Excerpts from Prof. Johnson's Presentation

Technology and Global Inequality in the Age of AI

Simon Johnson

What Impact Will Generative AI Have on Jobs (and Incomes)? Over the next 20 years…

Two widely held views in the U.S. today

1. **Techno-optimism**: AI will result in productivity increases so large that no one needs to work again
   - Share gains through universal basic income, etc.
2. **Extreme techno-pessimism**: rapid automation will create mass unemployment, almost no one gets a job
   - Without boosting marginal productivity by much

Our baseline scenario, 10-20 years

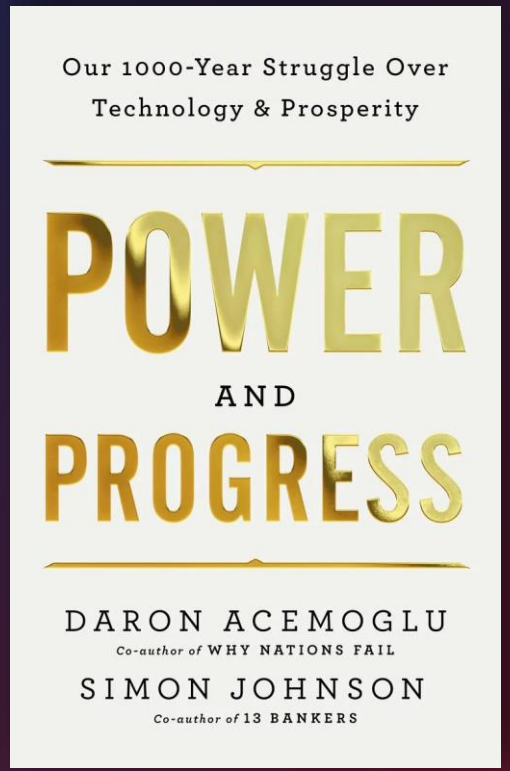
- US productivity growth remains on trend
- Job market polarizes further, and income gaps widen
- Global inequality increases within and across countries

But it doesn't have to be this way

- AI today offers a major choice: pro-worker, or not
- Who decides which path to take and on what basis?

SHAPING THE FUTURE OF WORK

“We Will All be Gods”… Or, Good Jobs for Whom?



Based on analysis and ideas from:

Power and Progress: Our Thousand–Year Struggle Over Technology & Prosperity

By Daron Acemoglu & Simon Johnson

With support from the MIT Shaping the Future of Work Initiative, co-directed by Daron Acemoglu, David Autor, and Simon Johnson.

With a consistently top-ranked PhD program and ~~five~~ six! faculty named Nobel laureates since 2010, MIT’s Department of Economics has played a leading role in economics education, research, and public service for more than a century.

PART I – Patterns of Inequality
Since 1980s, U.S. Companies Focus on Using Automation to Squeeze Labor Costs

Job market polarization since ~1980

- Broadly shared wage growth since WWII
- But growing divergence in last 40 years
- Labor is a cost to be minimized (Friedman)

AI could exacerbate this divergence

- Skill-biased technologies drive job-market polarization: boost for the most educated
- AI could easily continue these polarizing trends (e.g., no more "cut and paste" jobs)
- "Employment transitions" in the US will likely run at pre-COVID rate (McKinsey: Europe needs more)

