switch was the November, 2016, US Presidential election, wherein Donald Trump won and Hillary Clinton lost.  Like magic, most of the troubles in Ukraine simply just stopped. For the four years of the Trump Administration, Ukraine remained quiet. The corruption stopped. The blood money stopped. And let me tell you, the Clinton/Biden machine was mad enough to kill. They were willing to kill half the planet if that’s what was required to get back their checkbook.

The November 2020 US election rolled around and the Democrats in the US stole the election through rampant and brazen election fraud. Ballots-R-Us ran an A.I. driven counterfeit ballot insertion program that was the biggest heist in history. Once they got their hands on the keys, they locked out justice and hunted down their enemies.

Like magic, when Joe Biden got sworn in, the troubles in Ukraine started again with gusto.   Ukraine began massing more and more troops and armor near Luhansk and Donetsk.  So, in February of this year, Russia started massing troops along the Russian border with Ukraine.  Russia was going to protect the Russian-speaking populations in Luhansk and Donetsk. Putin was not going to allow NATO to invade another yard into Ukraine.

What did the Global Media Empire do? They immediately began running the propaganda 24 hours a day.  Russia, they claimed, was massing troops.  They deleted the fact that it was in response to NATO forces massing troops inside Ukraine.   Russia, they claimed, was a "threat."  They never mentioned what NATO was planning and implementing in Ukraine: to take Luhansk and Donetsk by force to prevent them from joining their families in Russia and saving themselves from the WEF debt trap.

Putin moved some (but not all) of his troops, from the Ukraine border area to elsewhere.   Things quieted down.

**THE PLAN REVEALED**

It finally became publicly known that the US and EU, through NATO, wanted to place US Missile "Defenses" on the territory of Ukraine.  **This had been their plan all along . . . all the way back to the overthrow of Yanukovich.**

They want to place US high speed missiles in Ukraine because at that location, those missiles will only have a flight time of about 5 minutes to Moscow and about 7 minutes to Russia's strategic nuclear missile silos.  The flight time would mean Russia would be unable to defend itself in time; a threat the Russians take very seriously and have publicly stated they will not allow.

The message was terse and short. Back off or be destroyed where you stand.

This is reminiscent of what Americans recall as "The Cuban Missile Crisis" in the early 1960's.   At that time, US military spy planes got photos of then-Soviet Union Medium range, and Intermediate Range nuclear missiles being assembled at launch sites in Cuba.   The military alerted then-President John F. Kennedy.

Kennedy asked his Generals how long it would take missiles launched from Cuba to reach Washington, DC.  They replied "5 minutes."   Then they added information that the other missiles, the longer range Intermediate" missiles, could reach almost all the other cities in the US within about 7-10 minutes, and if a First Strike was done, the US would lose about eighty percent of our population in the first strike.

President Kennedy decided right then and there that those missiles had to go.   Either the Soviet Union had to take them out, or the US would invade Cuba and destroy those missiles.

It turned out that the Soviets put those missiles there BECAUSE . . .  the US had placed Jupiter Missiles, that could hit the Soviet Union within about 5 minutes, in Incirlik Turkey.   You recall during the Obama administration an effort to surround Incirlik and take over those nukes. The Chairman of the Joint Chiefs at that time, Marine General Dunford, flew to Incirlik and fired the base commander and no one knows what happened to those nukes. Erdogan was not happy, because Clinton was friends with Fethula Gulen, who evidently had planned a Coup against him. Dunford expressed solidarity with Erdogan, but the possession of the nukes stored there was never established after than.

Anyway, that is why the Soviets, fearing they would be attacked in a first strike, responded by putting missiles of their own on Cuba, within 5 minutes strike time of the USA. It’s why Putin is being so bold now. And one thing everyone in the world knows, is that Virtual Joe is not in charge of the military. Someone else is running things. That someone may be forces loyal to President Trump and the patriots.

For thirteen days, the world teetered on the brink of actual nuclear war, we later found out.  I remember those days, because every day we practiced dying in a nuclear attack while in school. Because once the Soviet Union found out that the US knew about the missiles in Cuba and would attack, the Soviets had a choice: Use them or lose them.

