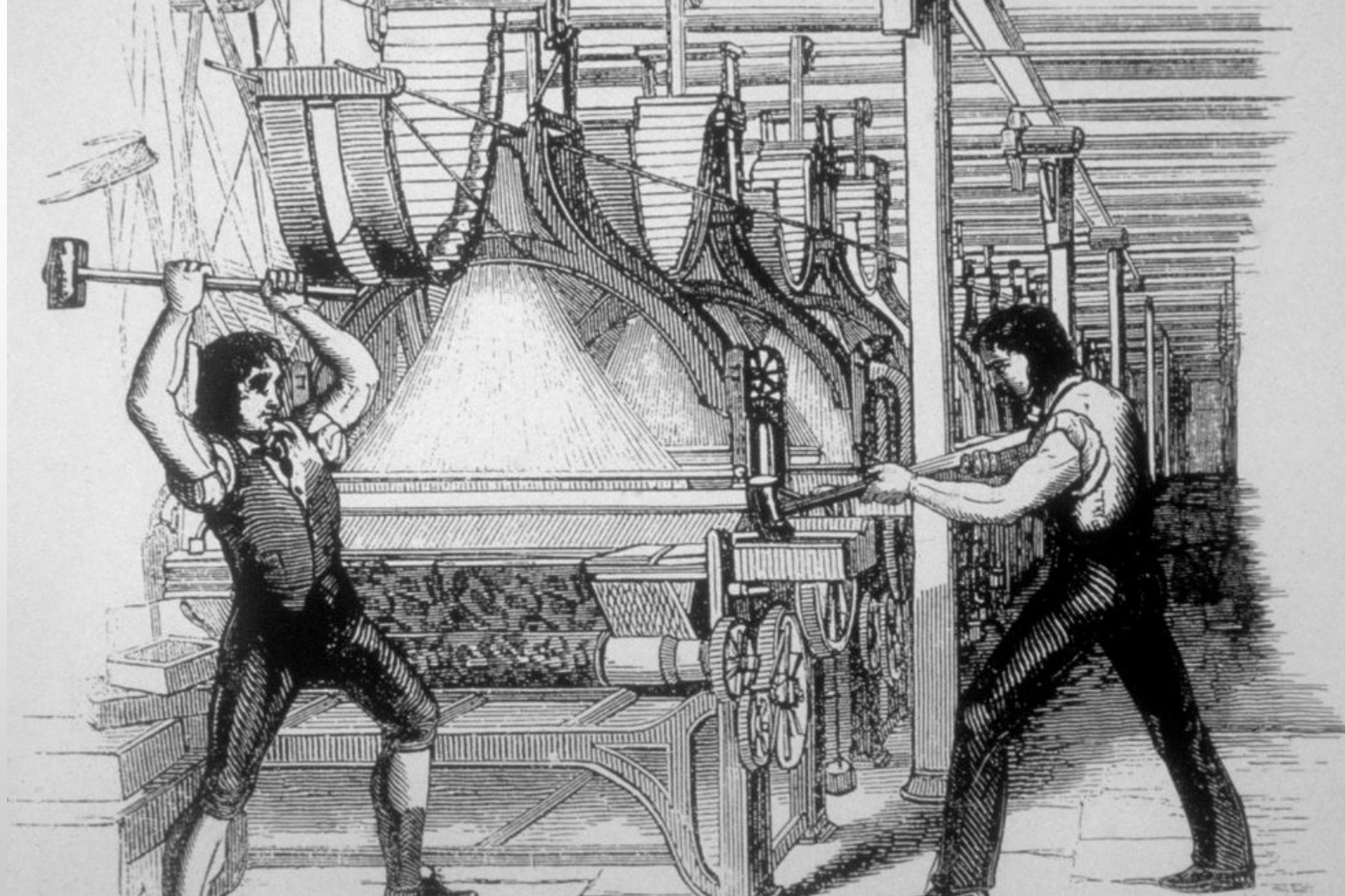


# AI and Front-line Workers: Lessons from the past and Questions for the future



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# Luddites foresaw problems



# Luddites foresaw problems



ROMWE Street Life Men Slogan G...

**\$7.19** -20%



ROMWE Prep Men Star Print Dra...

**\$6.83** -24%



Manfinity Hypemode Men Cotton B...

**\$13.43** -30%  
Estimated



SHEIN EZwear Plus Tie Dye Letter...

**\$8.07** -20%



# Taylorism treats people as machines



Lee, J. D., Wickens, C. D., Liu, Y., & Boyle, L. N. (2017). *Designing for People: An introduction to human factors engineering*. CreateSpace.