Risks for misinformation, social media

- Impact on democracy, mental health, children

The change in real (log) weekly earnings, since 1963

Working age adults, ages 18–64, USA

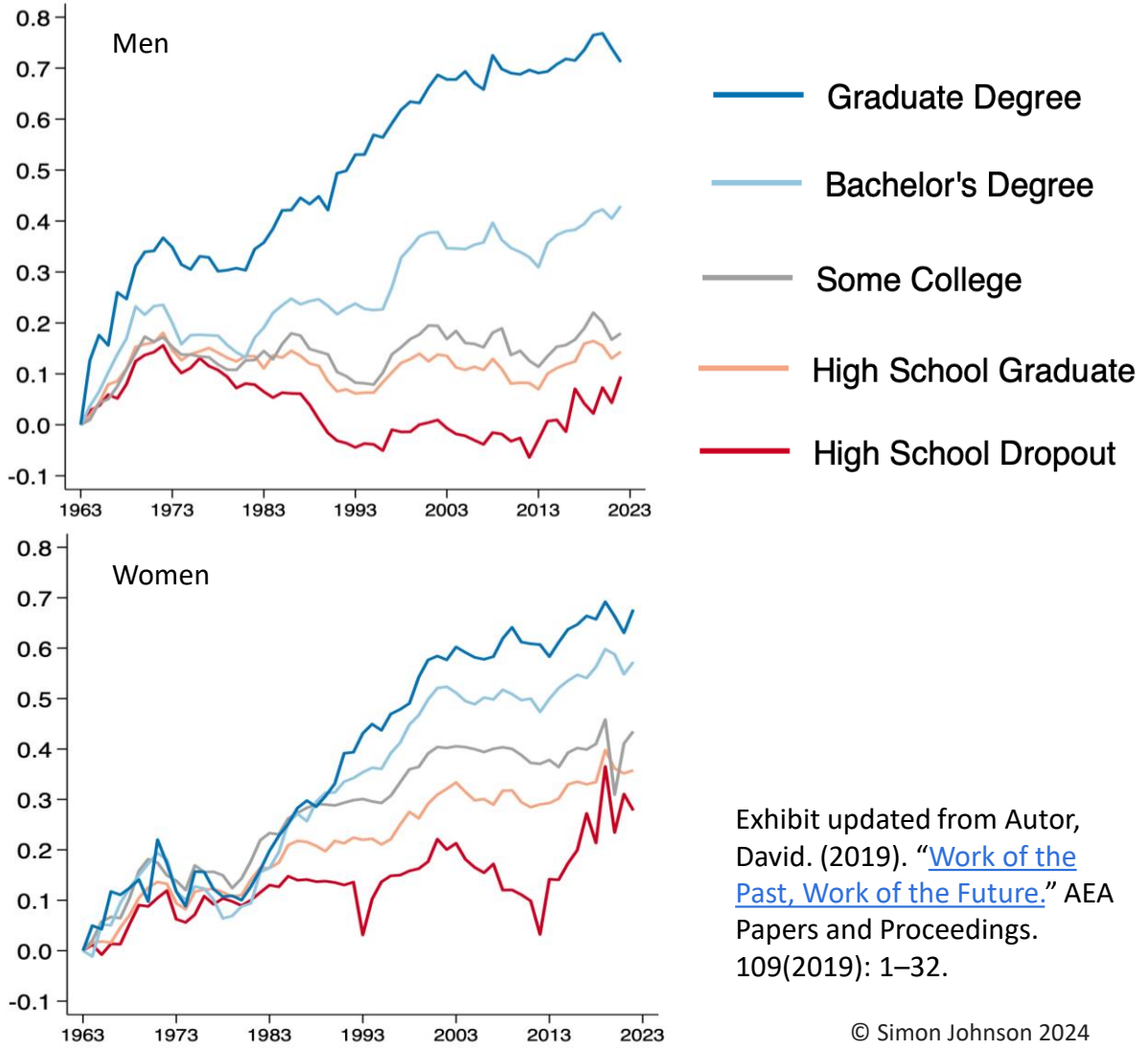


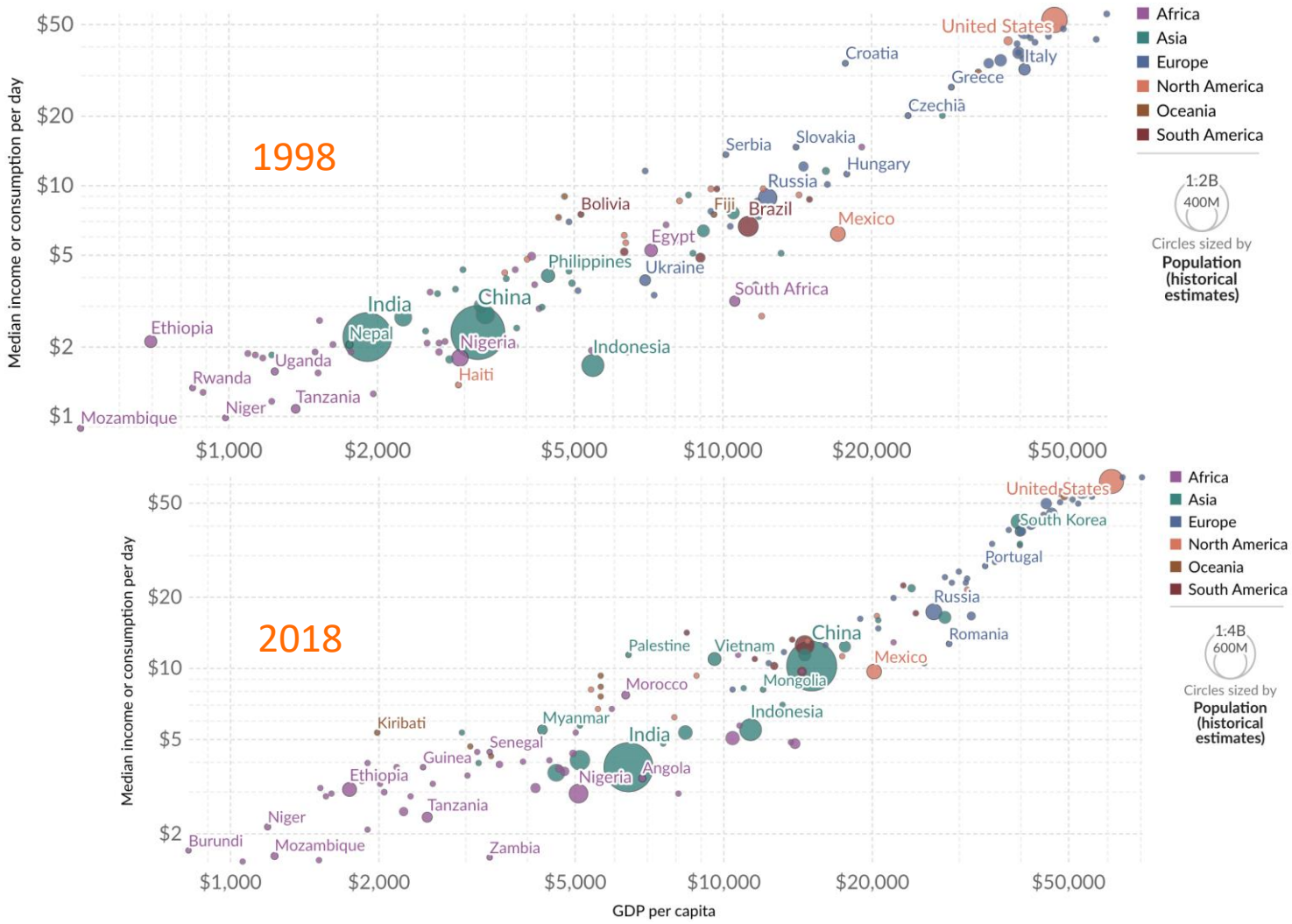
Exhibit updated from Autor, David. (2019). "Work of the Past, Work of the Future." AEA Papers and Proceedings. 109(2019): 1–32.

Additional Concern: What Happens to Global Inequality?

Threat to emergent middle-class

- China, India, and others have made significant gains in recent years, based on taking on repetitive tasks
- If negative impacts of AI prevail, the emergent global middle class and low-wage workers will bear the cost
- Concern for white collar jobs (Indian services), but AI also coming soon to manufacturing
- This will deepen existing inequalities and contribute to the instability of local labor markets and global politics

Long-lasting Differences in Daily Income/GDP per capita, 1998 and 2018



Exhibits from Our World in Data, using the World Bank Poverty and Inequality Platform (2022), compiled from multiple sources.

PART II - What Happens When Economic Development Goes Right: When Is There Really A "Productivity Bandwagon"? (A Rising Tide Lifts All Boats… Sometimes)

At the 1851 Great Exhibition in London, the U.S. displayed almost no industrial achievement.

But by 1890, the U.S. was the world's largest manufacturing power.