Thank God there were men of good will on both sides, and the missiles were removed by the Soviet Union.  Word of this removal came via shortwave radio broadcast from Radio Moscow and was later confirmed via teletype between Russia and the USA.  But for about eight hours, no one knew if the Soviets would use them.  The world was literally eight hours away from all-out nuclear war.

Here we are fifty years later, and**the US is doing the same thing to Russia.**  We want to place our missiles within five minutes strike time of Russia and President Vladimir Putin, just like former President John F. Kennedy, won't allow it.  It simply cannot be. Make no mistake, Earth explorers. Russia is not the Soviet Union. NATO should have been dissolved the day after the USSR fell apart.

No reasonable person can blame him.  Because the nasty little secret about those US missile "defenses" that we want to put in Ukraine, is that the warheads can be swapped-out in less than an hour, changing them from defensive missiles with conventional warheads, to offensive missiles with nuclear warheads, **and no one would know the warheads had been swapped-out.**

**The bottom line is that the EU wants the gas locked up in Russia without having to pay for it. Russia could be decapitated of their capital city and their defensive nuclear missile silos, and be left defenseless all within ten minutes.**

There is no way on God's earth, that Russia is going to sit back and let this happen.  They can't. It's a matter of survival for them.

**RUSSIA PROPOSES SECURITY GUARANTEES**

Four weeks ago, Putin proposed as legally enforceable security guarantees he demands from the US/EU (NATO).  He points out that NATO has expanded and expanded since the fall of the Soviet Union, and that NATO has now, literally, come right up to Russia's front porch in Ukraine.  He says "we have nowhere else to retreat to."

They put out their proposals twice.  The first one went to NATO and, within eight short hours, NATO boss Jens Stoltenberg dismissed them out of hand by simply saying "no." "Russia" he said "could not have the guarantees it wants."

So three or four days later, Putin issued the same proposals, only this time, had them delivered by official Diplomatic Staff to the leaders of each NATO country.   In that second proposal, he made clear that Russia MUST have security guarantees and if they cannot achieve that by Diplomatic means, then they will achieve that "by other means."

Most rational people understand "other means" to mean, war.

The proposals sat for a couple weeks, and a meeting date was set by NATO for January 10.  The two sides will met in Geneva, Switzerland. This did not age well.

Just as the food was being ordered in for the meeting, organized forces attacked in Kazakhstan. President Tokayev called Putiin and asked for assistance, and within hours the CSTO was there to stop the NATO forces threatening to take over the country. Within a few days, Putin’s troops left, and the Kazak president resumed control. The minister of security, who was loyal to the old, corrupt president, was imprisoned for treason.

Protests and riots began suddenly in almost every major city, with tens of thousands taking to the streets.   But while they tried to claim these were grass roots protests against a government that raised fuel prices, video emerged showing private cars pulling up at these protests, popping the trunks, and out came dozens of . . .  machine guns!

The NATO and the Global Syndicate was doing in Kazakhstan, what they did in Ukraine back in 2014.  They are trying to forcibly overthrow the government of Kazakhstan and install a puppet government there, too.

Why?  A map tells the story:

Kazakhstan borders Russia.  In fact, they share "the longest land border in the world."   Oh, and Russia's space launch facilities; are in Kazakhstan.   So the location of Kazakhstan, and Russia's space capabilities, are all at stake if Kazakhstan gets overthrown.

Geographically, if Kazakhstan falls, and a NATO-favorable government is installed there, US missiles can go there and still have only a short flight time of about 7 minutes to Moscow and about 10 minutes to Russia's nuclear missile silos.

The Syndicate is not only NOT giving Russia any security guarantees, it is actively trying to worsen Russia's situation by taking over Kazakhstan.

This time, Russia did not wait to act as they did when Ukraine went sour.  This time, when the President of Kazakhstan asked for help, it took only thirty minutes for Russia to approve deployment of troops into Kazakhstan to assist that government.

Russia, and other members of the Collective Security Treaty Organization (CSTO) sent troops immediately.  What did they encounter?   In Almaty, Kazakhstan alone, they arrested over Four-thousand (4,000) men with machine guns, hand-grenades, and rocket-propelled grenades! My friends in Almaty say the attackers were professional terrorists. They fought with heavy weapons, but they were no match for the CSTO.

