Techno-optimism roundup

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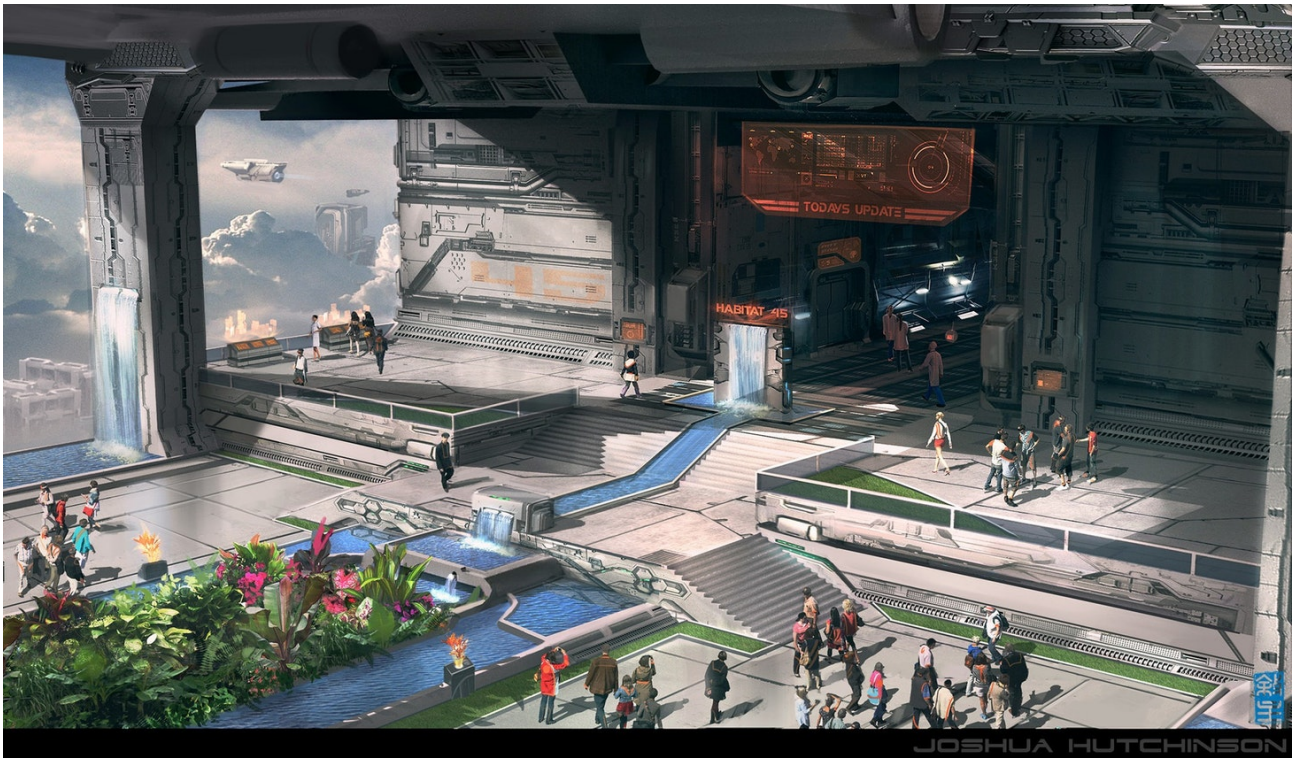
The COVID vaccine was a turning point

