Doomslayer: Weekly Progress Roundup

Human Progress expansion, a possible cure for diabetes, robot proliferation, and more.

MALCOLM COCHRAN

JUN 22, 2025

Announcements

We are pleased to announce that we have hired **two new team members.**

Jackson Vann has joined as a **Quantitative Research Associate.** He will refine and expand our data visualization system to ensure we provide the most comprehensive and up-to-date information on progress indicators.

We also hired **Dr. Kyle O'Donnell** as a **Policy Analyst**. He will research and write about economics, and the problem-solving innovations and processes stimulating human progress. Before joining the team, Kyle taught at George Mason University and James Madison University.

Economics & Development

- **Argentina's wholesale prices fell 0.3 percent in May**—the first drop since 2020—in a significant win for Milei's economic policies.

Energy & Environment

Conservation and biodiversity

- **Kemp's ridley sea turtles**, one of the world's most endangered species, **have laid a record 383 nests on the Texas coast so far in 2025**, surpassing the previous high of 353 set in 2017.

Energy production

- **Fervo Energy, a geothermal energy startup, has drilled what it calls its "hottest and deepest well to-date"** in southwest Utah. The company also claims that its enhanced geothermal system can extract up to 60 percent of available underground heat, around three times more than conventional geothermal wells.

Natural resources

- The Wall Street Journal recently highlighted **efforts to diversify the rare-earth mineral supply chain**. While China still controls about 70 percent of global mining and 90 percent of processing, Brazil—home to the world's second-largest known reserves—is opening new mines, while US companies work to rebuild domestic processing capacity.

Pollution

- A recently published study analyzing mercury levels in the leaves of *Androsace tapete*, an alpine plant, on Mount Everest, found a striking **70 percent drop in atmospheric mercury pollution since the early 2000s**.
- The Ocean Cleanup, a nonprofit focused on removing plastic from waterways, has launched a **new initiative** to stop ocean pollution at its source. By partnering with 30 major coastal cities across Asia and the Americas, the group **aims to block up to one-third of river-borne plastic from reaching the ocean by 2030**.

Food & Hunger

- England is close to approving a **new regulatory framework that would allow commercial production of gene-edited crops**, paving the way for faster agricultural innovation.

Health & Demographics

- In a small trial, **a single infusion** of a stem cell therapy **cured 10 out of 12 patients with severe type 1 diabetes**, with those 10 showing normal insulin production a year later.
- **Hepatitis B prevalence in Egypt has dropped by 15 percent since 2015**, thanks to consistently high vaccination rates. Today, less than 1 percent of Egyptian children under the age of five have the disease.
- **The FDA has approved lenacapavir**—a new and much-celebrated HIV drug that prevents the disease with a biannual injection.

Science & Technology

- **Walmart will soon offer drone delivery from 100 stores** across Atlanta, Charlotte, Houston, Orlando, and Tampa, in addition to its existing operations in Dallas and Northwest Arkansas.
- **Waymo is attempting to bring its self-driving taxis to New York City**. The company has applied for a permit to operate with human safety operators and plans to begin manually mapping Manhattan's streets this summer.
- A **new ultra-black paint might help solve the problem of satellite light pollution**, which has increasingly interfered with ground-based astronomy. The coating reflects just 2 percent as much light as uncoated satellites and will be tested on an orbiting CubeSat next year.
- Honda has become the **first company outside of the US and China to launch and land a reusable rocket vertically**.
- **Amazon's Zoox is building a factory in the Bay Area** intended to produce up to 10,000 robotaxis per year.
- Researchers have developed a computer algorithm that designed **entirely new enzymes that match the performance of natural ones**—potentially useful for creating custom catalysts for pharmaceutical and industrial chemical production.

Violence & Coercion

- **Colombia has banned child marriage**, and Bolivia is not far behind.

Progress Studies

Étienne Fortier-Dubois argues against climate conservatism.

The Elysian

No, we shouldn't return to the climate of the 18th century

This is a guest post by Étienne Fortier-Dubois, author of Hopeful Monsters. It is part of Terraform, an essay collection about the future of our planet. Support the project by collecting the digital or print edition 👇...

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Chris Paxton assesses recent progress in self driving cars.

