

IDEAS

Let's make the future what it used to be

We're still waiting for flying cars, but we could be on the verge of the most expansive era of innovation in human history.

By James Pethokoukis Updated January 27, 2022, 3:00 a.m.



The "Futures" exhibit at the Smithsonian's Arts and Industries Building runs through July 6. COURTESY ALBERT TING

The lifesaving mRNA vaccines are hardly the only important scientific and technological advances to have emerged during the COVID-19 pandemic. Among the others: cheap, reusable rockets that [returned](#) the United States to

manned space flight; an AI program that can [accurately predict](#) the structures of proteins needed to create new drugs and medical treatments; stunning developments in [nuclear fusion](#), especially at an MIT spin-off company; CRISPR [genetic editing](#) deployed in the human body for the first time; and the launch of NASA missions to test [asteroid deflection](#).

At a minimum, all that progress in key sectors such as biology, computer science, energy, and space suggests it isn't crazy to think this decade may eventually be worthy of the "New Roaring 20s" sobriquet that's already been bandied about on Wall Street. More significantly, however, America may be leading the world in finally realizing the expansive techno-optimistic visions of postwar futurists.

These forward thinkers — including Isaac Asimov, Arthur C. Clarke, and the creators of the most important work of postwar futurism, "The Jetsons" — thought that humanity in the 2020s would be well on its way to becoming a nuclear-powered, spacefaring civilization of super-smart, super-healthy humans enjoying vast material abundance and an ever greener and cleaner earth. (Zipping about in flying cars, too, of course.) Yet for decades it appeared those futurists were wildly wrong. No human, American or otherwise, has left near earth orbit since the crew of Apollo 17 in December 1972. Nuclear reactors, the fission kind, don't produce much more of America's power than they did when the Three Mile Island accident happened in 1979. And as the saying goes, they promised us flying cars and instead we got Twitter. Some economists refer to the past half century of slower economic and productivity growth as the "Great Stagnation."

But maybe all those recent advances show that reality is finally catching up to the fantastic forecasts of the immediate postwar decades. That's why when I recently visited "[Futures](#)," the Smithsonian Institution's massive new exhibit in Washington, D.C., I expected not only creative displays about the latest stunning discoveries and

emerging technologies but some serious speculation about what might be next. What diseases might be cured? Will a spate of fusion reactors help solve climate change? How soon before the earth is ringed with orbital factories and humanity has planted itself permanently on the moon, Mars, and beyond?

ADVERTISING



Well, the exhibit does show a flying car, in the form of an air-taxi concept vehicle with four spinning fans in ducts. There's also an experimental hyperloop train pod from one of Richard Branson's Virgin companies. But little else in the 32,000-square foot, nearly 150-item exhibition suggests that humankind is ready to take any sort of giant leap forward.

Most exhibits seem to be about sustainability: a display showing how washing machines could be used to create a "closed wastewater system" for growing a garden of wetland plants; a biodegradable wall of bricks made from mycelium — mushroom fibers, basically; one of the 32 solar panels that President Jimmy Carter had installed

on the White House roof in 1979, later removed during the Reagan administration.

It's strange, then, that the Smithsonian would name the exhibition "Futures," plural, when it shows just one vision of the future as possible and desirable. It's a vision about "sustainable cycles, rather than endless growth" — a concept firmly rooted in the eco-pessimist 1970s.

Back then, books such as Rachel Carson's "Silent Spring" and Paul Ehrlich's "Population Bomb," along with the 1972 "Limits to Growth" [report](#) based on MIT resource modeling, helped launch an environmental movement based on the notion that humanity was rapidly exhausting the resources of Spaceship Earth. A display of buttons from that era at "Futures" captures the zeitgeist with messages such as "Recycle or Die," "Consume Less," and "Solar Employs, Nuclear Destroys." But the eco-pessimists were as wrong as the techno-optimists. The invention of high-yielding crop varieties prevented the worldwide famines that Ehrlich had predicted. And the biggest economic story of the past half century has been the massive decline in global poverty. Faster Asian economic growth from the embrace of market economics has lifted more than a billion out of extreme deprivation.

Nor is there much evidence that we're running out of Earth. Even though the world's population has doubled and the global economy has [quadrupled](#) since 1970s, copper, chromium, nickel, tin, and tungsten [cost about 25 percent less](#) in 2015 than they did in 1980. Back then, Ehrlich and the economist Julian Simon made a bet on whether resource depletion would send those commodity prices soaring. Simon thought humanity could innovate its way out of potential shortages; Ehrlich disagreed. Simon won the bet. It's true that pandemic-induced bottlenecks and a tsunami of government stimulus have sent commodity prices [spiraling higher lately](#), but Simon's view on innovation has held for decades. In relation to global income, the price of a [broad basket](#) of key commodities fell by two-thirds between 1980 and 2017.

And while climate change has continued unabated, more and more environmentalists see advanced nuclear energy as key to tackling it. The lesson here: Economic growth and technological progress may cause problems — like inequality and pollution — but they also provide the solutions to those problems. And humanity continues to move forward — even if not as quickly as some optimist predicted. The pessimists overlook that, I think.

It's not as if "Futures" is trying to present a dystopian vision. Its walls are covered with uplifting quotes about the future. But the curators clearly have accepted the basic eco-pessimist argument and tried to fashion an uplifting vision of tomorrow based on those constraints. Maybe that's why there aren't any quotes from Elon Musk on the walls. The boss of Tesla and SpaceX — not to mention Time's Person of the Year — offers a vision more in line with that of the postwar futurists.

Does it matter that the Smithsonian Institution is unable or unwilling to create an exhibition that promotes a possible future built around creating abundance rather than managing scarcity? Similarly, does it matter that Hollywood churns out a never-ending series of films about civilizational collapse, whether from climate change, plague, or zombies?

It matters because progress is disruptive. Economic growth and technological change alter the status quo. The guilds of preindustrial Europe helped make sure Europe stayed preindustrial by blocking new technologies until governments started embracing the gains, including military ones, from the Industrial Revolution. One can imagine today's populist politicians stirring up fears about automation — much as some have done with trade — and calling for taxes on AI or robots. Or maybe they'll claim building a space economy is frivolous, despite the potential to move dirty industries off the planet, harvest vast new resources across the solar system, and develop new ways to create energy, such as space-based solar power. Even worse

would be a broader societal rejection of progress, a view perhaps best summarized by climate activist Greta Thunberg’s stern lecture about “fairytales of eternal economic growth.”

Dutch futurist Fred Polak said any culture without a positive vision for the future “has no future.” That’s especially true when too much of the world is still desperately poor and big challenges — from stabilizing the climate to preventing pandemics — require market-driven innovation and growth. As Alec Stapp of the new Institute for Progress [notes](#), higher gross domestic product per person is “correlated with basically everything we really want as humans,” including higher life expectancy, lower child mortality, greater literacy, and more expansive human rights.

There are images of the future out there that should excite us, even beyond the prospect of higher living standards. For example, a [road map](#) to the future recently published by Prime Movers Lab, a “deep tech” venture capital firm, speculates that we’ll get the first commercial nuclear fusion power plant in the 2030s, near earth asteroid mining in the 2040s, and genetic technologies to restore lost species and ecosystems by 2050.

Smithsonian curators and Hollywood producers should check it out. After all, had disruptive innovators owned the day earlier in history, we might have already conquered hunger, poverty, and climate change. We might even already be a multiplanetary civilization. As Musk [puts it](#), “Believe in the future!” Let’s get busy inventing an amazing future worth living in.

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