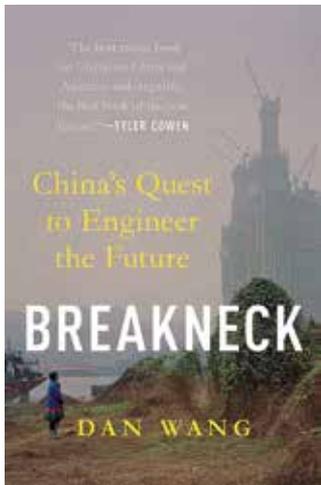


Engineers vs. Lawyers



Breakneck: China's Quest to Engineer the Future by Dan Wang (W. W. Norton & Company 2025)

How to understand the U.S.-China economic showdown.

Dan Wang, a research fellow at the Hoover History Lab at Stanford University, has written a provocative book about the factors that he sees propelling China's meteoric rise and the growing threats to the United States' status as the world's dominant power. His insights in *Breakneck: China's Quest to Engineer the Future* (2025) are based on Wang's time living in China as well as his analysis at Hoover and previous research as a fellow at the Yale Law School's Paul Tsai China Center and as the technology analyst at Gavekal Dragonomics, an investment research service specializing in China. *TIE* Executive Editor Owen Ullmann interviewed Wang about his findings.

TIE: How did you formulate your thesis of China as an engineers' state versus the United States as a lawyers' state?

Wang: I was living in China between 2017 to 2023, working at Gavekal Dragonomics to study China's tech developments. And it felt like a pretty momentous time to be in China because Donald Trump had just launched his first trade war, something that morphed into a technology war. Chinese companies were definitely gaining competence in all sorts of technologies that include clean tech, electric vehicles, batteries, and so forth. I was living through the growing repressiveness of President Xi Jinping's rule, and the centerpiece of my time was to have lived through the entirety of zero-covid in China, a period of extreme restrictions from 2020 through early 2023. I felt that China and the United States were now locked in this conflict competition or friction. Everyone was reasoning through this relationship using these nineteenth-century political science terms, like capitalist or socialist or liberal, and it just didn't feel the right way to think



about this relationship anymore. So I thought that it would be more fun to be inventive and playful to think about this new set of terms: engineers versus lawyers.

TIE: How has that concept of division—engineers versus lawyers—shaped both nations’ economies over the last half century?

Wang: I think the Chinese government treats building another mega-project and announcing an infrastructure stimulus as the answer to pretty much all of its economic woes. They build tall bridges in Guizhou or hyperscalers for cloud computing and networking and homes and solar, coal, wind, whatever. It is the answer to pretty much everything. They generally don’t do much by way of stimulus checks or re-distribution. So that’s one aspect. They’re very focused on re-engineering the economy to try to push away a lot of smart people from working in advertising technologies or the financial industry, to try to make them work on projects that are of more strategic interest for the country, namely sectors such as aviation or semiconductors or chemistry. And they’re also very literal-minded about treating society as a math exercise. I spent a lot of time talking about the one-child policy as well as zero-covid. The numbers from those social mandates leave no ambiguity about the goals and consequences of those radical steps.

Pretty Serious Threat

China will not supersede the United States in all its dimensions. The United States is a financial superpower, a diplomatic superpower, and a cultural superpower. China won’t replicate being a financial superpower because the engineers want to impose very stiff capital controls. But it will keep getting better and better on advanced manufacturing, and that alone might be a pretty serious threat to American preeminence.

—D. Wang



The Huajiang Canyon Bridge in Guizhou, China, is the world’s highest bridge, measuring 2,051 feet from the bridge deck to the bottom of the gorge. Construction began in January 2022, and the bridge was opened to the public in September 2025.

