

Weekly Progress Roundup

Doctors cure infant using gene therapy, drug overdose deaths fall, rare minerals keep turning up, and more.

MALCOLM COCHRAN
MAY 19, 2025

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Energy & Environment

Conservation and biodiversity

- Thanks to warming temperatures, a **new type of bee** has settled in England that is **better at pollinating** than the honeybee.

Natural Resources

- There are **4.5 billion tons of uranium floating around the Earth's oceans**, enough to power human civilization for millennia. **A new electrochemical process can tap that supply at a cost of \$83 per kilogram**, half the price of previous methods.
- On Tuesday, just a few months after China imposed **export controls** on indium—an important ingredient in solar panels and semiconductors—the mineral exploration company **Earth AI announced the discovery of a rich deposit in Australia**.

China's Rare Earths Aren't as Rare as You Think

When the country tried to choke off supply of the metals before, the world found ways to adapt.

By Marian L. Tupy

May 12, 2025 5:01 pm ET



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Gift unlocked article



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Pollution

- It's been **sunnier than usual** in much of East Asia this year, thanks to favorable weather and falling air pollution.

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Health & Demographics

- Doctors in Philadelphia used a **personalized gene therapy to cure an infant with a rare and often fatal genetic disorder—a world first**. Within six months of the child's diagnosis, the team designed and administered an infusion capable of precisely correcting the mutation responsible for the disease in each affected cell.

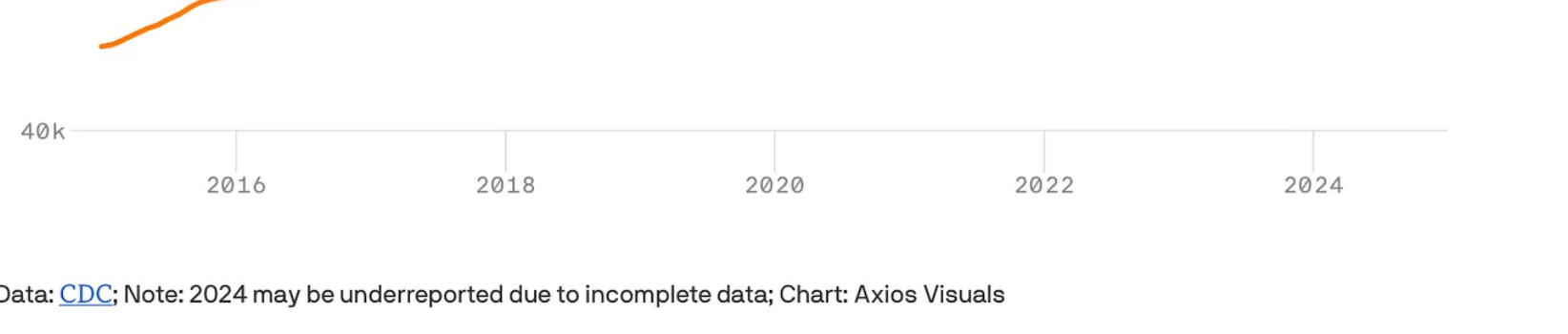


KJ, the genetically modified organism in question.

- The number of US newborns hospitalized for **respiratory syncytial virus (RSV) has fallen by half since 2018**. The CDC **credits** a new RSV vaccine and monoclonal antibody treatment that protect infants from the disease.
- The Indian state of **Kerala saw a 70 percent drop in rheumatic fever cases between 2019 and 2024**, blowing the WHO target of a 25 percent reduction out of the water.
- Indonesia's childhood stunting rate fell from 30 percent in 2018 to 21.5 percent in 2023** alongside rising access to adequate nutrition.
- The pharmaceutical company Stablepharma has **begun a clinical trial for a tetanus-diphtheria vaccine that remains stable at temperatures up to 40°C (104°F)**, eliminating the need for refrigeration. This is a big deal: The WHO estimates that around half of all vaccines produced go to waste, mostly due to cold chain failures.
- According to CDC data, **annual US drug overdose deaths fell by a stunning 26.9 percent between 2023 and 2024**, though deaths were still higher than before the pandemic.