**Proof:**

**03/04/2021 . (April 4, 2021)**US allocates USD 1.5 million for "human rights preservation in Kazakhstan." **19/04/2021 (April 19, 2021)**US Embassy in Kazakhstan begins official "tender" to find "willing organizations" to distribute money. **22.04.2021 (April 22, 2021)**US again allocates money to "strengthen the media landscape in Kazakhstan." **20.05.2021 (May 20, 2021)**The USA provides money in the amount of 240 million USD to build up military bases in 20 countries, including Kazakhstan, Uzbekistan, Tajikistan and Turkmenistan (whether the governments of the countries ever agreed to this? ).Thus, as you can see above, once Russia began moving its troops back toward the Ukraine Border in February into March, and the West realized they were going to have an actual fight on their hands over Ukraine, the Global Syndicate regrouped and their politicians in Washington began throwing money at Kazakhstan.  They decided THEN, back in March, they were going to move to destabilize Kazakhstan, and in April they started openly allocating the money to make it happen. **But wait . . .  there's more!  
  
Dec 16, 2021.**The US Embassy in Kazakhstan issued a travel warning for major Kazakh cities because of "upcoming demonstrations and warns of possible riots and mass arrests.  
Source:  
[https://kz.usembassy.gov/demonstration-alert121521/]

**Well, well, well.  That's some magic Crystal Ball the US Embassy in Kazakhstan has.   They issued travel warnings about demonstrations and mass riots three full weeks BEFORE there was even any sign of such things.   Gee, I wonder how they could have known?  Maybe because THEY THEMSLEVES were arranging all of it?**

 With that uprising in Kazakhstan, Russia got its answer from the West.  **There will be no security guarantees, and NATO will continue encircling Russia.**

After troops from CSTO countries basically halted the uprising in Kazakhstan, and it became clear the US/EU/NATO had been caught fomenting another Ukraine, Jens Stoltenberg from NATO came out publicly and told Russia "No. There will be no security guarantees."

So NATO is deliberately choosing war, because they want the gas, and they don’t want to keep paying real money for it.   They are deliberately provoking war with Russia.  There is no doubt about it. It is not that NATO thinks they can win such a war. It is that this is a method the Global Syndicate has been using for thousands of years, and it does not care in millions of innocent people die. In fact, history proves that they actually enjoy it.

Apparently, they think Russia "wouldn't dare" use nuclear weapons in such a situation.

They are wrong.   Putin has studied this for decades, and he believes that Virtual Joe and his gang of criminals are greedy, sick, and weak. They do not have the will to fight, and thus they will surrender Russia and Ukraine to Putin rather than have their own skylines turned to rubble.

Virtual Joe’s administration will implode with fear. The general core is filled with pussies who do not know how to fight. Patriots stand with truth, and we will not march into a banker’s war again. Ever.

I believe they already have nuclear missiles in Kaliningrad, a small patch of land between Lithuania and Poland which is still Russia.  This would afford five minute flight times of nukes to all European capitals.  Once the weapons are wired, Europe will cease to exist. There is no leadership that will walk into that fight; especially with a man who does not bluff.

Putin may demonstrate his new anti-satellite weapons and take out NATO GPS and Communications satellites?  I think this is VERY LIKELY. No one would die, but the entire continent would grind to a halt. No one but governments would know – unless you listen to this program - if Russia takes out satellites.  People on the ground in Europe would simply see their GPS not working.

The very next thing that Russia might do, is something that average Americans can watch for: **Attacks against our over-the-horizon radar sites.**

There are FIVE (5) over-the horizon radar sites, four on north America, three being in US, one on Greenland and the last in the UK.  They are:

Cape Cod, MA

Beale AFB, California

Clear Air Force Base, Alaska,

a fourth in Greenland at Thule Air Force Base and a fifth at Flyingdales Air Base in the United Kingdom.

The map below shows the base locations and the area covered by their over-the-horizon radars: (Click map to enlarge)

[Diagram

Description automatically generated](https://halturnerradioshow.com/images/2022/01/08/PAVE_PAWSBMEWSsvg.png)

Of all these sites, Cape Cod is the most likely to be hit.   It protects the US east coast, and putting that out of service would open the door to submarine launched missiles coming in from the Atlantic.   We would be blind as a bat and deaf as a post without the Cape Cod radar station.

