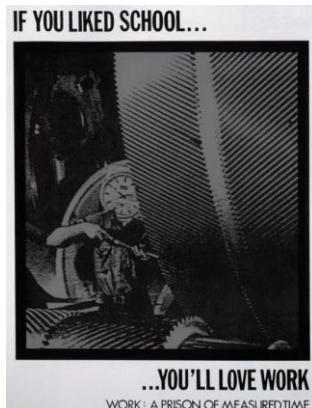


## Will technology make the future of work more human, or less?

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When I was in graduate school I came across this poster showing a factory worker laboring under a massive, bone crushing machine. The face of the worker had been replaced by a clock, and the bottom of the poster read “Work: a prison of measured time”. That poster had a lasting impact on my career. First, it made me realize I never want a job where I am paid primarily based on my time instead of what I contribute. It shouldn’t matter where I sit, what should matter is what I get done! Second, it made me sensitive to how technology can be used to create inhuman work environments where people feel more trapped than enabled.



The time clock is a great example. Companies need some way to measure the contributions of their employees. In an agrarian economy, this was based on what people produced. A worker was paid based on the fruits of their labor, often literally. But in the industrial age, development of technology resulted in work becoming divided into specific tasks. Workers became separated from the end products of their labor. So, companies developed technology to track time as a proxy for contributions. The result was work became more about “punching the clock” than making a difference.

I thought of this poster during a recent conversation about technology and the future of work. Some people suggest that technology is creating a more productive and engaged workplace focused on learning, flexibility and growth. These people discuss the benefits of things such as “global labor markets”, “the gig economy” and “machine learning” and how technology is giving employees more control over the careers and freeing them from repetitive or overly complex tasks. Others take a more dismal view, viewing technology as a tool for maximizing profits by reducing employee costs. Global labor markets are a way to avoid high local labor costs by employing people in economies with lower standards of living. People are forced into contract work because companies don’t want to provide healthcare benefits or commit to long-term employment. For these employees, it isn’t a “gig economy”, it is a “disposable worker economy”. And machine learning and related technologies are just a way to eliminate the costs of employing skilled workers.

In my view, technology is neither good nor bad for workers. What matters is how we choose to use it. There are three basic reasons why companies invest in work technology:

- **To do things people cannot do, or cannot do safely.** Technology can be used to perform work tasks that are literally inhuman – in the sense that no person could do them, or if they did they risk dying in the process. For example, manufacturing technology that enables working under extremely hot conditions, applying massive levels of force, or handling hazardous materials. This technology is inherently good for workers, because it allows us to do valuable things that people either cannot or should not do.
- **To reduce employment costs.** Technology can be used to reduce the costs associated with employing people. Employee expenses associated with salary and benefits often represent well over 50% of a company’s total operating costs. Technology can automate tasks in a way that reduces the need to employ people. This contributes to a company’s profitability by eliminating jobs, which is arguably bad for workers. But lowering operating costs also allows companies to

lower their prices and invest in new product development. This enables a company's long-term survival, which saves jobs which is good for workers. In addition, many of the jobs eliminated by technology involved doing highly repetitive or detail oriented tasks that people are neither good at nor typically enjoy doing. This technology frees workers from having to do things that most people probably do not like doing.

- **To maximize human potential.** Technology can enable people to more effectively leverage those things that make us uniquely human. This includes technology that helps us communicate with one another, learn new skills and capabilities, and find new ways to apply our capabilities and develop our potential. For example, technology enables me to work in one city, find and hire employees in another city, and then effectively work as a team with people working in dozens of other cities. This technology is good for workers, but only for workers who have the digital savvy, knowledge, and skills needed to engage in this sort of technology enabled work environment.

I believe we are at a crossroads in our use of technology and its impact on work. Which path we take depends on how much we invest in technology focused on maximizing human potential. Consider these two visions of the future:

***The utopian future of work.*** Imagine a world where there are no interviews, job applications, org charts, paperwork or paychecks. A world where work is simple, engaging and enjoyable. Finding a job is not about recruitment and selection, but about matching interests to opportunities. Companies are not about reporting structures, evaluations and rewards but defined as people collaborating to achieve shared goals. In this world, layoffs and retirement no longer exist, having been replaced with ongoing career transitions and lifelong learning. People have a sense of stability and employment security because they are given resources that allow them to constantly developing new skills for the next generation of jobs.

***The dystopian future of work.*** Imagine a world where the labor market has split into two categories: skilled and unskilled. The skilled labor market is comprised of well-connected professionals who have mastered the art of adapting to changing environments and engaging in lifelong learning. There is a constant shortage of these workers, which allows them to craft jobs so they can do them when, how and where they want at a high level of pay. These professionals enjoy benefits associated with being in demand, but they also work incessantly under the constant stress of knowing a change in technology could render their capabilities irrelevant. The other labor market is comprised of workers whose skills have been rendered obsolete due to technological advances. The supply of these workers greatly exceeds the number of jobs they are qualified to perform, so unemployment is rampant. Their world is a never-ending competition for low paying, unskilled and semi-skilled work. If they find a job, they know it is just a matter of time before it is eliminated with the next generation of cost saving automation technology. These workers long to be part of the skilled workforce, but many have families and other obligations that prevent them from pursuing the education needed to access the skilled labor market.

Technology is currently creating utopian and dystopian worlds. On the utopian side, companies can now use technology to match people to work opportunities regardless of where they live or who they know, replace annual reviews and compensation reviews with ongoing coaching and real-time flexible rewards, allow people to structure jobs to fit their interests and lifestyles, and proactively identify and train people on future skills they will need before they need them. We are also seeing the dystopian world

emerge as evidenced by growing wage gaps and a rise in chronically unemployed workers. What we do not know is which world is going to dominate our future.

The path we take will depend on choices companies make about how to invest in technology and decisions governments and societies that affect the use of technology. To create a more utopian future, companies must actively invest in technology to maximize human potential. This does not mean companies should not use technology to reduce costs. It is economically inevitable that technology will eliminate certain types of jobs while creating others. But technology must also be used to help workers transition to new types of work. Governments must update work regulations to reflect the changing nature of work. Companies cannot effectively compete in the 21<sup>st</sup> century global economy if they are hampered by employment regulations rooted in localized 20<sup>th</sup> century labor practices. We cannot effectively transition to the future without also letting go of the past.

Technology has the potential to create a future where people no longer worry about “having to work for a living” and instead focus on “living a fulfilling, purposeful life”. But as history shows, technology can also create horrific working conditions and punishing labor markets. Technology is going to change the world of work, that is certain. But whether technology leads to a future of work that is more utopian than dystopian entirely depends on how we choose to use it.