U.S. drug overdose deaths

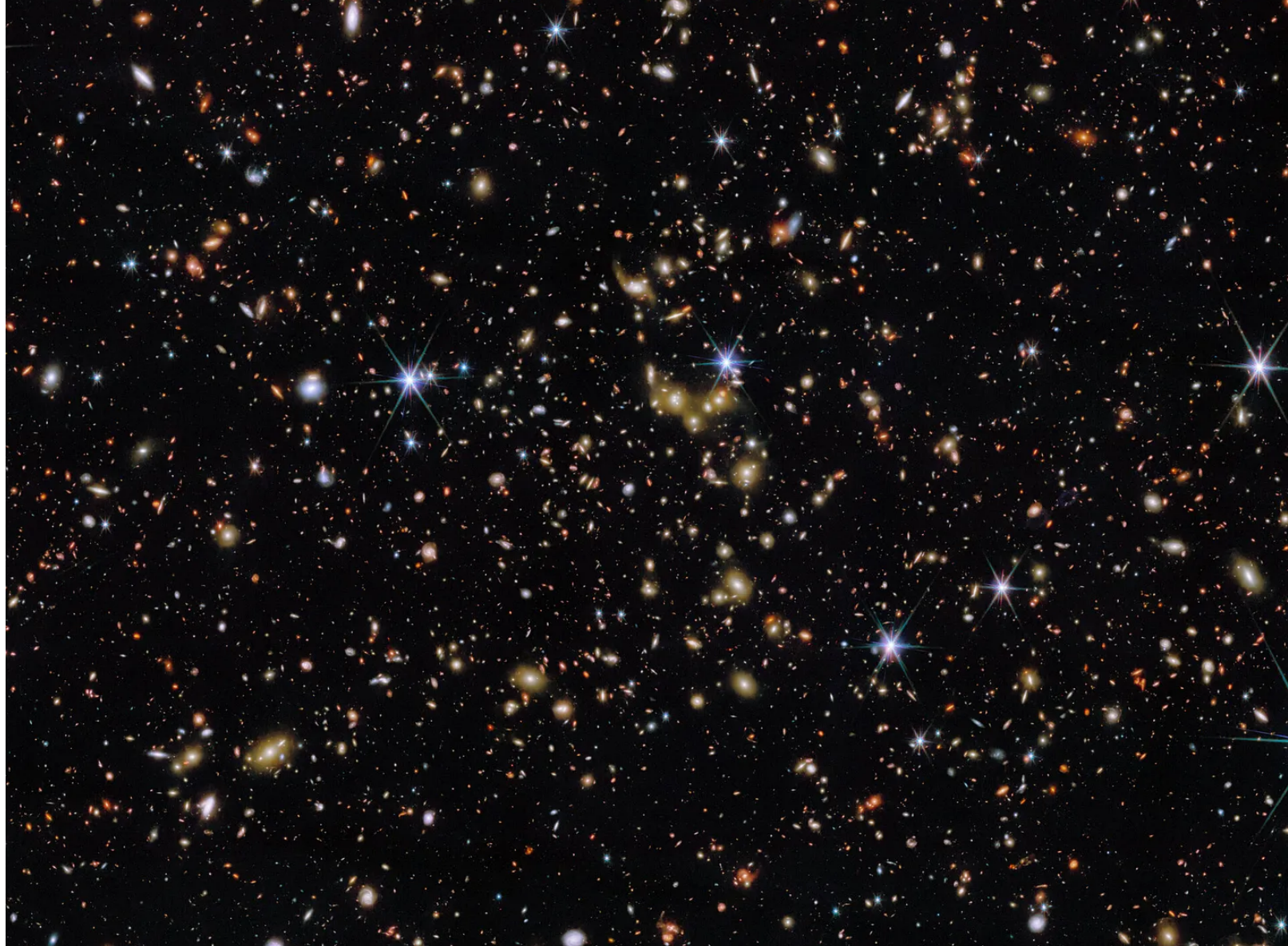
Provisional estimated 12-month rolling total; Monthly, January 2015 to December 2024