# Taylorism treats people as machines

Efficiency focus can be empowering or diminishing

Reduced strawberry shortcake from 286 steps to 46



Lillian Gilbreth used the principles of scientific management to create the modern kitchen

# Taylorism treats people as machines



<https://www.franchisewire.com/mcdonalds-franchisees-to-woo-workers-with-better-pay-and-perks/>

# Computerization can informate or automate

Zuboff, S. (1988). *In the Age of Smart Machines: The future of work, technology and power*. Basic Books.



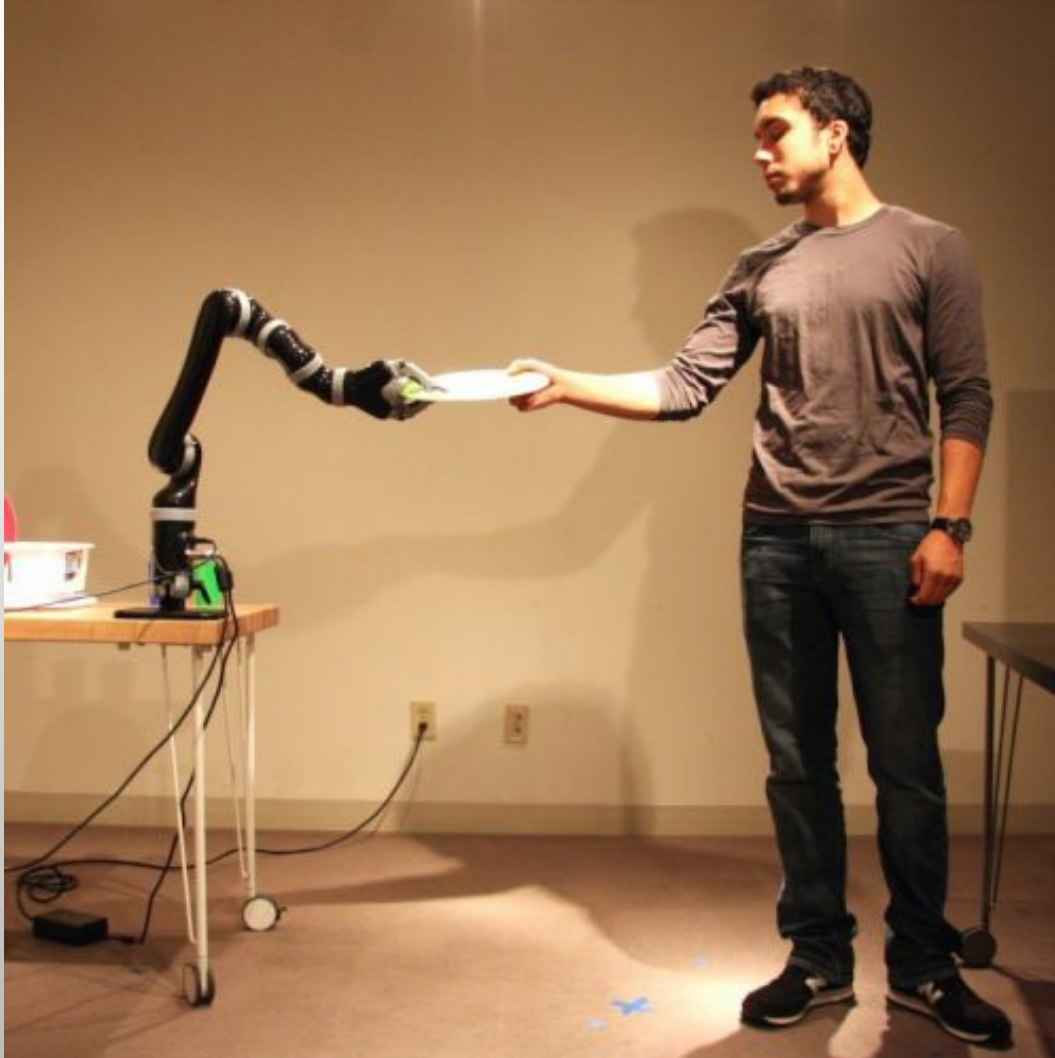
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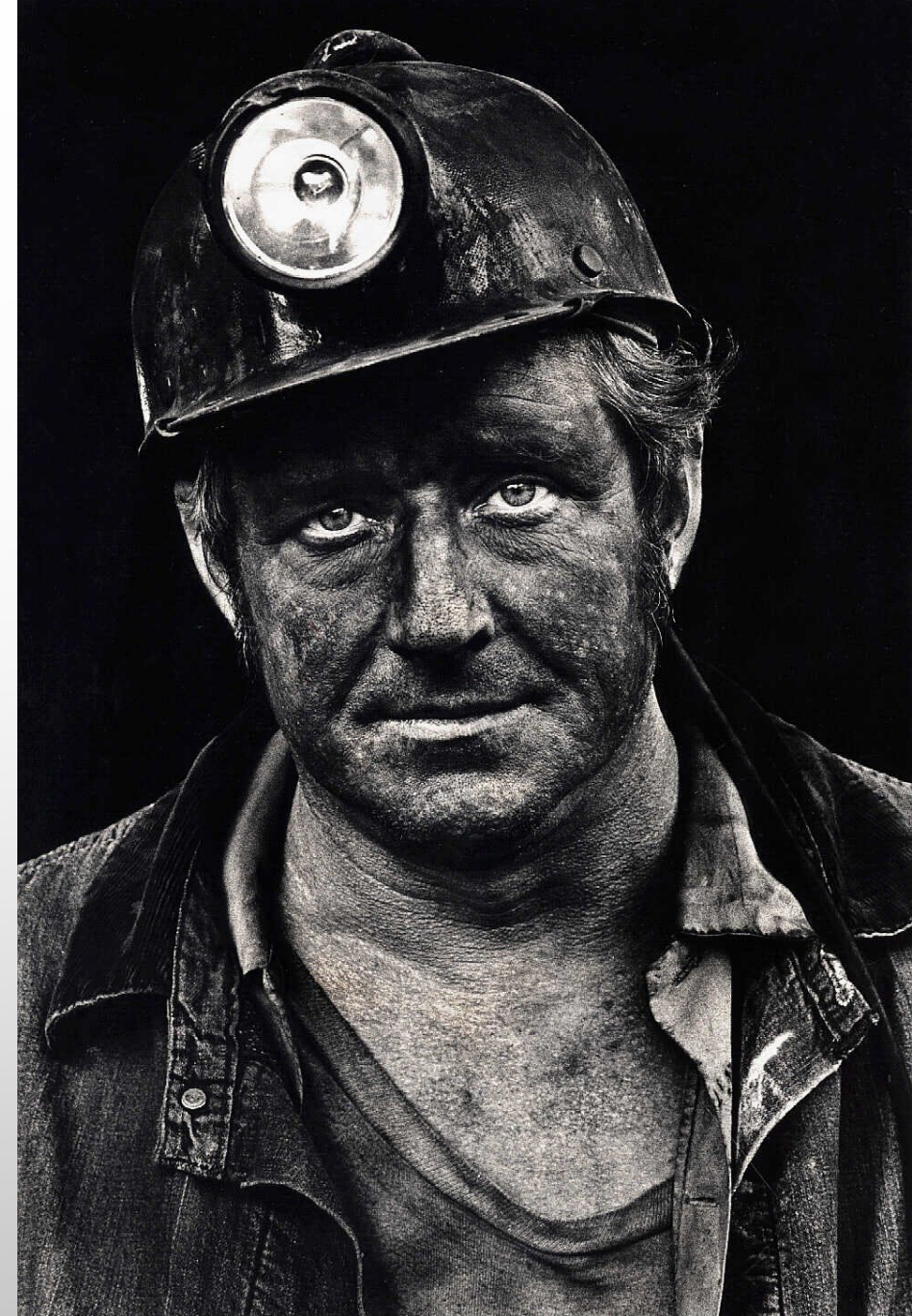


