

Fear the robots? Better to embrace them and adjust

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Robots serve drinks at the Tippy Robot inside the Miracle Mile Shops in Las Vegas.
by **Mark Zandi**, For the Inquirer

Driverless cars. Robotics. Cloud computing. Artificial intelligence. Drones. 3-D manufacturing...

Yes, we live in a tsunami of cutting-edge technologies. Technologies that hold enormous promise to make our lives better but deeply worry many of us. We worry that they will take our jobs.

It's not hard to see dark scenarios. Think of the millions of trucking, taxicab, and Uber jobs at risk if vehicles drive themselves. Or the factory jobs that will vanish when 3-D manufacturing lets us make our clothes and furniture at home. Or even the professional-service jobs threatened by artificial intelligence and machine learning.

These aren't abstractions. We all know someone who has lost a job to new technology. A clerk for a bricks-and-mortar retailer that closed its doors, unable to compete with e-tailers. A journalist at a struggling print newspaper whose advertisers left for social media. A machine-tool worker replaced by new robots.

But don't despair. While the new technologies will be disruptive — change always is — worries that they will result in mass unemployment, or even higher unemployment, are misplaced. In fact, in spite of temporary ups and downs in the economy, our biggest long-term challenge won't be unemployment. It will be a shortage of workers.

Hand-wringing that robots will take our jobs is age-old. I recently saw a presentation by a highly respected economist at a major technology firm who had found, in the archives of the New York Times, articles dating from the 1940s with headlines to the effect that the robots were coming and we would all be out of work. Indeed, those worries go back to when machines were first brought into cotton and wool mills in the early 1800s.

There is also reasonable debate over whether today's technologies are really such a big deal compared with those that washed over our economy in times past. Consider this: Which would you rather have, a smartphone or an indoor toilet? Be honest. Sure, having a phone in your hand with a GPS and live streaming is pretty cool, but it seems a trifle compared with not having to trudge to an outhouse in the dark in the middle of a Philadelphia winter.

The point is, it's not obvious that the pace of technological change today is any faster than it was in the past. If anything, the economic data say otherwise. Productivity — how much we produce given how much we work — would be surging if new technologies were coming on fast and taking lots of jobs. But it has been just the opposite. Productivity growth has been stuck in the mud in recent years.

Our economy is always adjusting to technologies that displace jobs, but our economy has always been dynamic enough to create new and better jobs. There is no reason to think that the current pace of technological change will overwhelm our economy's ability to adjust and employ everyone.

You may ask: Precisely which new jobs will replace those we will undoubtedly lose to new technology? I'm not sure. It's hard to imagine the jobs of the future. If I had told you 10 or 15 years ago that the companies creating the most jobs today would be Amazon, Facebook, Google, Netflix, and Uber, many of you would have asked, "Who?" Exactly.

None of this is to say we don't need to worry about those losing jobs to new technologies because they will quickly find other jobs. Unfortunately, that's not how it goes. Many don't have the skills or education they need to get jobs at these new companies. Many end up taking lower-paying, less rewarding jobs.

Technological change is a key reason for the growing chasm between the haves and have-nots in recent decades. The haves are empowered by technology, while the have-nots are crushed by it.

The solution may sound hackneyed, but it is no less true that we must invest more in education and training — K-12 and community colleges, for sure, but e-learning and technical schools, also. We also should provide businesses incentives to spend more on worker training. Tax incentives are a good way to temporarily defray the costs of apprenticeships for businesses that hire displaced workers. That will help those workers gain the skills and on-the-job experience needed to become full-time employees.

Technology can be scary and difficult to adjust to, but we must embrace it. If we do, robots won't take our jobs, they will free us to work at better ones.

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