In the United States, we think that lawyers are much better at obstruction than construction. And in the United States, there are very few of these radical social engineering projects. There are no stupid ideas like the one-child policy, but there’s also almost no functional infrastructure anywhere in the United States because it just doesn’t build enough. I wrote this book substantially at the Yale Law School. I often would take the train from New Haven down to New York City on the Metro North Lines, which are pretty good and reliable but just a bit slow. I thought all of that was fine up until I saw a railway timetable from 1914, which showed that a century ago it was slightly faster getting between New York and New Haven than it is today. It’s not a perfectly fair comparison because the trains make many more stops now. Still, as an approximation, America’s not moving faster than 110 years ago. I just want the infrastructure to feel like it’s getting better rather than worse.

TIE: How do you see the respective populations responding to both of these developments—the idea that in China they’re always adding to the infrastructure and in the United States there are a lot of barriers to that?

Wang: I think physical dynamism is positive, but I want to acknowledge some of the costs of that physical dynamism in China, which is that they’re still building a lot of really big bridges in the countryside. And some provinces like Guizhou are unable to make the bond payments for these bridges because they are just so expensive to build and pretty poorly used by the population. There are giant

environmental costs to pouring a lot of carbon-intensive concrete into the ground and not necessarily getting a lot out of it. And there are also the human costs of building enormous dams and having to displace thousands, sometimes hundreds of thousands, of people for really big mega projects. Still, construction is positive because people like a sense of physical dynamism.

If you're a resident of Shanghai, you're getting new parks all the time, you're getting new subway stations all the time, you're getting new shops and restaurants all the time. In San Francisco, I am speaking to you as I'm overlooking the Golden Gate Bridge at this very moment. It took four-and-a-half years to build the Golden Gate Bridge, and it took about twenty years to add a bus lane. So San Franciscans feel like they're living in a city with tremendous public disorder, that there are a lot of homeless people who wander distressingly through the streets, but there's pretty little new infrastructure buildout, and what infrastructure buildout there is does not get delivered very well.

There's this infamous story of a \$1.7 million public toilet here. California's high-speed rail was approved by a voter referendum in the year 2008. And you know, I would be surprised if anybody were able to ride from San Francisco to Los Angeles thirty years after the referendum passed, after a very young person has grown into an adult. The physical construction in China has been a way to stimulate economic activity. But it has also built a considerable degree of political resilience for the Communist Party because it can very credibly claim to deliver big



The initial rough estimate to build the fifty-square-foot Noe Valley public toilet in San Francisco was \$1.7 million, with a two-year timeline. Donation of a prefab unit and installation work cut the city's cost to \$200,000.

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projects that make people's lives better. Not always, but often. And that is something that the Americans cannot do.

TIE: As you mentioned in your book, while the Communist Party is improving the material lives of the population, what about their spiritual lives, the natural yearning to have individual freedom to innovate, to do what you want as opposed to having the government tell you everything from where you might go to school or live to where you work? Does that tradeoff really work? Are people accepting what seems like a type of bribery from the Communist Party to maintain control?

Wang: Yes. There is a spiritual cost to all this engineering over the past few decades. While China's economy has grown enormously, it has simply not created very many compelling cultural products that attract the rest of the world. Engineers are a censorious people who really cannot take a joke. A lot about this because in 2023, when a comedian made a joke involving a military slogan, every comedy club in Shanghai was closed for months. I know a lot of writers and journalists who have decided to leave China because their work keeps getting censored. But that is definitely one of these very real tradeoffs in China, where the cities and the countryside keep getting physically better.

Meanwhile, people's spiritual needs are not necessarily met. There is still some degree of freedom for people to just watch a lot of TikTok videos. They have more time to

read books now than before. But the cultural content creation has not been terribly aggressive in China. I want to be a little bit cheeky to note that there are plenty of people in America who would say that television, mass media,

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and internet TikToks are just a giant distraction from the fact that our lived experiences are not getting better. We've had folks like Neil Postman and Peter Thiel saying that we're watching much better cat videos while we are riding to work on subways that were built literally over 120 years ago.