Noah Smith December 16, 2020

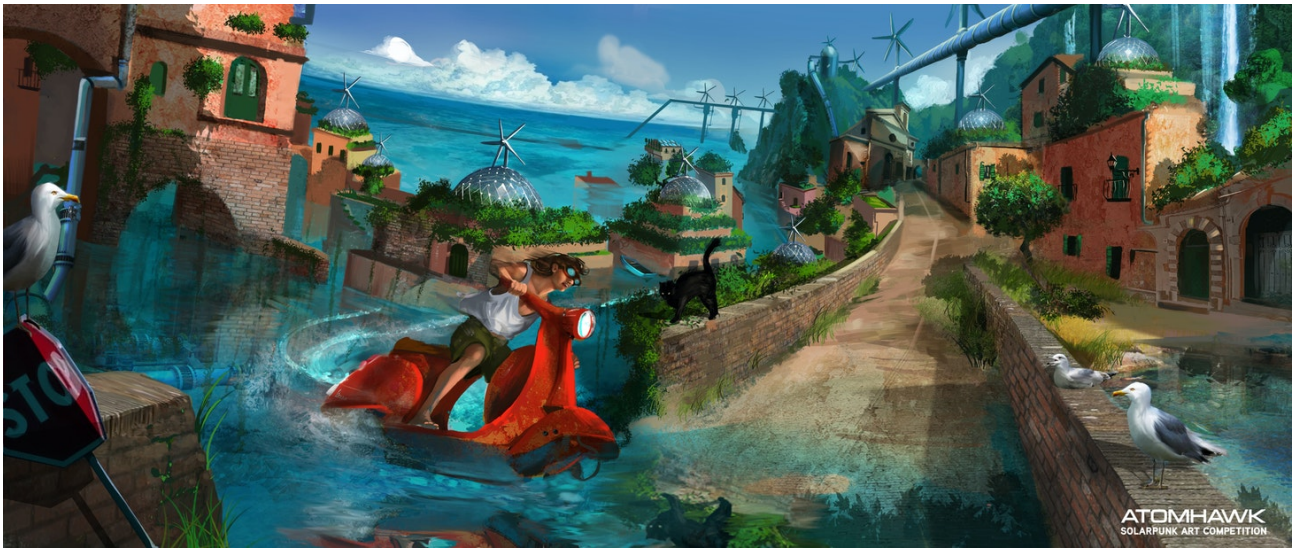


"Habitat 45" by Josh Hutchinson

I've been writing a bunch of techno-optimist posts lately. It started with an optimistic post about climate change, and then I wrote a techno-optimist manifesto, and followed that up with a post about why new energy tech might be especially conducive to productivity growth. But I'm far from the only one writing and talking about this. Here's a roundup of a few others.

Caleb Watney: "Cracks in the Great Stagnation"

This was the only techno-optimist post I saw before I wrote my own, meaning I need to spend more time reading blogs! But it's a really good one. Watney speculates on a number of areas of technological progress, focusing on vaccines, solar and batteries, lab-grown meat, A.I., self-driving cars, nuclear fusion, and VR. He and I are thinking along very similar tracks here.

