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How Efficiency Is Wiping Out the Middle Class

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I am concerned that my childhood dreams are turning into a nightmare.

Stanley Kubrick's "2001: A Space Odyssey," which I first saw in 1968 when I was seven years old, sparked my fascination with computers and Artificial Intelligence (AI); areas that became the focus of my academic and career pursuits. Today, I still believe that AI and automation can deliver great things to the world, but the effects on Americans trained at moderate skill levels—or the middle-skill workforce—worries me.

Some have suggested that the significant, long-term decline in U.S. manufacturing jobs are a result of bad trade deals and corporate greed. The decline is more likely a result of efficiency gains made possible by computers, including significant advances in AI, which have allowed us to optimize our economy as never before. In the next decade, AI will take on a broader array of tasks, including new industries, which will affect even more workers.
And it's not only about jobs being lost or saved; there is a distinction between a job and a career: the kind of work that provides skill development, meaningful wage-growth prospects, and a reasonable likelihood that one's work won't be automated away. The types of careers, in other words, that have traditionally formed the foundation of healthy communities.

One of capitalism's bedrock promises—one that dates back to Adam Smith—is that competition in the free market benefits society. Somewhere along the line, however, intoxication with efficiency caused us to lose sight of that principle at the expense of workers. Getting back to that promise will require policy changes and a renewal of forgotten values.

The raw, widespread anger we saw during the recent U.S. election reflects, in part, the intense despair that many workers feel as they see their families' economic prospects fade and social conditions deteriorate.

David Siegel

Trade and immigration have become boogeymen, but it is the technological advances and the associated huge efficiency gains that truly underpin the "hollowing out" of the middle class behind the scenes.

Exponential increases in computing power, along with innovations in software, analytical techniques and the rise of Big Data, mean that even many repetitive white-collar tasks are due for disruption, too. According to a 2013 study by two Oxford University professors, almost half of all jobs in the U.S. are susceptible to "computerization" over the coming decade or two.

No one seems to know how to address this. As Harvard's Clayton Christensen and Derek van Bever argue in "The Capitalist's Dilemma," orthodox finance dictates that investment by corporations to create jobs tends to be the third-best option behind substitutive innovation (which tends not to create new jobs) and efficiency innovation (which almost always results in job losses). As we have seen, companies today increasingly prefer to avoid employing humans, if possible.

Most of the commonly proposed solutions are unlikely to resolve the issue. For example, an increasing focus on education, while necessary, is not sufficient; what good is a college degree if there are no opportunities to use it? The same applies to worker retraining programs.

Some promote the promise of the so-called gig or sharing economy, but I don't buy it. Working as an Uber driver might help make ends meet in the short-term, but the experience actually causes skills atrophy over time, as there is no emphasis on development or career progression.

Doesn't history teach us not to worry? The Industrial Revolution was disruptive, but it created jobs eventually, didn't it? Sure, but nobody knows whether the Information Revolution will do the same. Not all destruction, unfortunately, is creative in the Schumpeterian sense.

Mr. Christensen and Mr. van Bever suggest rebooting the capitalist system through a series of policy incentives aimed at making investment capital more "patient," evolving the curriculums at business schools, realigning corporate strategy and resource allocation, and freeing managers to focus on long-term value creation.

These ideas are worthy of support. I would go further and recommend aligning corporate tax policy with the goal of creating and fostering careers by skewing tax rates to favor businesses that create career opportunities.

The hollowing out of the middle-skill workforce is a classic tragedy of the commons, and few in leadership positions today feel a personal responsibility to help address it. But business leaders must wake up to the scope and difficulty of the challenges we face. A narrow emphasis on efficiency puts our entire system at risk. Moving forward, creating careers (rather than dead-end jobs) must be an equally valid goal. We cannot and should not try to stop the march of technological progress. However, we must redefine what progress truly means.