

Job-Gobbling Automation Marches into More Public Endeavors

Robots make pizza, brew lattes, and guard parking lots

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Robots are moving on up, from testing to practical use in new arenas. Recently developed systems for delivery and food production that were in try-out mode a year ago are now engaged in performing their functions out in the world. While robots have been used in manufacturing for years — largely wiping out most automotive production jobs — some new smart machines have been appearing in the public space where the effect of automation is visible for all to see.

The San Francisco/Silicon Valley area is home to many technology businesses. As a result, the region sees many rollouts of new smart machines performing in startup business, and food-related robots are trending presently. One addition for caffeine-craving java junkies is the robot barista serving up cappuccinos and lattes at San Francisco's Cafe X. Two machines grind the beans, steam the milk and prepare the beverages, while a classic robot arm places the drinks before customers. Only one human is required to operate the place, and the startup's owner says he wanted to speed up the process as well as save money by using fewer workers.

In Mountain View, forty miles south of San Francisco, the Zume Pizza company says it has cut labor costs by half through its use of robots. The kitchen has an automated sauce spreader and robot arm to handle the oven duties, although humans are still used to prepare ingredients and sprinkle them on the pies. Each robot costs between \$20,000 and \$35,000, which is paid off quickly in savings on wages and benefits. The pitch to customers is that fresh, healthy ingredients make a

yummy pizza, but the business model is based on fewer workers.

According to Zume co-founder and CEO Julia Collins, "We're a co-bot situation. There are humans and robots collaborating to make better food, to make more fulfilling jobs, and to make a more stable working environment for the folks that are working with us."

It should be noted that the union-organized effort to raise fast-food workers wages ("Fight for \$15") has prompted business owners to introduce robots more rapidly than they might have otherwise.

Former CEO of McDonald's Ed Rensi appeared on a Fox Business show last year and analyzed the new restaurant technology: "If the \$15 minimum wage goes across the country, you're going to see job loss like you can't believe. I was at the National Restaurant Show yesterday, and if you look at the robotic devices that are coming into the restaurant industry — it's cheaper to buy a \$35,000 robotic arm than it is to hire an employee who's inefficient making \$15 an hour bagging French fries — it's nonsense, and it's very destructive, and it's inflationary, and it's going to cause a job loss across this country like you're not going to believe."

Many current business owners are probably thinking the same thing but don't say so in public.

If you like to eat restaurant chow in the comfort of your own home, the delivery may now be accomplished by a robot rather than a human. A few models of delivery bots exist, such as Starship Technology's cooler-sized machine and Marble's larger box-on-wheels.

However, a backlash has developed in San Francisco, where Supervisor Jane Kim is investigating how a tax on robots might help to mitigate the jobs lost. (Funny how the city doesn't mind large numbers of illegal aliens who cause the same negative effect against its citizens.) Supervisor Norman Yee has proposed legislation to ban delivery robots because of the public safety hazard on sidewalks — and admittedly Marble's sidewalk-hogging machine looks like it could hurt in a collision.

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For sit-down restaurant eaters, a tablet-style screen may be present at the table for ordering food. Some fast-food spots where customers line up to order have also used a larger stand-alone kiosk.

In February, Wendy's announced it would install ordering kiosks in 1,000 of its restaurants (about 16 percent of its locations) by the end of the year. A typical restaurant would get three kiosks costing around \$15,000. The company believes that expense would be paid off in less than two years based on the labor savings.

Money is also being saved on basic security, such as in parking lots. The Knightscope company rents out its robot security guard for \$7 per hour, which is certainly cheaper than a human. The 300-pound five-foot-tall machine looks like a giant salt shaker and is imposing without being scary. It rolls around and scoops up information, using its multiple high-definition cameras for 360-degree vision, thermal camera, laser rangefinder, weather sensor, license-plate recognition camera, four microphones, and person recognition capabilities. But the robot is not weaponized, except against human workers.

Self-checkout stations are popping up more frequently in supermarkets and stores because it's not hard to scan barcodes and add up the cost of purchases. In fact, price scanners have been around since the 1980s when the barcode representation of data became standardized. However, this trend is bad news for millions of cashiers. A recent study from the Cornerstone Capital Group estimated that 6 to 7.5 million existing check-out jobs are at risk over the next 10 years. That forecast is around 38 percent of the current industry workforce, which numbers around 16 million workers. Plus, the study concluded that retail could lose a greater proportion of jobs to automation than manufacturing did.

While more smart machines are appearing in the public space, the majority of robots remain tucked away behind the scenes in factories, workshops, or wherever cheap routine labor is needed. One measure of increased use is shown by sales being on the upswing. In the first quarter of 2017, North American companies bought a total of 9,773 industrial robots for \$516 million, a record level of sales.

Robots have become less expensive over time. For example, the Baxter two-armed industrial machine has a base price of \$25,000 and can work 24/7 loading boxes or other simple tasks. Its expected lifetime is about 30,000 hours, so the price tag is attractive to business.

In 1914, automotive pioneer Henry Ford shocked the business world by raising his employees' wages to double that of the industry standard. He explained his action in his 1926 book *Today and Tomorrow*: "The owner, the employees, and the buying public are all one and the same, and unless an industry can so manage itself as to keep wages high and prices low it destroys itself,

for otherwise it limits the number of its customers."

Today's business leaders have completely forgotten this lesson, namely that most shoppers are workers and vice versa. When employee paychecks have largely disappeared from the automated economy, who will purchase the products manufactured by machines? Apparently making maximum profits has blinded the captains of industry to the big economic picture.

A Rasmussen Reports poll (May 2017) titled "Can a Robot Do Your Job?" found "that 63 percent of American Adults believe it's at least somewhat likely that most jobs in America will be done by robots or computers 25 years from now, though that includes just 22 percent who think that's Very Likely to happen." That result indicates how awareness of automation's growing threat to the economic system is substantial among the public.

If only that knowledge existed in Washington, D.C., where the leaders of the free world are sleepwalking off an economic cliff. During a March interview, Treasury Secretary Steve Mnuchin remarked about robots taking U.S. jobs, "It's not even on our radar screen...50-100 more years."

Mnuchin's opinion is not shared by many tech and robot experts, who believe that a substantial portion of U.S. jobs could be automated within a couple decades. The big picture of employment is indeed sobering. Oxford researchers forecast in 2013 that nearly half of American jobs were vulnerable to machine or software replacement within 20 years. Rice University computer scientist Moshe Vardi believes that in 30 years humans will become largely obsolete, and world joblessness will reach 50 percent. The Gartner tech advising company believes that one-third of jobs will be done by machines by 2025. Forrester Research Inc. has a more optimistic view, that there will be a net job loss of 7 percent by 2025 from automation — so the best we can hope for is something like a permanent recession.

Of course, that cluelessness is reflected in Washington, D.C.'s immigration policy, which moves along on auto-pilot despite fundamental changes coming that will decrease the number of human workers needed for the nation's production and services. There is a numbers-reduction bill in the Senate — the RAISE Act — but it only requires a 50 percent cut in legal immigration, and sponsors Tom Cotton and David Perdue haven't mentioned the automation juggernaut against jobs, which would suggest greater downsizing.

At this point, the job-killing machines are becoming visible for all to see, but Washington is blind to an approaching danger to the entire economic order.

As Enoch Powell remarked, "The supreme function of statesmanship is to provide against preventable evils." Automation is not preventable, but its effects can be mitigated to some degree. Where's the statesmanship addressing that issue? Inquiring minds want to know. ■