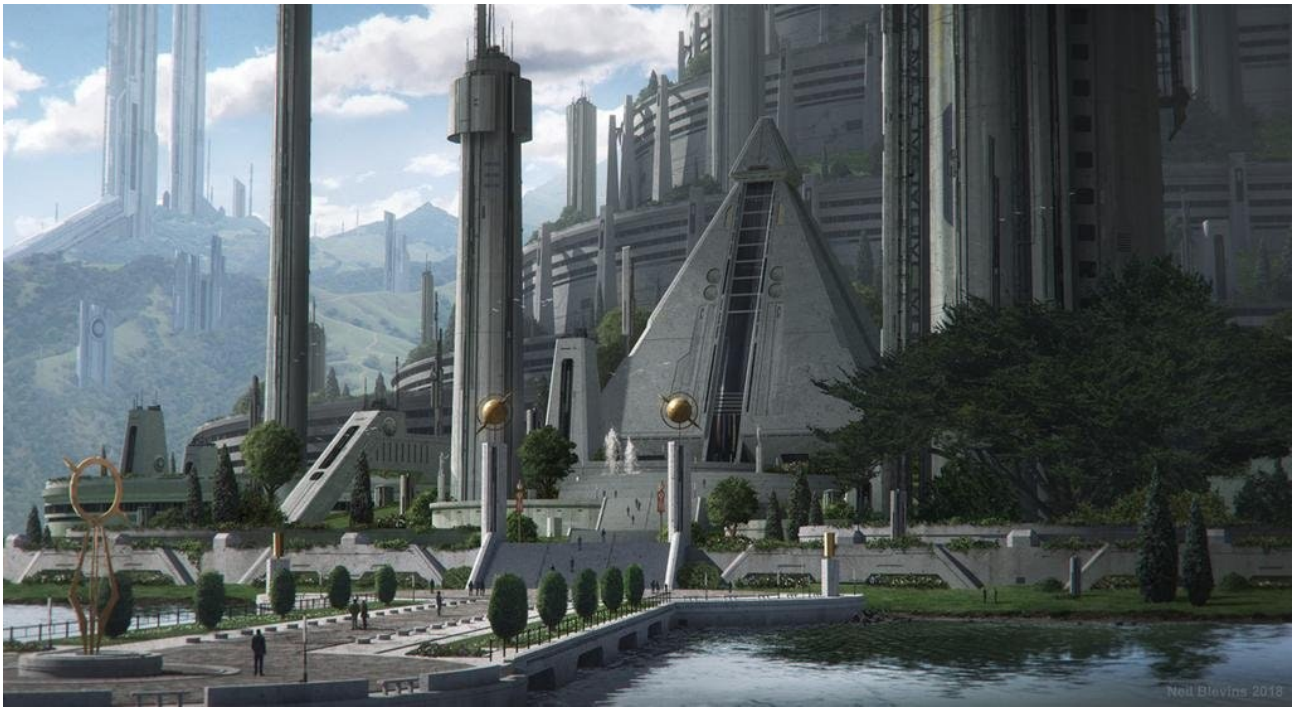


"Final Keyframe" by Grazia Ferlito

Tyler Cowen: "Is the Great Stagnation Over?"

Cowen wrote the book on the Great Stagnation (years before Robert Gordon did!). But he always suspected that productivity and technological progress would accelerate again. Now, observing a number of obviously important breakthroughs, he writes:

> Around the time The Great Stagnation came out in 2011, I predicted that it was most likely to end within the next twenty years. We are not there yet, but that claim is no longer looking so absurd.



"Eden Habitat 2" by Neil Blevins