TIE: Your book emphasizes how the Communist Party does a lot of things to ensure that it continues to maintain control. We saw that the Communist Party in the Soviet Union looked like they were in charge until suddenly they weren't. Could there be an "aha" moment where cracks suddenly appear and the Chinese Communist Party collapses? Or are they so clever and everything's so entrenched that they're there for the long term?

Wang: I certainly take seriously the example of the Soviet Union, in which the regime looked pretty invincible up until it collapsed, in which case it looked inevitable that it was going to collapse. Something like that could happen to China. But I would say that I am not expecting the cracks to appear anytime soon because China is not the Soviet Union in all sorts of ways. First, China has built a much more functional economy than the Soviet Union did. And then it was pretty obvious that the Soviets were only producing heavy industry. China has a thriving entrepreneurial economy. And the second aspect is that the Communist Party of China has studied the failures of former President Mikhail Gorbachev more than any other country, and they are really intent on not recreating Gorbachev's mistakes.

It doesn't mean that they'll succeed, that they won't collapse in another way. But they won't do the Gorbachev

thing of trying to liberalize the political system at the same time as the economy. I think that China has proven again and again to be pretty robust. I remember living in China at the start of 2020, when people were talking about covid as a shareable moment for China, namely a natural disaster that triggers the political collapse of the regime. But actually, China pulled itself together really quickly and demonstrated that it was able to control the virus and get life back to normal much more effectively than, say, Donald Trump's America in the year 2020. Zero-covid's rigid rules collapsed later. But I think, in general, I would bet on the political resilience of the Chinese Communist Party rather than its dissolution.

TIE: I should ask you the same question about how fragile you think liberal democracy is in the United States. There's a lot of debate about that right now.

Wang: There is a lot of debate but I am still betting on the robustness of America relative to its collapse. The United States has survived a lot of big national traumas over the last few decades. The 1960s and 1970s saw a lot of cities burning, there were assassinations all over the place. And in the longer sweep of time, maybe we will be able to look back on the 2020s as a time of turmoil that America was able to get through even though right now I'm not feeling a very

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great conviction. Speaking as a Canadian citizen, I don't feel that the current regime is very happy about immigrants at large and maybe is not thrilled about any sort of criticism. I certainly wish it could be a lot better than it has been.

TIE: If you think back a hundred years to around 1920, there were a lot of similarities coming out of World War I and today. We had a pandemic with Spanish flu, there was suppression of free speech and censorship of newspapers. A lot of people were jailed. It was an ugly period, but as you pointed out, we pulled through from that. Assuming you are correct that both systems will survive,

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at least for the foreseeable future, where do you see the two nations in terms of their rivalry and preeminence in the world over the next decade or two?

Wang: My feeling is that China will not supersede the United States in all its dimensions. The United States is a financial superpower, a diplomatic superpower, and a cultural superpower. China won't replicate being a financial superpower because the engineers want to impose very stiff capital controls. But it will keep getting better and

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better on advanced manufacturing, and that alone might be a pretty serious threat to American preeminence.

Right now, the United States has about twelve million manufacturing workers. We've lost a few tens of thousands after Trump's tariffs were imposed, and I could certainly imagine that twelve million goes down to six million manufacturing workers over the course of the next decade, as China keeps gaining manufacturing competence. I suspect that as the United States loses a few more manufacturing jobs, the economy will not get better and the politics will not get better. I'm quite worried about the deindustrialization in the Midwest. I'm mostly a resident of Michigan, where my wife is a professor at the University of Michigan. So I am concerned about broader job losses in Michigan, as well as the broader Midwest.

I am afraid the United States will keep losing these manufacturing jobs, and I'll make a more general comment about the competition, which is that I think the United States and China are locked in conflict. I don't think that it's predestined which is going to win based on these structural advantages because the more one country looks like it is ahead, the more it feels overconfident and make mistakes out of hubris. And the more the other country is behind, the more it will feel the need to reform and better catch up.