It Can Think!

Self-Driving Taxis Scale Up

Self-driving car company Wayve is doing something big: for the first time they will deploy an autonomous taxi service in London, according to CEO Alex Kendall on X. With this announcement, they join Tesla and Waymo as companies with immanen...

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Clay Routledge suggests a simple way to find more meaning in life.

Flourishing Friday

Finding Meaning in Everyday Experience

A couple of weeks ago, I discussed fascinating research on aesthetic experiences in science and how they contribute to the wellbeing of scientists, including their sense of meaning in life. Writing about that topic got me thinking about some excellent...

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Why the West Turned on Itself

Maarten Boudry joins Chelsea Follett to examine the cultural and ideological roots of Western anti-Western sentiment.

HUMAN PROGRESS

JUN 20, 2025

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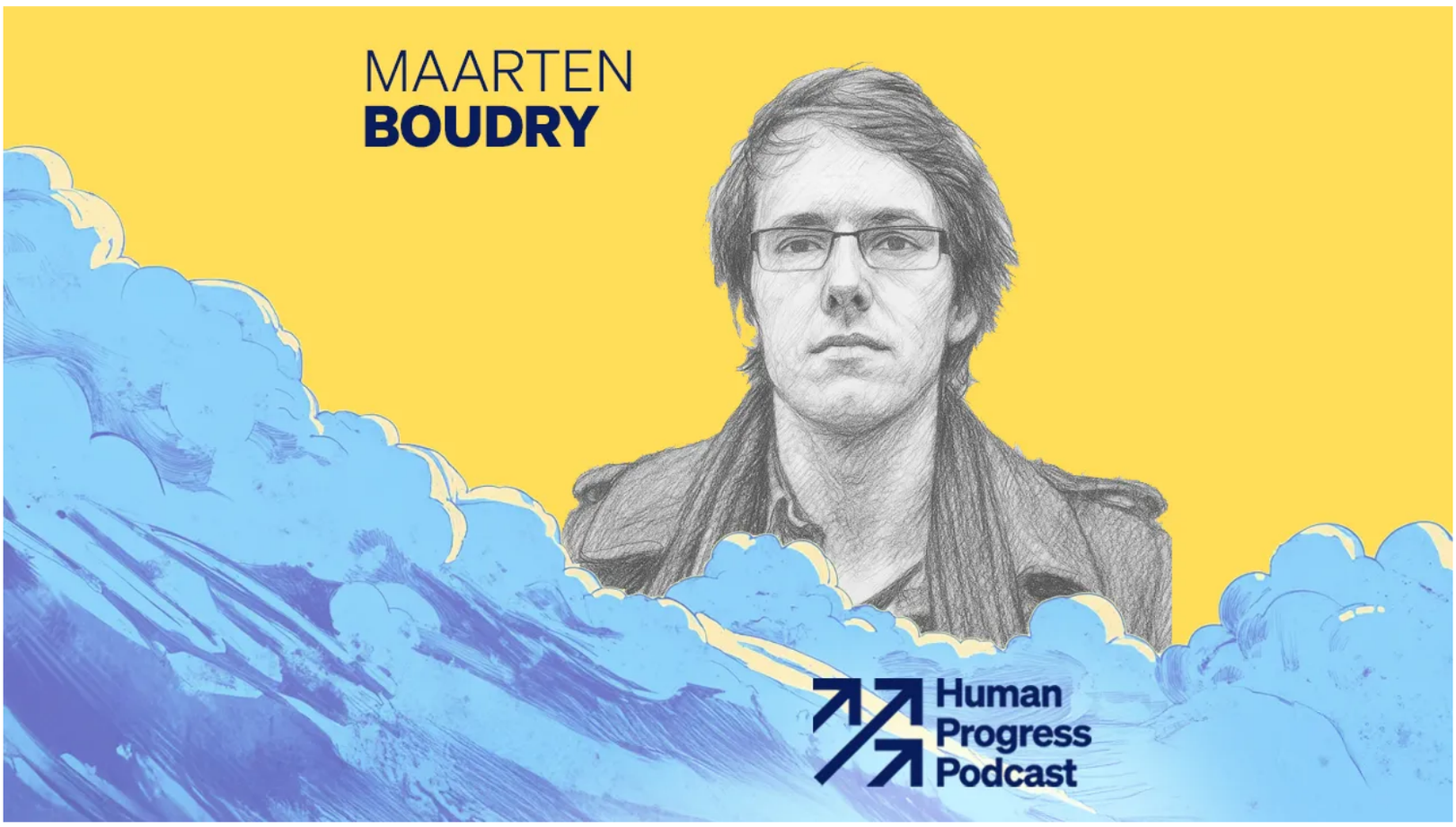