A single missile could hit the giant radar array building and knock it out.  Here is what the facility looks like:

[A picture containing outdoor, mountain, transport

Description automatically generated](https://upload.wikimedia.org/wikipedia/commons/thumb/0/0a/PAVE_PAWS_Cape_Cod_AFS_1986.jpg/2560px-PAVE_PAWS_Cape_Cod_AFS_1986.jpg)

Here's a up-close image of the radar building:

A picture containing sky, outdoor

Description automatically generated

And here's a super-up-close image of what the stop-sign-shaped radar emitters look like:

A picture containing text, crowd

Description automatically generated

With these types of radar stations, we can see literally over-the-horizon and get several MORE minutes of advance notice if we are being attacked.  Without these particular radar stations, we'd have less than five minutes warning that missiles were inbound.

**If you hear reports that anything has taken place at any or all of these particular radar stations, that is your confirmation that World War 3 has already started and that nuclear missiles are inbound.**

These radar would have to be taken out shortly before Russian missiles come out of their silos or out of their submarines off our coasts.

Under normal circumstances, our satellites would normally detect missile launches.  The heat signature of the rocket motors is very visible to our satellites.  After a satellite missile LAUNCH detection, we would next go to our radar to confirm and to track the missiles.

If Russia takes out our satellites, as they have now proven they can, we won't know if there's a launch.

Intelligence information given to me last night reports that, incidentally, all the Russian MiG aircraft which are capable of launching anti-satellite rockets, **are now being fueled, and made ready for flight in Russia.**

With our Satellites gone, we would then have to rely solely on our radar.   If these radar get taken out, then you have confirmation that an attack is already underway and the nukes are already inbound. There would be no other reason whatsoever, to take out the radar, except to prevent tracking of the inbound missiles.

Nukes launched from inside Russia would arrive in about 30 minutes, unless they use their new Hyper-sonic, which would arrive in about ten minutes.  Nukes launched from Russian submarines at sea, would arrive in about 6 minutes.

So if you hear of any incidents at any of these radar stations, you have literally **only minutes** to get to shelter to ride it out.

**RUSSIA PREPPING NOW**

Over two weeks ago, seven IL-76 cargo aircraft from the Russian Air Force, took off from a base in Belarus.  They were initially THOUGHT to be heading to Kazakhstan with troops and equipment.  They weren't.

[Map

Description automatically generated](https://topcor.ru/uploads/mini/medium/6c2/ede37628ae3db1629c725e3d7e46e.jpg)

The aircraft headed to Mount Yamantau in the south Ural Mountains.   Here's a scalable map of the complex:

 Satellite images show the planes offloaded cargo of a type that is best described as "Strategic Resources."   That means they are the final supplies one might expect to see being brought into a **Doomsday Bunker.**

Since the Soviet era, the military in Russia has been building a vast - gigantic- doomsday city, thought to be the literal size of about Washington, DC, deep underground at that mountain.

The fact that Russia is now flying "strategic supplies" to that doomsday bunker is evidence they anticipate using it soon.

Many will fall back to the old - and no longer valid - concept of "Mutual Assured Destruction" (MAD) and tell you there's no way Russia would launch a nuclear strike at us because it means they would be destroyed too.

**Not true anymore.**

Russia has hypersonic missiles.  **We do not**.

Their hypersonic missiles can be launched and strike us before the order for our missiles to launch ever gets them out of their silos.  Their missiles can hit before ours get launched.

Russia has the S-500 air defense system.  **We do not.**

The S-500, and its brand new incarnation, the S-550, can take out our inbound nukes.   Maybe not get all of them, but get enough of them for Russians to survive.

**We have no reliable missile defense**, despite having spent billions over decades.   In fact, the sum total of our missile defense, is forty (40) missile interceptors.  Some in Alaska and others at Vandenberg Air Force Base in California.   What the hell are forty interceptors going to do against a full scale first strike?

Russia has specially constructed bomb shelters stocked with food, water, medicine, tools.  **We do not.**

Last year, Russia held a special, well-announced-in-advance, bomb shelter drill with its civilian population.  They successfully put FORTY MILLION civilians into bomb shelters throughout the country, very fast.   The US and NATO, **have no such bomb shelters and conduct no such civilian drills.**  Our people are left out in the open, to fend for themselves.