Matt Yglesias: "Some optimism about America's COVID response"

I'm pretty sure that it was the COVID vaccine that got us all thinking along techno-optimist lines. Other positive trends like solar and batteries had been going on for years, but the big push of the vaccine effort — the unprecedented speed and effectiveness, the public-private cooperation, the use of a novel technology (mRNA vaccines) to beat a novel pandemic. It was an inspiring moment.

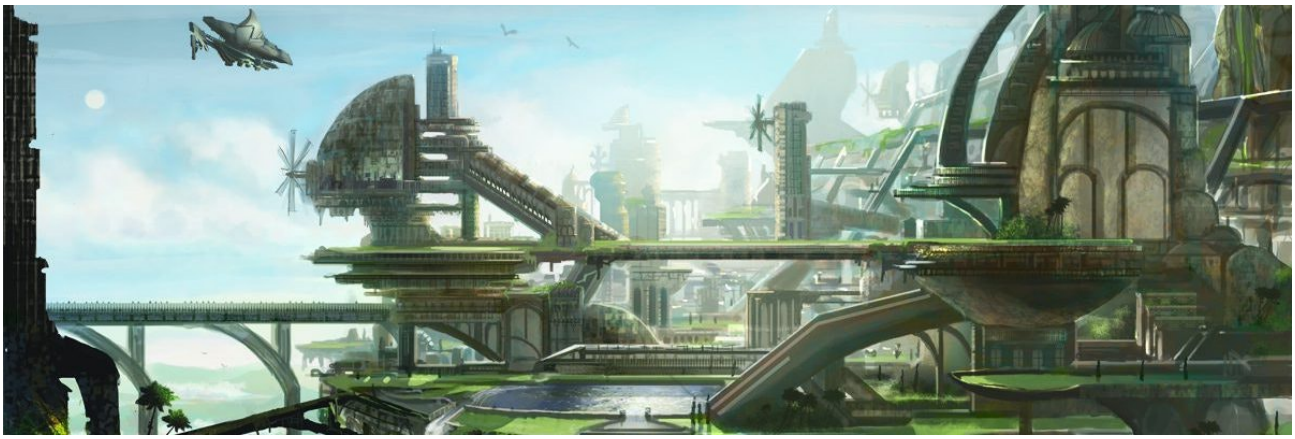
And like many of us, Yglesias was inspired to think about than just vaccines. He writes:

> I think it's clear that if we had to weather this pandemic with the tech of 20 years ago, we'd have had worse public health outcomes and worse economic outcomes. Two decades' worth of internet and mobile tech has proven its value, and more good things are to come if this period of experimentation ends up helping to accelerate the development of widely used remote work, telemedicine, and online education models…

and

> [The vaccine is] a proof of concept for the kind of thing we could be doing in the clean energy space. Say an electric car that meets such-and-such specifications would get guaranteed orders to serve as government fleet vehicles. Or pre-commit to buying electric buses for schools and transit agencies. Nuclear micro-reactors for use on military bases or as backup systems for hospitals. The assurance that a market exists is a big stimulus to private investment, and when strong social consensus exists that innovation would be beneficial, we can get it done.

He's right, of course.



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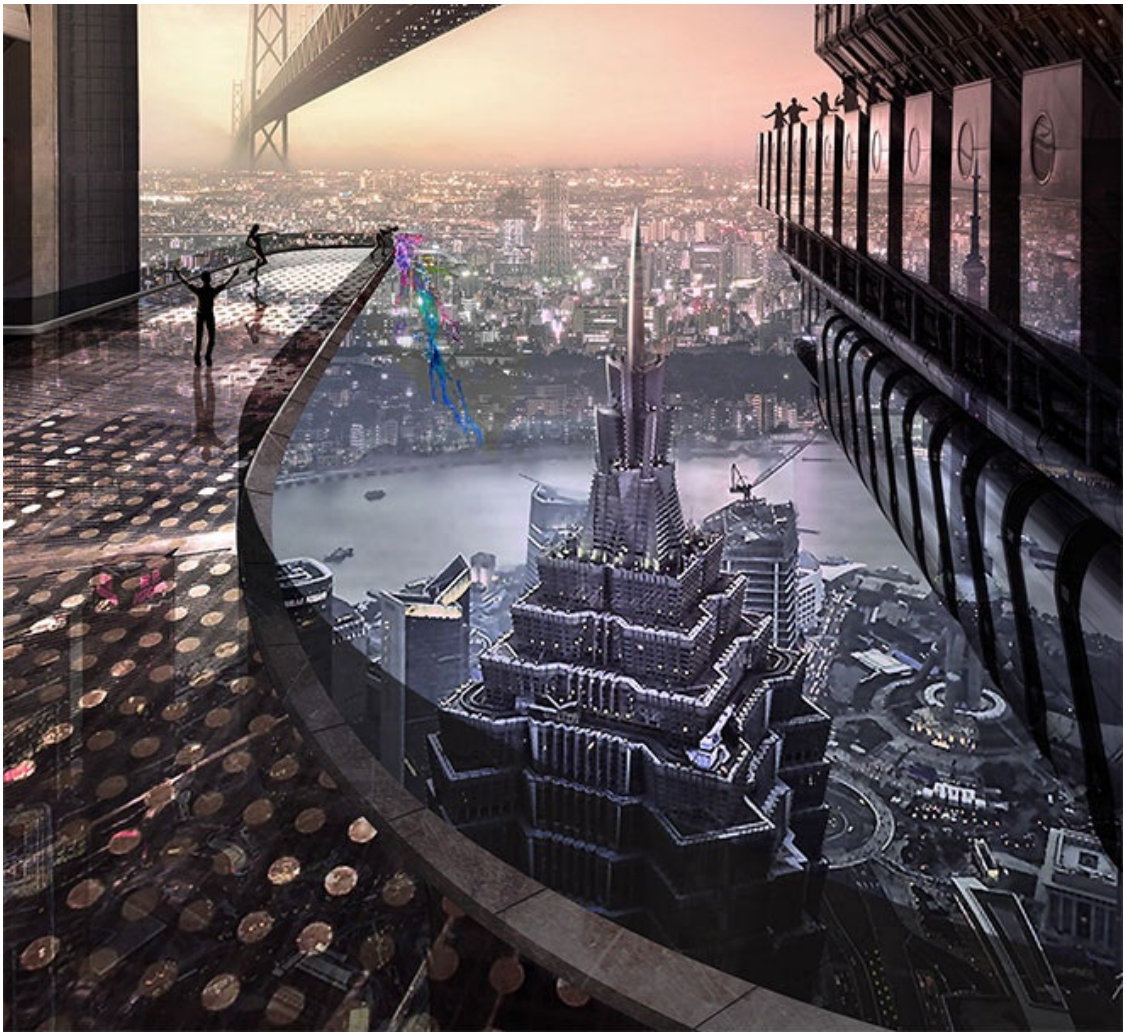
The Economist: "The pandemic could give way to an era of rapid productivity growth"