In the West, many intellectuals have built their careers by condemning the very civilization that made their work possible.

Why has this kind of self-denunciation become so widespread in the world's freest and most prosperous societies?

In this episode of *The Human Progress Podcast*, philosopher and author Maarten Boudry joins Chelsea Follett to examine the cultural and ideological roots of Western anti-Western sentiment—and why biting the hand that feeds you has become a hallmark of modern Western thought.

Listen to the interview

Below is an edited and abridged transcript featuring some highlights from the interview.

Joining me today is Maarten Boudry, a philosopher and author with eclectic interests, including progress, cultural evolution, conspiracy theories, and more. You should check out his Substack. He joins the podcast today to discuss a fascinating essay titled "The Enlightenment's Gravediggers."

You start with a very powerful and illustrative story about Jean-Jacques Rousseau.

Rousseau was one of the first philosophers of the Romantic movement, which was a big part of the counter-Enlightenment. At this point in history, modernity hadn't yet delivered anything tangible for the common people, but there was a relative measure of intellectual freedom, so, in that sense, we were already in the early stages of modernity.

Rousseau, before he was an established philosopher, was leafing through a magazine and came across an announcement for a prize by the Académie de Dijon. I don't have the prize question with me here, but it was something to the effect of, "Have the improvements of the sciences also led to a betterment of morality in our society?" Rousseau describes that the moment he read that sentence, in a flash of insight, he saw the innocence of humanity in its original state and the depravity and decadence of civilization. And so he wrote his essay, a sweeping indictment of the whole of so-called civilization. It says that wherever the sciences are blossoming, wherever knowledge is improving, virtue is declining, and every supposedly great civilization eventually collapses under the weight of its own useless knowledge. By the way, he won the first prize—this is relevant for what comes next.

What I find fascinating is that Rousseau was a very cultured and educated man, but he condemned the whole idea of being refined and learned and cultured. In effect, he was biting the hand that feeds him. The Enlightenment philosophers had created this little island of intellectual freedom, which was the hand that was feeding him by giving him the freedom to study and exchange ideas. And he knew that hand would never punch him in the face. In fact, his friend Diderot encouraged him, even though he totally disagreed, because he relished the provocation of an Enlightenment philosopher tearing down the whole project of the Enlightenment.

That is one of the most fascinating and unique aspects of modernity. We do not just tolerate this sort of behavior; we encourage it. If you understand what is behind that story, it provides a lot of insight into what comes next in the 20th and 21st centuries: this very modern phenomenon of anti-modernity, the capitalist phenomenon of anti-capitalism, and the Western hatred of Western civilization.

Tell me more about the cultural trend of disdain toward Western civilization and capitalism.

There are a couple of different intellectual tributaries to this grand river of anti-modernity. There's postmodernism, with the idea that we should undermine truth and reason, the foundations of modernity. There's the victim versus oppressor narrative, sometimes called post-colonialism, which is the idea that you can neatly divide the world into oppressors and victims, which also leads to an indictment of Western civilization. And there's environmentalism, which rejects the fruits of modernity. In the book, I ask the question, why do these different ideologies exist at all? Is there something about modernity that sows the seed of its own destruction?

The explanation that I eventually came up with is very simple: modern Western civilization is the only hand that allows itself to be bitten. If you were living under Stalin, you could never dream about criticizing the political ideology or economic system; dissent was just not tolerated. The same applies to China and to a lot of other unfree countries. And that leads to a sort of paradox, which I think was first described by an American politician called Daniel Patrick Moynihan, which is basically that there's an inverse correlation between the number of complaints about human rights violations and the amount of actual human rights violations. If you ever find yourself in a society where nobody is complaining, and everyone agrees that the future will be glorious and the political system is great, you really have to get out of there as quickly as possible because that's a completely totalitarian society.

