



China's Christmas Miracle and What It Means for Robotics

The first story in today's People Program is as fantastic as it is true. It's called China's Christmas Miracle. What this event meant for robotics and automation is incalculable. Funny things happen when you give people hope. This is a story about hope.

The central thoroughfare in Beijing—the main drag—is named the Street of Eternal Peace or, in Mandarin, *Cháng'ān Jiē*.

At Christmas time in 1978, the operative words on Chang'an Street were not eternal peace, but rather, eternal poverty—utter poverty! In 1978, 88% of China's population, after a day of brutally hard work, each worker made less than \$2.60 a day, no more than \$300 a year.

That meant that in 1978, 88% of all Chinese went to bed poor, and got up the next morning without any chance to be anything other than poor. And their children, they were looking at a future of being no better off than their parents.

Then it all changed. On December 18, 1978, at Beijing's Hotel Jingxi, all of that grief and hopelessness would be forever changed for the better.

In 1978, the road to modern China was about to be born.

The same modern China that the International Federation of Robotics reported bought 168,000 industrial robots in 2020; that's 3500 industrial robots each and every week. In 1978, China bought zero.

The architect of that magnanimous Christmas moment of birthing modern China on the 18th of December was a diminutive guy named Deng Xiaoping, about whom Henry Kissinger said, “I developed an enormous regard for the extraordinary little man with the melancholy eyes.”

Melancholy, as Victor Hugo once described it, is that twilight state in which suffering transmutes into a somber joy.

On a grey December day, the man with the melancholy eyes, announced what is today known as China’s Christmas Miracle.

Into this impoverished land and its woefully impoverished people, he said

“We need large numbers of pathbreakers who dare to think, explore new ways and generate new ideas,” “Otherwise, we won’t be able to rid our country of poverty and backwardness or to catch up with—still less surpass—the advanced countries.” To walk with giants, you must be a giant. A quiet giant, but still, a giant.

He proposed that China learn from the example of other, richer countries, allow workers and peasants to “vie” to get ahead so those with a better standard of life would inspire others to work harder, and he proposed that provinces and enterprises be given the power to make decisions or try new things.

Take Haier, as just one example of the change into modern China. Haier, the well-known maker of home appliances. When Deng entered the hotel that day in December, Haier was an unsuccessful, state-run company making refrigerators that never worked. Zhang Ruimin took it over and built it into an international colossus with revenue of \$38 billion...and along the way even bought out GE appliances.

What has transpired in China ever since 1978 is more than astounding; it’s never been done before...in all of human history, no matter how big the country or how large its population.

It was, in effect, Roosevelt's New Deal, The Marshall Plan, Eisenhower's Interstate Highway System, Kennedy's New Frontiers, and Johnson's Great Society all rolled into one, massive mega-project for a billion-plus people. Simply astounding!

In the three years 2011 to 2013, China used more cement than the U.S. used in all of the 20th century...6.6 gigatons.

No one knows what China might look like today if that Christmas gift hadn't been delivered and opened in 1978. Maybe an epic-size North Korea with "accurate" ICBMs.

One thing for sure is that the International Federation of Robotics wouldn't be gushing over the tens of thousands of industrial robots sold to China every year.

It's said that China by 2050 will have in operation more industrial robots than the rest of the world combined...something like 9 million.

Poverty in China has gone from 88% to less than 6%. China now was a brand-new middle class of over 500 million. That's a middle class larger than the entire population of Europe.

—Ezra Vogel, author of [Deng Xiaoping and the Transformation of China](#), said of Deng: Who in the 20th century had more influence on more people? Deng did what China had been trying to do for 150 years, and couldn't.

These days on the Street of Eternal Peace, or *Cháng'ān Jiē*, everyone is feeling a whole heck of a lot better about themselves than in 1978.

Merry Christmas, China.

As [Bloomberg recently pointed](#) out, China must now try to avoid falling into what economists call the middle-income trap (see: [Dani Rodrik: China's Boldest Experiment](#)), where per-capita income stalls before a nation becomes rich.

"Usually that happens because rising wages and costs erode profitability at factories that make basic goods like clothes or furniture, and the economy fails to make the jump to higher-value industries and services."

Only five industrial economies in East Asia have succeeded in escaping the trap since 1960 (World Bank): Japan, Hong Kong, Singapore, South Korea, and Taiwan.

China, for this year's Christmas gift, is hell-bent on becoming the sixth. Such a leap is impossible to make without modernizing industry with robot-driven automation. In his 2014 speech on [core technologies](#), President Xi Jinping called for a revolution in robotics; and with that speech made a commitment to robot-driven automation. A speech otherwise impossible without Deng Xiaoping's Christmas Miracle.

Here in 2021, Xi and China continue to live up to that commitment, as this recent CNBC headline reports: [Why China is spending billions to develop an army of robots to turbocharge its economy](#). Plainly, the robots and automation are necessary; there are no substitutes, and there's no going back to depending solely on human labor. Billions of dollars are flowing from the government to subsidize robots, and the flow will continue unabated, even in the face of a trade war.

However, China's best Christmas gift ever from Deng Xiaoping now needs a critical upgrade, which has now fallen to Xi Jinping to deliver.

The Xi effect

After forty years of "reform and opening up" (gǎigé kāifàng), which besotted China's skies, polluted water supplies, and poisoned agricultural lands larger than the entirety of Great Britain, a major cleaning of the tables is long overdue.

Even corruption, which drains away the equal of China's entire defense budget, needs constant rooting out.

That gargantuan undertaking has fallen to 68-year-old Xi, who, like Deng, also ran afoul of the Cultural Revolution, and also survived it. For those lifted out of poverty, it will be up to Xi to sustain them with a quality standard of living.

Ensuring the food supply, trustworthy pharmaceuticals, dependable medical care, reliable transportation, and high-quality, consumer goods, have all fallen on his shoulders.

So too has "reskilling" workers displaced by robot-driven automation. "[By 2020](#), China's Ministry of Education had hoped to enroll 23.5 million students into three-year vocational programs designed for the new economy." COVID has short-circuited much of that effort.

And all the while, the vortex of the middle-income trap swirls menacingly closer.

Automation is how Xi will maintain the sheen on China's best Christmas gift ever.

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