Data: [CDC](#); Note: 2024 may be underreported due to incomplete data; Chart: Axios Visuals

Science & Technology

- The **self-driving taxi company Waymo is scaling up production**, with plans to more than double the size of its robotaxi fleet by next year with the help of a new factory in Phoenix.
- Apple and Synchron have teamed up to make the iPhone, iPad, and Vision Pro headset compatible with Synchron's brain-computer interface**. Soon, anyone with a Synchron implant may be able to operate these devices with only their thoughts.
- Using the James Webb Space Telescope, **astronomers have captured the deepest wide-field image of the universe to date**, covering 0.54 square degrees of the heavens—the area of three full moons—and revealing galaxies as they appeared just a few hundred million years after the Big Bang.



- Large language models can now independently and reliably complete tasks that take humans 20 minutes or more**. Before 2023, they were limited to tasks that take people around 10 seconds.

Violence & Coercion

- A **recent Op-Ed** in the *Washington Post* highlights some unusually hopeful facts about US mass shootings:

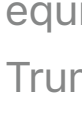
As of May 10, there have been four shootings in the United States in which four or more victims died this year, compared with 11 at the same juncture last year. It's the lowest incident count over the first four months of a year since at least 2006, when researchers started the Mass Killing Database...

The drop underscores an often-misunderstood fact about deadly mass shootings: They have not skyrocketed over the past couple of decades, especially considering the growth in population.

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Selected essays

Luis Garicano summarizes the hidden costs of trading within the European Union.



Silicon Continent



The myth of the single market

The IMF puts the hidden cost of trading goods inside the EU at the equivalent of a 45% tariff. For services the figure climbs to 110%, higher than Trump's "Liberation day" tariffs on Chinese imports—measures many saw as a near-embargo...

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Unlike much of our physical infrastructure, cruise ships continue to grow.

Grim Old Days: Judith Flanders's The Making of Home

Before industrialization offered mass-produced comfort and privacy, "home" was a place of mere survival.

CHELSEA OLIVIA FOLLETT
MAY 16, 2025

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The historian Judith Flanders's book *The Making of Home: The 500-Year Story of How Our Houses Became Our Homes* takes readers on a multi-century journey through the history of housing. Before the industrial era, the majority of humans spent their lives barely surviving in shelters that most people today would not wish upon their worst enemy.

"Five people living in one room, with no sanitation, lit and warmed by firelight, 'cramped, musty and indescribably filthy'. . . [these were] the ordinary living conditions of [our] own history."

Privacy was practically nonexistent. "For most, the past was a world where every aspect of life was lived in sight of others, where privacy was . . . almost unknown. For most of human history, houses have not been private spaces." An abundance of rooms with distinct purposes is a recent phenomenon. "For much of human history, cooking [took] place in the main living space" over the central hearth. The first corridor or hallway to appear in a domestic residence debuted in 1597 in London. Most homes had far too few rooms to justify such an extravagance.

Comfort was rare as well. Earth floors were common for centuries. By the 17th and 18th centuries, wooden floors were more common, and "even the rich generally had wooden floors," with the marble floors seen in many paintings of the period being aspirational rather than realistic depictions of homes. In the 17th century, the Dutch routinely spread sand over their floors, and the British did so into the 18th century. "The sand soaked up grease from open-fire cooking, as well as wax and oil from lighting."

People had few furnishings or other possessions throughout most of history, so what little they owned often served multiple functions. "Furniture was mobile because there was very little of it, and what there was necessarily moved around to fulfil many and different needs." It makes sense that in most European languages—from the French and Spanish meubles to the German Möbel, and from the Polish meble to the Swedish möbler—the word for furniture shares an etymological root with the English word mobile: "Furniture for everyone but the very wealthiest, was historically almost perpetually on the move." At one time, the word moveable could mean furniture in English (it is used in this sense in a line in *The Taming of the Shrew*, for example).