You also talk about an alternative explanation: that this self-flagellation is some sort of mutation of Christianity.

As Nietzsche pointed out, a lot of the morality in Christian teachings is a kind of inversion, where the weaker and more vulnerable you are, the more virtuous you are. And there's also the notion of original sin, that all of us are born tainted by evil. You can find these white guilt rituals on YouTube, where white people prostrate themselves in front of the people that their ancestors oppressed and ask for forgiveness. It's very similar to the idea of original sin because, of course, they themselves didn't own any slaves; it's their whiteness itself, their identity, that they feel they have to apologize for.

However, many of these same people are also explicitly anti-Christian. They have completely secular upbringings and are rejecting Western civilization, which Christianity is part of. So, even though it's possible that they're unconsciously influenced by these Christian ways of thinking, it's hard to prove. It also doesn't work for all of the cases. It especially doesn't work for the rightist forms of anti-modernity, which are muscular and aggressive and seem to be based more on pride than guilt.

My simpler explanation is that both on the left and the right, there are simply more opportunities to bite the hand that feeds you. I call this the supply-side explanation. I think the demand for complaining about the current state of affairs has always been there. People like to gripe about everything. I actually came up with something I call the Law of Conservation of Outrage in an earlier piece, which posits that, no matter how much progress society makes, the amount of complaining will always stay the same.

You say in the essay that anti-Western critics often like to pretend that their bravery will be met with universal outcry against them. But with a few exceptions, you note that these crusaders are not only given free reign but are also often handsomely rewarded.

Yeah, they are rewarded in specific contexts. So, in an academic environment, for example, you are rewarded for finding ever more novel ways to condemn Western civilization, and many of these anti-Western and anti-capitalist academics hold university positions that are paid for with tax money, which is basically the surplus production of the capitalist system that they criticize.

Can you talk about some examples of people who criticized their own societies, such as Edward Said and Michel Foucault?

Foucault is an interesting example. Early on, he was a member of the Communist Party, but he very quickly broke with communism. He was a postmodernist, so he didn't believe in ideology or grand narratives. But he was biting the hand that feeds him in the sense that he was trying to demonize many of the institutions of modernity that we take as exemplars of moral progress.

I'm cutting some corners here, but Foucault's argument always amounted to, "oh, so you think that we are so much better than we were in the Middle Ages?" In the Middle Ages, they were torturing criminals, but his argument was always that the modern way of treating prisoners or the mentally insane was actually even worse because although it presented itself as morally enlightened, it was really just a sinister bourgeois exercise of power to dominate the weak and vulnerable.

Foucault, of course, had unrestrained freedom to express his hatred of modernity, and he was rewarded by a lot of acolytes and followers who thought he was very brave to question the narrative of moral progress. Ironically, towards the end of his life, he contracted HIV and was treated in the Salpêtrière, which is a hospital in France that played a central role in *Madness and Civilization*, one of his major works. He bit the hand that feeds him, and the hand nurtured and comforted him until the end of his life.

Edward Said was one of the founders of post-colonialism, of this idea first expressed in his seminal work, *Orientalism*, that Western civilization, through the centuries, has always harbored a desire to oppress and invade the Orient. The intellectual groundwork for this conquest was laid by fiction and poetry, which, according to Said, presented the Orient as exotic, irrational, and sensual, in contrast with the rational, dominant, and masculine self-image of the West.

To be completely fair, there is some truth to what he wrote. It's obviously true, especially if you go back centuries, that Western civilization had a very distorted view of other civilizations—just like every other culture in all of history. But Said was not interested in an even-handed or symmetric treatment of Western civilization; he was mostly interested in trashing the West.

The irony in Said's case is that he studied in Princeton. He had guest professorships and distinguished chairs, and he got lots of awards for condemning Western civilization. Even in Israel, which he, in his later works, condemned as an oppressive, apartheid regime, he was welcomed. His books were published in Hebrew and put on university curricula.

