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Can the Automation Tidal Wave Be Resisted?

By Thomas H. Davenport

Over the past year or two, a number of people have written books about the automation of jobs. I confess to be doing so as well, so you may have noticed [a few posts about this topic](#). In this column I am not going to dwell on whether automation will replace jobs forever, or on what kinds of jobs are most likely to be replaced. My focus is rather on what—if anything—can be done about it, assuming that the trend is more or less true and a valid cause for concern.

The different writers on this subject have a variety of remedies. I respect all of their ideas, but I see substantial challenges with each of them. For example, Tyler Cowen, the economist author of *Average Is Over*, sees a somewhat permanent employment underclass emerging from the automation of jobs. About 85% of the U.S. population, he argues, will be the victims of slow wage growth and difficulty in making ends meet. There will be much more leisure, but not much money to support it. He expects that many of the less advantaged will move to cheaper places to live in the U.S. heartland. In short, he doesn't think much can be done about the automation problem other than adjusting one's lifestyle to it. It's a pragmatic perspective, but a somewhat depressing one.

Erik Brynjolfsson and Andy McAfee make a strong case that automation is affecting middle-level jobs. In their book *The Second Machine Age*, the first half of the book addresses the changes in jobs wrought by information technology. The second half explores the implications for the economy and society, and what might be done to mitigate them. The focus in addressing the consequences of automation is social and economic policy. Their primary remedy is more and different education—focused on topics where humans hold an advantage, such as creativity—for those who might be dislocated by technology. [A similar argument is made by Eric Schmidt](#) in a McKinsey-sponsored video about disruptive technologies.

It's difficult to object to more education, but I find it unlikely that it will spring forth, at least in the U.S. In this country we find it difficult to fund the education we already supply. We should certainly emphasize creativity in our educational objectives, but at the moment we seem much more focused on standardized curricula and test scores. Perhaps some other country will do a better job of it—most likely the usual suspects of Norway, Finland, or Singapore.

The most recent tome to address the perils of automation is Nick Carr's *The Glass Cage*. I have a lot of respect for Carr, who is perhaps the only person to raise serious concerns about our ardent embrace of all things technological. He questioned the value of our IT spending in *Does IT Matter*, and pondered what the Internet is doing to our brains in *The Shallows*. *The Glass Cage* is an elegant and elegiac book that raises doubts about the worth of automation in a variety of settings, from driving to farming to flying. Is Carr correct that automation costs us not only our

jobs, but often our souls as well? He probably is. But will that stem the tide of advances in automated guidance, decisions, and actions? Carr himself seems to realize that it's not going to happen in a world obsessed with economic efficiency. He also puts the onus for rejecting or limiting automation on individual workers, when they often have little choice in the matter.

If none of these approaches supplies the answer to automation, what does? I'd argue that individuals still have options for dealing with the problem on their own, and their own choices are the only source of immediate succor. They can choose—or try to retrain themselves for—a job that is unlikely to be automated. They can try to become experts as quickly as possible, because it's usually the entry-level jobs that are eliminated first. They can specialize in a field that is so narrow that no one would be likely to automate it. They can learn enough about how computer programs do their jobs to modify and enhance them. Finally, they can take the artisanal route—eschewing mass production and technology, and creating high-end products for wealthy customers.

I wouldn't even argue that my own ideas will save most of the endangered jobs. But those who adopt these approaches are relatively likely to grab one of the diminished number of jobs left. As the old joke goes about what happens when you and your friend are confronted by a bear, you don't have to outrun the computer to avoid automation—just your friend.

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