**The War No One Wants, but Democrats Need**

Not since Roosevelt stole the 1940 election out from under John Nance Garner at the brokered Convention in Chicago have the Democrats needed a war so badly. Unless you count the 90-day war Hillary started in Kosozo to get her whoring husband’s name off the headlines. Except for that war.

Biden’s multiple unfolding disasters, which blew up in his face like a pack of exploding cigars over the last 10 days or so, are almost unanimously self-inflicted. The tankers running his government from Brussels are doing their best to destroy America, but in doing so are exposing the Democrat Party as the political death squad for the Global Syndicate.

They tried every dirty procedural trick in the book to kill the filibuster to pass a “voting rights” bill which eliminates voter ID — something nearly four-fifths of the American people support. That’s the wrong side of history. The bill institutionalizes practices like ballot harvesting and allowing illegals to vote? They want Ballots-R-Us to have free and unfettered access to drop boxes up to 10 days after the election is over to ensure they win the offices they need to maintain control of the national checkbook. Americans see through it. They want it stopped. Maybe the tankers will write a bill the Susan Collinses, Bill Cassidys and Mitt Romneys can support, and you won’t have to worry about the filibuster.

That obvious solution didn’t seem to penetrate the skulls of the think tank managers who use Congress for sex and get Virtual Joe to sign anything they can get to his desk. These are the same people who not only steadfastly believe that accusing every Republican not named Adam Kinzinger or Liz Cheney of being a seditionist and a traitor for questioning various items among their 2020 electoral practices is a moral thing to do, but also that it’s a sound political strategy.

To say that strategy has blown up in their faces thus far would be charitable. America Free Radio and associates in the real main stream media have been able to keep patriots around the world informed and empowered to stop the Global Syndicate at every turn.

Inflation at a 40-year high? 7% is bullshit. Everyone sees the truth of 36% hyperinflation killing the dollar no matter how tightly Americans hold onto it. Maybe don’t drop trillions of dollars out of helicopters while instituting piles upon piles of regulatory abuse while paying people not to work, and you wouldn’t have a problem. The Democrat’s politically poisonous actions are intractable, especially when Virtual Joe’s gang of criminals is full of malevolent economic illiterates.

Supply chain troubles? Store shelves empty? Meat packers and retailers cannot be blamed anymore. America knows who’s in charge at the Department of Transportation, and Buttcrack isn’t what you’d call the most confidence-inspiring bureaucrat we’ve ever seen. It’s YOUR supply chain, Joe, and we’re going to blame you when it’s broken.

Supreme Court not impressed with your vaxx mandates? That’s too bad. Of course, you yourself said it was a proposition of dubious constitutionality, before you panicked and tried to impose it anyway. Now you’ve been humiliated in terms as stark as any president has ever been by the Court, with a lot more to come in all likelihood. And by the way, the Omicron variant of COVID has destroyed every facet of the Biden virus policy, and there is no longer any debate to be had as to which of the last two presidents has most abjectly failed to shut down the Chinese virus.

Virtual Joe started last week with an approval rating of 33 percent and things actually got worse from there.

And then a crazed Muslim who’d been in America for a grand total of two weeks proceeded to take hostages at a Texas synagogue over the weekend, and the Biden administration couldn’t bring themselves to call it jihad.

None of these events seem to be the major cataclysm which finishes Biden off, which provides the final scene to the third act of this American version of MacBeth. The scary thing is, we haven’t come up against that item yet — and there are three years left for us to do so.

As this column has said several times, the truly frightening thing about the deepening, widening vortex that is the Biden regime is that as he drowns in his own mistakes, he will become more unstable and more dangerous, and he’ll do more damage.

Which brings us to my point. We are in the most dangerous times since the founding of this country. Much more dangerous that the plot to suck America into a war that killed 85 million people. Why? Because the weapons are a million times more powerful.

This flailing president seeking relief from his critics might do the unthinkable — or at least respond unnecessarily to circumstances in ways which produces the unthinkable.