Even more ironically, the opposite was true in the Palestinian-controlled territories. For a long time Said and Yasser Arafat had a friendship, but at some point, Arafat got fed up with Said and banned his books in the West Bank and Gaza Strip, which were under Palestinian control. I think there's no better example of the difference between a hand that punches back and the one that allows itself to be bitten.

Up until now, we've been talking about how critics of modernity often receive prestige and accolades. That's a metaphorical "feeding," but you also talk about literal feeding. Tell me about that.

In Rousseau's time, the feeding was purely metaphorical. He lived before the Industrial Revolution, and people were still as poor as they had ever been. The literal feeding only began in the 19th century, and what you see is that the more people enjoy the fruits of a capitalist society, the more opportunities they have to engage in criticism. So, capitalism and industrial modernity become a victim of their own success because they breed this class of people who have their material needs met and can spend their lives biting the hand that feeds them. Karl Marx is a great example. He was living off of the handouts that he received from Friedrich Engels which were made possible by Engels' father's cotton factory. Capitalism was affording him the freedom and the material prosperity to write screeds against capitalism.

There was a recent study about how the hotspots of degrowth—the philosophy that calls for an end to economic growth and a controlled shrinking of material production—are all in wealthy countries. You don't hear a lot of degrowth-ism from people in developing countries because they have a more immediate understanding of the benefits of capitalism and industry. But if you've been prosperous and well-fed and affluent for a long time, you tend to take those things for granted. If you read the degrowth literature, they seem to have no clue at all about what it means to farm, for example, and be self-sufficient. They romanticize it, and they can afford to romanticize it because nobody is there to tell them what it was like. Even their grandparents never experienced it.

You end the essay on the nuanced point that, in some way, we should be happy that there are so many critics of our civilization because it is a sign that freedom is still protected.

Yeah, absolutely. Perhaps because I'm an inveterate optimist, I try to put a positive spin on this kind of ungrateful, spoiled behavior. But it is a serious argument; I wouldn't want to live in a society where people are afraid to speak up. However, I also believe that a society that engages in too much self-abasement and self-flagellation loses confidence in itself, and I worry about what that portends for the future. There are signs, especially in Europe, of technological and economic stagnation. And if you look back to earlier modern eras, there was a lot more confidence and optimism and a stronger belief in progress. I do think something has changed, and we no longer seem to believe in ourselves.

I can give you one example where I think this kind of wholesale rejection of industrial modernity is very harmful. Think about the way that people talk about fossil fuels in Western countries, how they're destroying the planet, and we have to ween ourselves off as quickly as possible. It's one thing for a Western activist who is surrounded by fossil fuel products to indulge in these fantasies, but Western environmentalists are also telling poor countries, "Oh, you shouldn't repeat our mistakes," meaning you shouldn't burn all these fossil fuels, and engaging in self-abasement, "we are so guilty because we have been doing that for two centuries." That self-abasement leads them to actively sabotage fossil fuel development in poor countries. The IMF, the World Bank, and a lot of investment banks have openly promised not to fund fossil fuel investments in poor and developing countries. Not at home, mind you: they're still building coal plants in Germany and gas plants in Norway. This virtue signaling mostly comes at the expense of poor and developing countries.

So, these delusions have consequences. Perhaps not yet here because we're surrounded by so much material affluence, but there are already downstream consequences on the other side of the globe.

Read the full transcript

Cardwell's Cage and How to Break Free

History's cycle of progress and stagnation can be broken.

CHELSEA OLIVIA FOLLETT

JUN 18, 2025

Donald Cardwell, a British historian of science and technology, famously observed that "no nation has been very creative for more than an historically short period." Known as Cardwell's Law, this dictum haunts many people concerned about the future of innovation. Can the United States, or any other country, break free of the cage of Cardwell's Law and create an environment that fosters innovation indefinitely?

To better understand this challenge, it helps to zoom in from the level of nations to that of cities, which often function as engines of innovation. While intended to describe whole societies, Cardwell's Law scales down well to the level of individual urban centers. After all, city-states were the first states and served as the sites of institutional experimentation. And for a long time, it was cities, not larger nations, that commanded loyalty.

