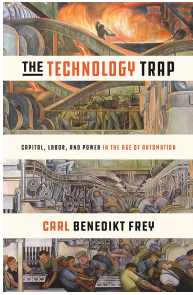


The Technology Trap

Capital, Labour and Power in the Age of Automation



“The Technology Trap

Capital, Labour and Power in the Age of Automation”

by Carl Benedikt Frey, 2019

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Carl Frey is an economist at Oxford University where he directs the Future of Work programme at the Oxford Martin School. He was the co-author of an influential 2013 paper entitled “*The Future of Employment. How susceptible are jobs to computerisation?*”. This concluded that about 47 percent of all jobs within the USA were at high risk from increasing automation. His recent book continues the same theme, analysing the effects of increasing automation on different types of employment, but from a practical and well-informed historical perspective.

Frey takes the Industrial Revolution of the 18th and 19th Centuries in Northern Europe as providing a historical analogue, allowing the effects on human workers of transformative and disruptive technology to be assessed. He argues that there are many parallels between our current age of increasing automation and the early days of the Industrial Revolution. As the mechanized factory displaced craft workers, traditional middle-income jobs dried up, the labour share of income fell, profits surged and disparities between high and low incomes skyrocketed. It took over half a century until average people saw the benefits of the Industrial Revolution trickle down. “*Three generations of working people were made worse off as technological creativity was allowed to thrive. And those who lost out did not live to see the day of the great enrichment.*”

It is not surprising that there was widespread opposition to mechanisation from displaced workers at the time of the Industrial Revolution. Frey considers there is a realistic possibility that we will see similar widespread opposition to new technologies in the future. He draws out the important distinction between labour-enabling technologies and labour-replacing technologies. Enabling technologies allow human workers to be more effective and productive in the workplace. Replacing technologies displace humans out of the workplace. An internet connected laptop in an office is an enabling technology. An industrial robot in a car factory is a replacing technology.

Frey concludes that whether replacing technologies will be facilitated or opposed depends on who will stand to gain from them and the societal distribution of political power. The Luddites at the time of the Industrial Revolution did what they could to stop the spread of labour-replacing technologies but they were unsuccessful as they lacked political power. The governments of the time chose to back the merchants and mill-owners rather than the workers. Troops and police were deployed to quell labour unrest. The mechanized factory was deemed critical to Britain's competitive position in trade. Thus Britain at the time avoided the ‘technology trap’ in which labour-replacing technology is consistently and vigorously opposed for fear of social destabilisation.

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Frey draws out a series of helpful practical implications for the present day. Many current and proposed applications of AI can be regarded as labour-replacing technologies and it is highly likely that this will lead to widespread social disruption which may continue for many decades. Many skilled and semi-skilled workers are likely to be made worse off initially and they may never benefit directly from new jobs created by labour-enabling technologies. To avoid the technology trap governments must pursue policies to kick-start productivity growth while helping workers adjust to the onrushing wave of automation. Major reforms in education are required, governments should provide relocation vouchers to help people move, reduce barriers to switching jobs, get rid of zoning restrictions on house building, boost the incomes of low-income households through tax credits and provide wage insurance for people who lose their jobs to automation. *"The bottom line is that regardless of what the future of technology holds, it is up to us to shape its economic and societal impact".*

John Wyatt