The Library of Congress

# Cooperate or delegate?



<https://robotics.wisc.edu/building-adaptive-robotic-collaborators/>









<https://www.npr.org/sections/pictureshow/2012/07/06/156386882/documenting-dirty-jobs-miners-at-work>

# The coming AI revolution

- Survey of business leaders:  
37% technology replaced workers in 2023  
44% anticipate AI-enabled layoffs in 2024
- World Economic Forum:  
69 million new jobs will be created  
83 million destroyed worldwide
- 11.5 million workers will need to re-tool skills
- 10-100% productivity increases with AI collaboration

# Potential impact of Types of AI and Types of work

	Office work	Manual labor	Customer service
Generative models			
Embodied AI and robots			

# Will AI reduce us to stochastic parrots?

Bender, E. M., Gebru, T., McMillan-Major, A., & Shmitchell, S. (2021). On the dangers of stochastic parrots: Can language models be too big? 🦜. *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*, 610–623.

- Dunning-Kruger spiral enabled by AI?  
Glib, overconfident superficial understanding



# Questions for the future

- **Respect Luddites:** How to avoid painful dislocations for individuals?  
Restructure education?
- **Moderate Taylorism:** How to balance "the-best-way" with autonomy and expression?
- **Carefully automate and informate:** How to informate to avoid overtrust, complacency and deskilling?
- **Design new human work:** Focus on productivity and meaning?