A grim message from my otherwise uplifting book, *Centers of Progress: 40 Cities That Changed the World* is that a city's creative peak tends to be—as Cardwell noted—brief. As the British science writer Matt Ridley observed in the foreword to the book, "Global progress depends on a sudden series of bush fires of innovation, bursting into life in unpredictable places, burning fiercely, and then dying rapidly."

Are there any exceptions to that rule? Have any cities managed to maintain longer-than-expected golden ages of innovation, and what can we learn from them?

The cities from earlier eras that I profiled in my book tend to be featured for their achievements over longer periods of time. That is, unfortunately, because in the distant past, progress was often painfully slow—not because someone had cracked the code to break Cardwell's Law.

Writing, for example, developed over multiple generations, as simple pictographs that accountants invented for record-keeping purposes evolved into a symbolic script and eventually into highly abstract, cuneiform characters. The birthplace of writing was Uruk, an ancient Sumerian city. The most noteworthy part of Uruk's history lasted for many centuries, but only because the city's great achievement took generations to accomplish. We should hardly want to emulate a society that advanced at such a pace.

In contrast, when we turn to modern history, the pace of progress accelerates—but the creative window narrows. Manchester, the so-called workshop of the world, led the way during the Industrial Revolution, but only for a few decades. Houston's heyday helping drive forward space exploration also only lasted a few decades. Today, the youngest living person to have walked on the moon is 89. Tokyo went from being a world capital of technology in the 1980s to decades of economic stagnation. The San Francisco Bay Area that birthed Silicon Valley and the digital revolution has lost its crown, with many technological breakthroughs now occurring elsewhere. In the modern era, the golden age of innovation in any locale tends to last only a few decades, or even less.

To understand why this pattern repeats so consistently, consider the underlying conditions that support—or sabotage—sustained innovation. The economic historian Joel Mokyr, in an illuminating 1993 essay, describes the narrowness of the path that societies must walk to promote creativity, a veritable tightrope where one wrong move can lead to everything crashing down. "In retrospect, the most surprising thing is perhaps that we have come this far," he concludes.

What causes the downfall of centers of progress, making Cardwell's Law so seemingly prophetic? While world-changing innovations have come from an extraordinarily diverse set of places, from Song–era Hangzhou to post–World War II New York, sites of creativity almost always share certain key features. It is the loss of those factors that spells their doom. These feature are: conditions of relative peace, openness to new ideas, and economic freedom.

Free enterprise and healthy competition encourage innovation, and the freedom to trade across borders plays an important role by increasing that competition. At the same time, free exchange across borders must not be confused with the total dissolution of borders: vast empires under centralized control tend to stagnate technologically, and complete integration of countries under a global government would in all likelihood be a disaster. A certain type of international competition can be beneficial—just not the kind of rivalry that leads to war.

War redirects creative energies toward making deadlier weapons and away from technologies aimed at improving living standards. And, of course, losing a war can lead to a society's complete destruction.

Moreover, war prevents innovators from collaborating across borders, and even thinkers within the same country often cannot put their heads together due to the secrecy inherent in war. While some credit WWII with speeding up the creation of the computer, a case can be made that the conflict actually delayed the computer's invention by preventing collaboration between many innovators, from Konrad Zuse in Berlin to Alan Turing in Great Britain. Even in peacetime, innovation can be stifled when freedom and openness are curtailed.

In short, progress is threatened when peace is lost to war, openness is stifled by the suppression of speech, and freedom is undermined by restrictive or authoritarian laws.

Hong Kong provides a recent and illustrative example of how quickly the conditions for progress can disappear. During its whirlwind economic transformation in the 1960s, Hong Kong rose from one of the poorest countries in the world to one of the wealthiest. It accomplished this feat through policies of "noninterventionism": simply allowing Hong Kongers to freely compete and collaborate to enrich themselves and their society. But the city's proud tradition of limited government, the rule of law, and freedom has been abruptly extinguished by a harsh and unrelenting crackdown from the Chinese Communist Party.

Despite sobering examples such as that of Hong Kong, there is reason for hope. Centers of progress are often short-lived, but the fact that throughout history most societies remained creative for only a short time should not discourage us. To defy Cardwell's Law, all that is needed is a clear-eyed willingness to learn from the mistakes of the past and to fiercely protect the conditions needed for further progress.

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