To be concrete about this, I was living in China throughout zero-covid. At the start of 2021, Xi really felt like he was on top of the world because he was able to control the virus and the United States could not. Plus, the

United States had just dealt with the disaster of January 6th and China's institutions looked more stable. Xi started feeling like he was in a good economic position. What happened next? Well, he decided to smash a lot of tech companies to reorient a lot of smart people away from consumer tech into industrial companies. And then he decided to try to smash a lot of the real estate sector as well. So, I think these are classic mistakes of overconfidence. I expect that if either country feels like it is too much ahead, it will continue making these sorts of mistakes.

TIE: **Some critics of U.S. reindustrialization say that even with a one-third smaller workforce, total output here has doubled from forty years ago, and they cite automation more than competition from China as the main reason. Is it possible that, especially with advancements in artificial intelligence, we bring back more factories but everything is produced by robots? Output grows but with a still-shrinking workforce?**

Wang: That would be a great scenario for the United States if output could continue to grow. The challenge is that I'm not sure AI and automation necessarily favor America, because if we take a look at the deployment of robots, China is way out ahead of the United States. It is employing far more robots. This is according to data tracked by the Information Technology and Innovation Foundation.

It's not obvious to me that AI will accelerate manufacturing strengths in the United States relative to China, because the United States is much more of a services- and healthcare-driven economy. About 11 percent of GDP is

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tied up with the manufacturing sector. In China, it's something more like 25 percent. If we're just thinking about AI because it is going to deepen these respective countries' threats, I fear that the United States will just get much

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better at making PowerPoints and China will get much better at making electronics and drones because that's where they have more of the data.

I would like to believe that automation and AI will make American manufacturing better, but frankly, I see all of those trends as favoring China much more so.

TIE: *The most important question is whether you think this rivalry continues as a largely peaceful competition or could it lead at some point to an armed conflict?*

Wang: We want to hope that this is going to be peaceful because we really don't want to have a war between these two great powers. I really believe that many more people ought to be thinking about the challenge of how to avoid such a war. World War I produced something like a few million deaths. World War II produced tens of millions of deaths, and we don't want World War III to produce north of a hundred million deaths.

TIE: *What steps can be taken to keep it as a competitive but peaceful rivalry?*

Wang: I think that something that would help is just greater mutual curiosity between both sides. China has something like 300,000 Chinese students studying in the United States. There's something like a few hundred maybe not even a thousand American students studying in

China. That is one big disparity. The Chinese think much more about what's going on in the United States than Americans think about what's going on in Beijing.

Part of the reason that I wrote my book is to introduce a little bit more curiosity among Americans. I think most Americans will never go to China. Many more Americans will want to visit Japan and South Korea than China. That's just a fact. Part of the reason that I wrote my book is to give Americans a sense of the texture of life in China: splendid elements of Shanghai, the crazy hydropunk elements of Chongqing, Shenzhen as a very dynamic hub, the Stalinist elements of Beijing and so on. I just want a little bit more mutual curiosity between the two countries.

At one point, Trump said he wanted to cut back on the number of Chinese studying in the United States but he later changed his mind, as he tends to do. When a reporter asked him if he wanted Chinese students studying here, he replied that it's our honor to have them. Trump changes his mind three times a day before breakfast, and on this matter, he seems to like Chinese once more. When I lived in Beijing, I felt that Trump did not feel a natural enmity towards China. He was always saying good things about the Chinese people. He was always saying good things about his buddy, Xi Jinping. He seemed to have been much meaner towards the Germans and the Japanese. I believe that war between the United States and China is not inevitable. It is not necessary. And right now, maybe it looks a little bit unlikely given who Trump is. It could

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well be possible that Trump decides to tie Taiwan into a bow and gift it to his friend, Xi Jinping. And that removes one of these major flash points between the United States and China. ◆