Even the rich moved their furniture around frequently. In Shakespeare's play *Romeo and Juliet*, the servants of the wealthy Capulet family are ordered to clear a room for dancing by moving the furniture away after a meal: "Away with the join-stools, remove the court-cubbert [a kind of cupboard] . . . turn the tables up." Turning a table up meant removing its legs and turning it onto its side for space-saving storage. "Until the first third of the nineteenth century, and later in many places, for most people below the rank of French kings, furniture . . . remained pushed back against the walls" when not in use. Heavy furniture with a fixed location in a home, as opposed to light moveable furniture, is relatively recent. "It was only from the end of the seventeenth century, as some of the great houses began to allocate a separate room for eating in, that wavy tables that were not routinely moved came into use" among the rich.

In Europe, "until well into the late seventeenth century the household furnishings of the modestly prosperous were so scanty that it is possible to itemize them almost entirely in a few sentences." An ordinary home might have a table, benches, a chair (often just one), a cupboard, fireplace tools, cooking implements, and that was about it.

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Surviving inventories from Europe reveal that homes there also often remained relatively empty:

The entire household goods and furnishings of one late-seventeenth century labourer consisted of a tabletop without legs (buckets or barrels probably substituted,) a cupboard, two chairs, a bench, a tub, two buckets, four pewter dishes, 'a flagon and a tankard', three kettles and a pot; a bed with two blankets and three pairs of sheets; a trunk, two boxes, a barrel and a coffer, a drainer, and assorted 'lumber and trash and things forgot.' This man was by no means impoverished. His three sets of sheets marked him as a man of some substance, and, even more, so did the bed, for beds were far from common.

Lacking beds, the majority of people simply slept on straw-stuffed sacks. "Until the fifteenth century, most Europeans slept on sacks stuffed with straw or dried grass, which were nightly placed on boards, benches or chests, or directly on the floor, in the main, or only room."

Beds were "objects of status and display for those fortunate enough to have them." When present, beds usually represented a significant fraction of a family's wealth. "In the seventeenth century, up to a third of a Dutch household's worth might be tied up in bedding; into the eighteenth it might be up to 40 per cent for a working man's family." People worked for years to save enough to buy a bed. "In some regions of Italy as late as the eighteenth century, it might take six years for a labourer to save enough to buy a bed and bedding. Altogether, often more than half of a family's wealth was invested in its beds, bedding and clothing." A bed was a status symbol. "For this reason, beds were given pride of place in the main room, where visitors were able to see them," in homes that had more than one room.

Chairs were also once rare. "In the Middle Ages chairs were found in courts, and in the homes of the very great, but rarely anywhere else." Perhaps one reason that ceremonial chairs—dubbed thrones—became symbols of authority was that throughout history few people owned even a single chair, let alone a fancy one. Outside of royal or noble residences, even "in the seventeenth century, chairs were found only intermittently in daily life, and were by no means routine items of household furniture." Even among the elite, pieces of furniture now considered standard were few, while more modest homes possessed hardly anything:

In Plymouth, Massachusetts, in 1633, a household valued at £100—very wealthy—possessed two chairs. Half the houses in Connecticut before 1670 had no table, and while 80 per cent had chairs, each household averaged fewer than three, less than half as many as there were residents. As late as the mid-eighteenth century, a third of houses in one county in Delaware still had no tables, and the same number had no chairs. Some adult family members sat on benches or chests at meals, their food resting on their laps, while children rarely had chairs, and were usually expected to stand while they ate. In the Netherlands, Jan Steen's 1665 [painting] *A Peasant Family at Meal-time* shows only the man of the household with a seat at the trestle table.

The most versatile, and thus most common, piece of furniture was the chest or trunk: It could serve as seating, as a table or desk, and even "as a base for bedding," in addition to providing storage space. People stored everything in their chests, from clothing to food, despite a lack of dividers to separate the contents. "In Bologna in 1630, a theft of linen and cheese from the same trunk was recorded without surprise." Around the 16th century, the shelved cupboard appeared, allowing for better separation and organization of stored items.