The Economist suggests — reasonably, in my opinion — that the technologies that boost productivity in the 2020s had their roots in earlier decades of research, and that it simply takes a long time for people to figure out how to use new inventions. They cite Erik Brynjolfsson, Daniel Rock & Chad Syverson's paper "The productivity J-curve: How intangibles complement general purpose technologies". That paper argues that big inventions with wide-ranging applications — electricity, the internal combustion engine, computers, the internet, and maybe A.I. — initially cause a productivity slowdown, because people are taking time out from production to figure out how to use the new stuff. Once they do, it's off to the races, and productivity bounces back.

The Economist writes:

> Early evidence suggests that some transformations are very likely to stick, and that the pandemic quickened the pace of technology adoption. A survey of global firms conducted by the World Economic Forum this year found that more than 80% of employers intend to accelerate plans to digitise their processes and provide more opportunities for remote work, while 50% plan to accelerate automation of production tasks…
>
> [T]he boost to distance education and telemedicine delivered by the pandemic could help drive a period of growth in services trade, and the achievement of economies of scale in sectors which have long proved resistant to productivity-boosting measures…
>
> [T]he raw materials for a new productivity boom appear to be falling into place, in a way not seen for at least two decades. This year's darkness may in fact mean that dawn is just over the horizon.

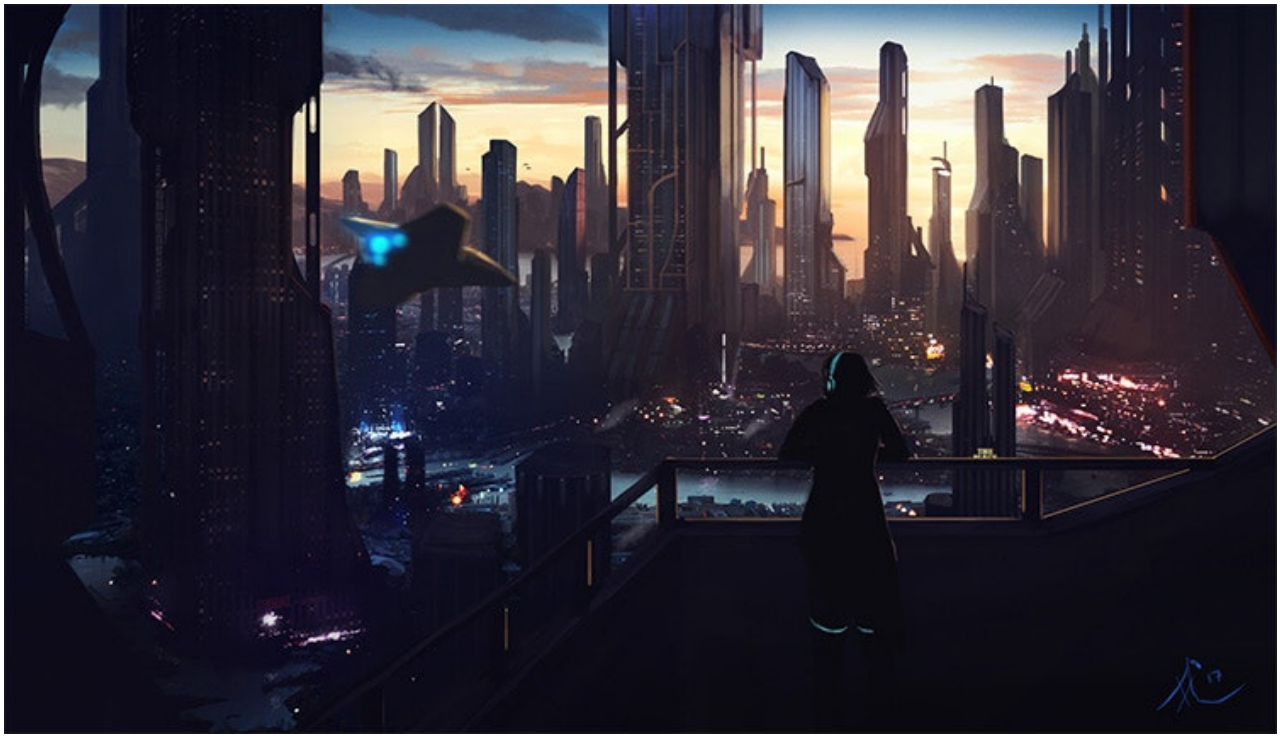


“Puking Rainbows” by Fu Zijia

Alan Ohnsman: “Peter Thiel Says Covid Marks 21st Century’s True Start. SPAC Boom, Surging EV Stocks Are A Sign”

Peter Thiel was one of the most prominent techno-pessimists of the 2010s, famously comparing the dream of flying cars with the disappointment of Twitter. Of course, I don’t share Thiel’s right-wing politics; quite the opposite. But the fact that he’s decided to become optimistic about progress again is noteworthy. He says:

> I keep thinking the other side of it is that one should think of Covid and the crisis of this year as this giant watershed moment, where this is the first year of the 21st century. This is the year in which the new economy is actually replacing the old economy.