What do all tyrants do when their ship is sinking or, more accurately, when they realize that their house of cards will not hold up?  They divert their populace by starting a war — or at least allowing one to happen.  War isn’t simply a way of diverting attention, either.  Not anymore. Not this kind of war. An emergency war makes it far easier to erode or negate whatever civil liberties still exist.  Think: PATRIOT Act. Who wasn’t on board when they came to strip search you at airports? How about tapping your phones? How about eaves dropping on your emails? Feel safe?

Currently, war beckons in two places: the Russian-European border and the South China Sea and Taiwan.  They are two very different scenarios, but both are being pile-driven by the Global Syndicate. China needs to cash in on Taiwan, the same as they did with Hong Kong. They’re broke. Putin needs to keep NATO aggression in check. If he doesn’t, his country will be attacked, and all the gas will then belong to Brussels. NATO is not going to stop unless they are stopped, by force. The CCP will not stop unless they are stopped by the Chinese people.

Democrats need a war. Any war. They need people to die. They always need people to die. Who dies? Middle class sons and daughters. If they could get Wars-R-Us to deliver, gone would be the rightful concerns about vaccine madness, dementia, runaway inflation, Big Tech/mass media fascism, corrupt education unions, failing Democrat cities, ginned up racial hatred, attacks on the Second Amendment, the federalization of elections, a corrupt FBI and DOJ, election fraud, the Russia Hoax, parental rights and school boards, an open southern border, and on and on.

The Global Media Empire would put on the war show, 24 hours a day.

Biden (and Harris, if there’s room) will wrap themselves snugly in the flag, and all will be forgiven.  For a while.  But the theft of civil liberties will make a “comeback” highly unlikely for freedom.  The Establishment Party will own everything; again. Just like they did during the 30 years war that started with Wilson’s sacrifice of the Lusitania.

Exactly. We still remember *Wag The Dog* because it was both completely absurd and entirely realistic all at the same time. We’re in an eerily familiar situation with highly untrustworthy people in our leadership who don’t deserve the benefit of the doubt. Clinton had her Kosovo, after all, George W. Bush had his Iraq, and Obama had his Libya, and Chris Stephens was small price to pay to become wealthy beyond reason and start his OFA army inside America. Biden hasn’t had his distractive foreign excursion yet.

And the world is full of hostile tyrants licking their chops at the prospect of capitalizing on the destabilizing weakness of America’s leadership. China leers greedily at Taiwan, Russia masses troops on its border with Ukraine, Iran considers its options.

One possibility closer to home your author can foresee is Venezuela, which represents the logical, perhaps inescapable outcome of the Global Syndicate’s policies, attempting to solve their national implosion with [aggressive military action against Guyana](https://globalvoices.org/2021/01/12/venezuela-refuels-its-territorial-dispute-with-guyana-in-area-with-massive-offshore-oil-find/), in whose waters a massive oil find is being prepared for development and production.

Political tensions between Guyana and Venezuela are escalating in a [longstanding border dispute](https://en.wikipedia.org/wiki/Guyana%E2%80%93Venezuela_relations#:~:text=Border%20dispute,-Main%20article%3A%20Guayana&text=A%20border%20commission%20was%20set,States%20(OAS)%20in%201967.&text=The%20zone%20at%20issue%20is%20west%20of%20Guyana's%20Essequibo%20River.) over an area that comprises [two-thirds](https://en.wikipedia.org/wiki/Guayana_Esequiba) of the smaller English-speaking South American country. The area in question is the resource-rich Essequibo province, where energy giant ExxonMobil began [oil exploration](https://corporate.exxonmobil.com/Locations/Guyana/Guyana-project-overview) in 2008. The company [recently discovered](https://www.stabroeknews.com/2018/06/13/news/guyana/exxon-still-on-course-for-first-oil-by-march-2020/) significant oil and gas reserves in Guyana, placing the country on [the threshold](https://www.economist.com/the-americas/2020/02/27/ahead-of-oil-riches-guyana-holds-a-decisive-election) of an economic boon.