Like many types of furniture now considered ordinary, cupboards were once an extravagance reserved for high society. "As with beds, tables and chairs, cupboards began as luxury items for the wealthy," only becoming available to the middle class in the late 17th century in some countries such as the Netherlands. Next, consider drawers. Today, owning a dresser with drawers that open and shut is not seen as particularly remarkable, but the first chest of drawers debuted at Versailles in 1692—a luxury fit for royalty. Upholstery also was once the purview of kings. "Padded furniture had appeared in the seventeenth century [and] by the late seventeenth century Whitehall Palace in London contained at least two upholstered chairs."

Only during the late 18th century, as the Industrial Revolution began to raise living standards, did more ordinary households come to possess "new luxury commodities," such as window curtains and a sofa. Sofas were also high society items in the beginning. In 1743, the wealthy British politician and writer Horace Walpole wrote of his love for his sofa in a letter (for owning a sofa was the sort of thing worth bragging about), and "his correspondent was forced to admit that he didn't know what a sofa looked like." The sofa was adopted rapidly by the late 18th century, as were other forms of padded furniture. The poet William Cowper even penned a verse paeon to domestic comforts, entitling the first section "The Sofa" (1785).

"The great changes in domestic furnishings that had come with the Industrial Revolution" transformed home interiors.

Many amenities went from rarified luxuries to commonplace home features. Consider clocks. "Pendulum clocks were invented in 1657. Two decades later, no modestly prosperous Dutch farmer owned such a novelty; but twenty years after that, nearly nine in ten did." Next, consider window curtains. "Between 1645 and 1681, only ten inventories in one county in Massachusetts included any curtains at all." Curtains, when present, were not divided into convenient window-framing pairs as they are today. In fact, "single curtains were found at the very apex of society, in the Mauritshuis in the Hague, in the 1680s, and the Rijswijk Palace . . . in 1697"

Glass windows themselves were once rare. "Early glass was the most fragile of materials: a pane might shatter in strong winds or heavy rain. When wealthy owners travelled between their houses, therefore these delicate, and valuable, panes were routinely removed from their frames and carefully wrapped and stored. . . . Because of this, until the early years of the sixteenth century, the glass panes and the windows they were fitted into were considered to be separate items," with the glass being considered furniture rather than a part of the home and not necessarily conveying upon the sale of a home. "In Oxfordshire in the sixteenth century, less than 4 per cent of the inventories of the poor and the averagely circumstanced mention any glass windows at all; even among the better-off, it was less than one in ten." In fact, even into the 19th century, half of the houses in the United States had either no glass windows or just one, often consisting of only a single small pane.

Flanders's book paints a picture of the preindustrial home that was dark, quite literally.

[Read more about the Grim Old Days](#)

The Real Threats to Golden Ages Come From Within

History’s high points have been built on openness, Johan Norberg's new book explains.

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MAY 12, 2025

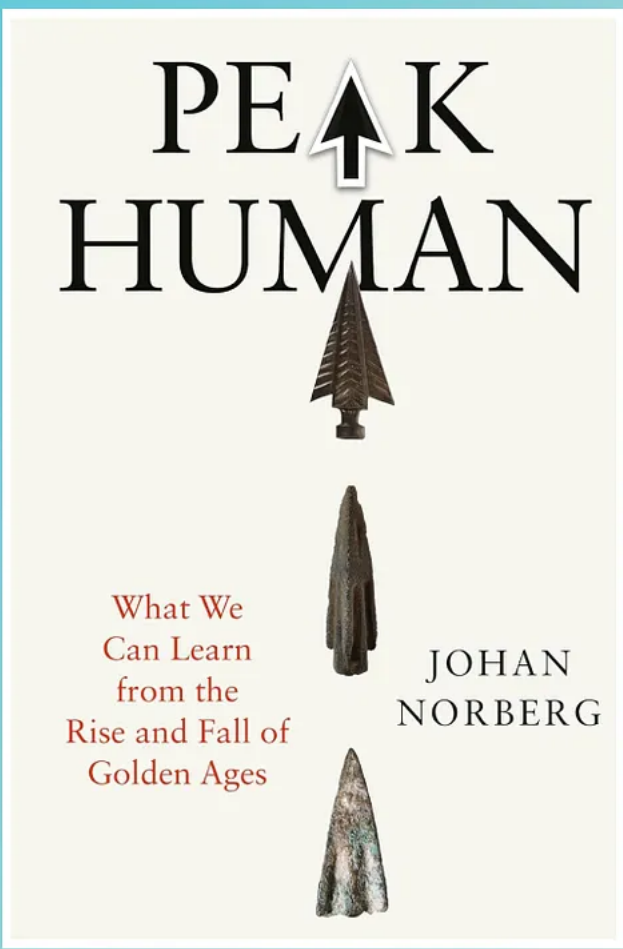
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We mistakenly published an earlier, incomplete draft of this book review on 5/12/25. Below is the finished and final version.