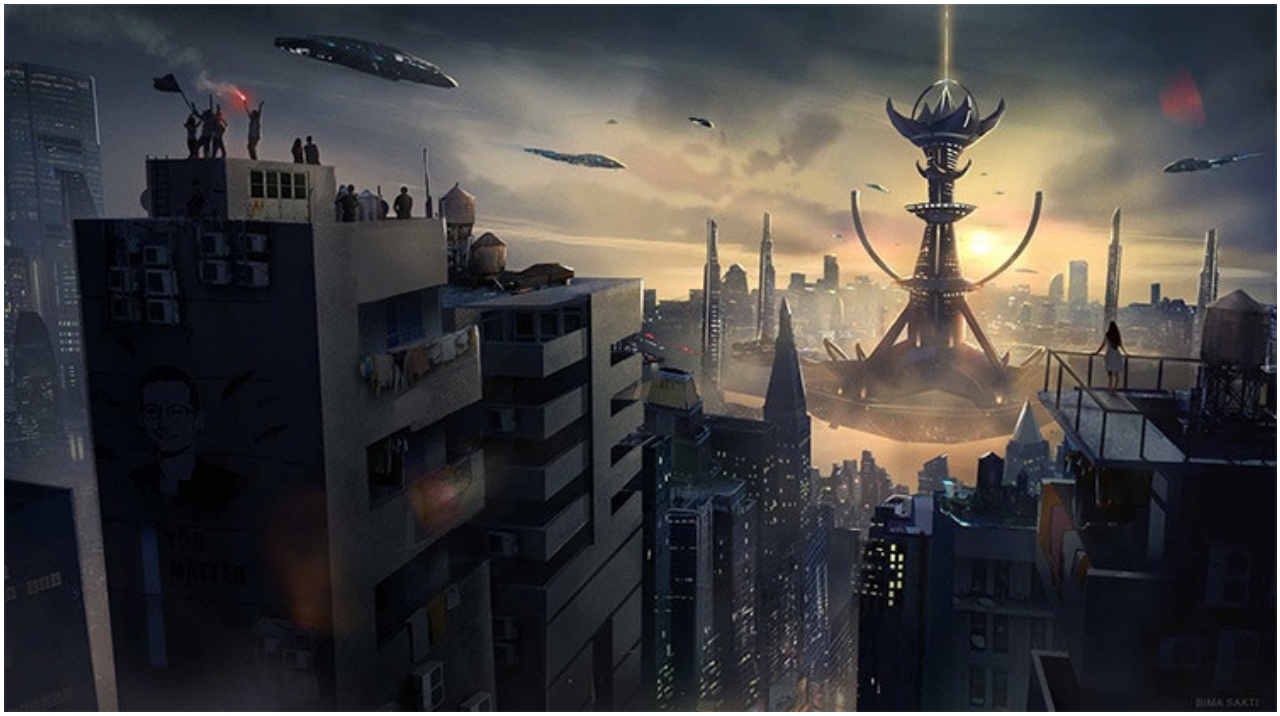
"Homeworld" by Amy Lauver

Byrne Hobart: "Stagnationism"

Many of the new techno-optimists are excited about biotechnologies or the return of energy technology. But some are still excited about software! Hobart is one of these:

> It is interesting to look at one case where the techno-optimists are right and the stagnationists have explaining to do: the pace of software deployment remains high, and the pace of software advancement appears to be accelerating as products like AlphaFold and GPT-3 let computers do things that previously seemed either a) only possible with human input, or b) not possible at all…
>
> Software automation replaces tedious, low-value added rote work with equally tedious but very high-value added investment in permanent automation, and since software companies are more fundable than service companies, and since they're racing to win market share, this could temporarily push wages up in the jobs that get automated first.

As I always say: "Dystopia is when robots take half of your jobs; Utopia is when robots take half of your job."



"Holy Flower" by Bima Sakti

Tyler Cowen: "What might an end to the Great Stagnation consist of?"

More thoughts from Cowen:

> I would say that almost certainly the great stagnation is over in the biomedical sciences. It is less obvious that the great stagnation is over more generally, as we might simply retreat into our former sloth and complacency once we are mostly vaccinated…
>
> Two more general points seem relevant. First, many of the biomedical advances seem connected to new platforms, new modes of computation, new uses of AI, and so on, and they should be leading to yet further advances. Second, there are (finally!) some very real advances in energy use, and those tend to bring yet other advances in their wake, and not just advances in bit space.

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Some caveats

It might be that the new techno-optimism is just wishful thinking; after all, we don't really know what will happen to technology or to productivity. It might be that all of us bloggers are just sitting around huffing each other's fantasies; the blogger at Applied Divinity Studies certainly thinks so. In the coming weeks, I'll try to answer some of the critiques of techno-optimism, and to provide some perspective on what techno-optimism does and doesn't mean.

Also, call me a woke SJW, but I can't help but notice that so far the new wave of techno-optimists are, like me, a bunch of white dudes (with the possible exception of the Economist writer). I'm going to try to track down some techno-optimists (and techno-pessimists!) from other demographics. I'll also write about why own my techno-optimism is partly motivated by observing the ways in which past innovations have reduced social inequalities.

Anyway, watch this space. Much more to come.

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