On January 9, Venezuelan president Nicolás Maduro [announced](https://www.argusmedia.com/news/2175764-venezuela-saberrattles-over-guyana-us-wades-in?amp=1) that he would “reconquer” the province, which is situated to the west of Guyana’s Essequibo River. While the area’s riches include gold, diamonds and timber, the focus of Venezuela’s claim is offshore—the location of ExxonMobil’s massive [Liza oil field](https://www.youtube.com/watch?v=wuNhqTX4gyw), which the company estimates will produce approximately 120,000 barrels of oil per day. In its project overview, ExxonMobil describes the area as part of the [Stabroek Block](https://www.offshore-energy.biz/exxonmobil-sanctions-third-development-in-stabroek-block-off-guyana/), [calling it](https://corporate.exxonmobil.com/Locations/Guyana/Guyana-project-overview#DiscoveriesintheStabroekBlock) “the first significant oil find offshore Guyana.”

Russia and China have both backed the Maduro government. American adventurism in the south Caribbean, while it may well be warranted from a geopolitical standpoint, nevertheless carries the risk of world war.

Mullin closes his piece with a warning:

Nothing catalyzes governmental, economic, and social change in a country quite like military defeat.  So an urgent message to those still with a shred of patriotism in our leadership: You do *not*want to go to war under the banner — or at the direction — of this repugnant administration.

He’s right, and the American people are largely at the mercy of the repugnant administration where war is concerned.

It’s time for Americans to demand — loudly — reform to the War Powers Act and to take the unilateral power to make war away from Joe Biden. He can’t be allowed to deploy troops without a congressional declaration of war. Not in his current cognitive state, and not in the current condition of his administration. And not given the sad history of fruitless, ill-advised wars for political purposes bad American leaders have become accustomed to launching.

**Carrier Group Under Way**

The USS *Harry S. Truman* aircraft carrier strike group was heading for the Mediterranean on Sunday amid rising tensions between the West and Russia.

The nuclear-powered Nimitz class warship and her 5,000-strong crew will take part in NATO exercises called Neptune Strike 22, AP [reports](https://www.breitbart.com/news/us-announce-naval-exercises-in-mediterranean/).

Naval Striking and Support Forces NATO, led by 6th Fleet Commander Vice Adm. Gene Black, is overseeing the joint international deployment.

The exercises are set to begin Monday and run through Feb. 4, and will “demonstrate NATO’s ability to integrate the high-end maritime strike capabilities of an aircraft carrier strike group to support the deterrence and defense of the alliance,” Pentagon press secretary John Kirby told reporters.

He added the strike group, along with several other NATO allies he did not name, “will participate in coordinated maritime manoeuvers, anti-submarine warfare training, and long-range strike training.”

Kirby insisted the war games had been “long-planned,” since 2020, and were not in response to the recent Russian military aggression near the Ukrainian border, though the drills are not listed on NATO’s website among exercises slated for this year.

The announcement came a day after Russia announced its own all-out naval exercises, with more than 140 warships and about 10,000 soldiers taking part in January and February in maneuvers that will take place in the Atlantic, the Arctic, the Pacific and the Mediterranean.

The U.S. and Western allies have watched as the steady rise of Russian troop numbers near the border grew to a peak of an estimated 100,000, driving fears that Moscow was preparing to invade Ukraine.

Russia annexed Ukraine’s Crimean Peninsula in 2014 and shortly after threw its support behind a separatist rebellion in the country’s east. Over more than seven years, the fighting has killed over 14,000 people and devastated Ukraine’s industrial heartland, known as the Donbas.

Kirby acknowledged tensions with Russia had sparked discussions among the allies on the holding of exercises, although Russian naval capabilities are still a largely unknown quantity.

“There was due consideration about — given tensions right now — about our exercise posture. And after all that consideration and discussion with our NATO allies, the decision was made to move ahead,” he told reporters.

The strike group includes five U.S. ships —- the cruiser USS *San Jacinto* and the guided missile destroyers USS *Cole*, USS *Bainbridge*, USS *Gravely* and USS J*ason Dunham*.

The carrier was to join the area of operations of the central command (Centcom) but U.S. Defense Secretary Lloyd Austin decided at the end of December to keep near the Mediterranean to “reassure” Europeans amid tensions with Russia.

Any further engagement beyond regional exercises is subject to debate.

As Breitbart News [reported](https://www.breitbart.com/politics/2022/01/21/poll-little-support-for-military-involvement-with-russia-and-ukraine/), Americans largely do not support intervening militarily in the ongoing conflict between Russia and Ukraine and prefer diplomatic pressure or weapons support.

**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_(Earth)) 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.