by Ian Vasquez

“Every act of major technological innovation ... is an act of rebellion not just against conventional wisdom but against existing practices and vested interests,” says economic historian Joel Mokyr. He could have said the same about artistic, business, scientific, intellectual, and other forms of innovation.

Swedish scholar Johan Norberg’s timely new book—*Peak Human: What We Can Learn from the Rise and Fall of Golden Ages*—surveys historical episodes in which such acts of rebellion produced outstanding civilizations. He highlights what he calls “golden ages” or historical peaks of humanity ranging from ancient Athens and China under the Song dynasty (960-1279 AD) to the Dutch Republic of the 16th and 17th centuries and the current Anglosphere.

What qualifies as a golden age? According to Norberg, societies that are open, especially to trade, people, and intellectual exchange produce these remarkable periods. They are characterized by optimism, economic growth, and achievements in numerous fields that distinguish them from other contemporary societies.

The civilizations that created golden ages imitated and innovated. Ancient Rome appropriated and adapted Greek architecture and philosophy, but it was also relatively inclusive of immigrants and outsiders: being Roman was a political identity, not an ethnic one. The Abbasid Caliphate that began more than a thousand years ago was the most prosperous place in the world. It located its capital, Baghdad, at the “center of the universe” and from there promoted intellectual tolerance, knowledge, and free trade to produce a flourishing of science, knowledge, and the arts that subsequent civilizations built upon.

China under the Song dynasty was especially impressive. “No classic civilization came as close to unleashing an industrial revolution and creating the modern world as Song China,” writes Norberg.

But that episode, like others in the past, did not last: “All these golden ages experienced a death-to-Socrates moment,” Norberg observes, “when they soured on their previous commitment to open intellectual exchange and abandoned curiosity for control.”

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The status quo is always threatening: the “Elites who have benefited enough from the innovation that elevated them want to kick away the ladder behind them,” while “groups threatened by change try to fossilize culture into an orthodoxy.” Renaissance Italy, for example, came to an end when Protestants and Catholics of the Counter-Reformation clashed and allied themselves with their respective states, thus facilitating repression.

Today we are living in a golden age that has its origins in 17th-century England, which in turn drew from the golden age of the Dutch Republic. It was in 18th-century England that the Industrial Revolution began, producing an explosion of wealth and an escape from mass poverty in much of Western Europe and its offshoots like the United States.

And it was the United States that, since the last century, has served as the backbone of an international system based on openness and the principles that produced the Anglosphere’s success. As such, most of the world is participating in the current golden age, one of unprecedented global improvements in income and well-being.

Donald Trump says he wants to usher in a golden age and appeals to a supposedly better past in the United States. To achieve his goal, he says the United States does not need other countries and that the protectionism he is imposing on the world is necessary.

Trump has not learned the lessons of Norberg’s book. One of the most important is that the factors that determine the continuation of a golden age are not external, such as a pandemic or a supposed clash of civilizations. Rather, says Norberg, the critical factor is how each civilization deals with its own internal clashes, and the decision to remain or not at a historical peak.

Author: Ian Vasquez, vice president for international studies at the Cato Institute, director of its Center for Global Liberty and Prosperity, and co-author of The Human Freedom Index.