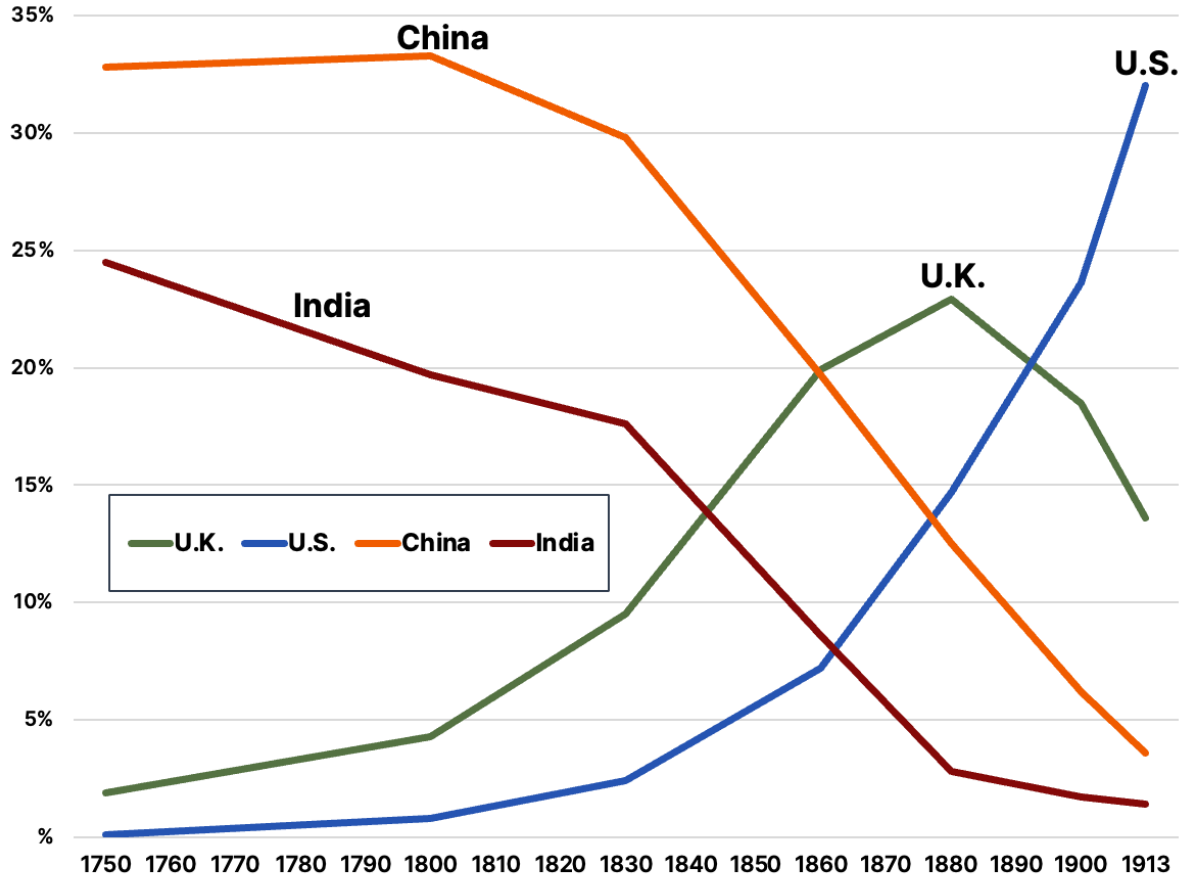
How did this happen? Worker Augmentation

- The "American System of Manufacturing"
- Machines boosted productivity of workers (e.g., immigrants) without much formal education
- New tasks requiring expertise: autos from 1900

With positive global implications

- American technology (e.g., sewing machines, farm equipment, automobiles) spread around the world
- Higher wages made possible by higher marginal productivity (+ unions, eventually)

Reversal of Fortune: Share of World Manufacturing



Data from Bairoch, Paul. (1982). "International Industrialization Levels from 1750 to 1980." Journal of European Economic History. 2: 268-333.

Part III – What Will AI Do? Next 10–20 Years…

It will displace labor through automation

- Replace workers with machines and algorithms, average productivity per worker increases
- But this does not necessarily increase wages (e.g., British Industrial Revolution, 1780–1840)

And create new tasks, requiring expertise

- More than 60% of U.S. jobs in 2018 did not exist in 1940 (Autor et al., 2024)
- This new task creation process was fast enough to underpin shared prosperity, 1940–80
- **But since 1980, new tasks have not kept up with the loss of good jobs due to automation**

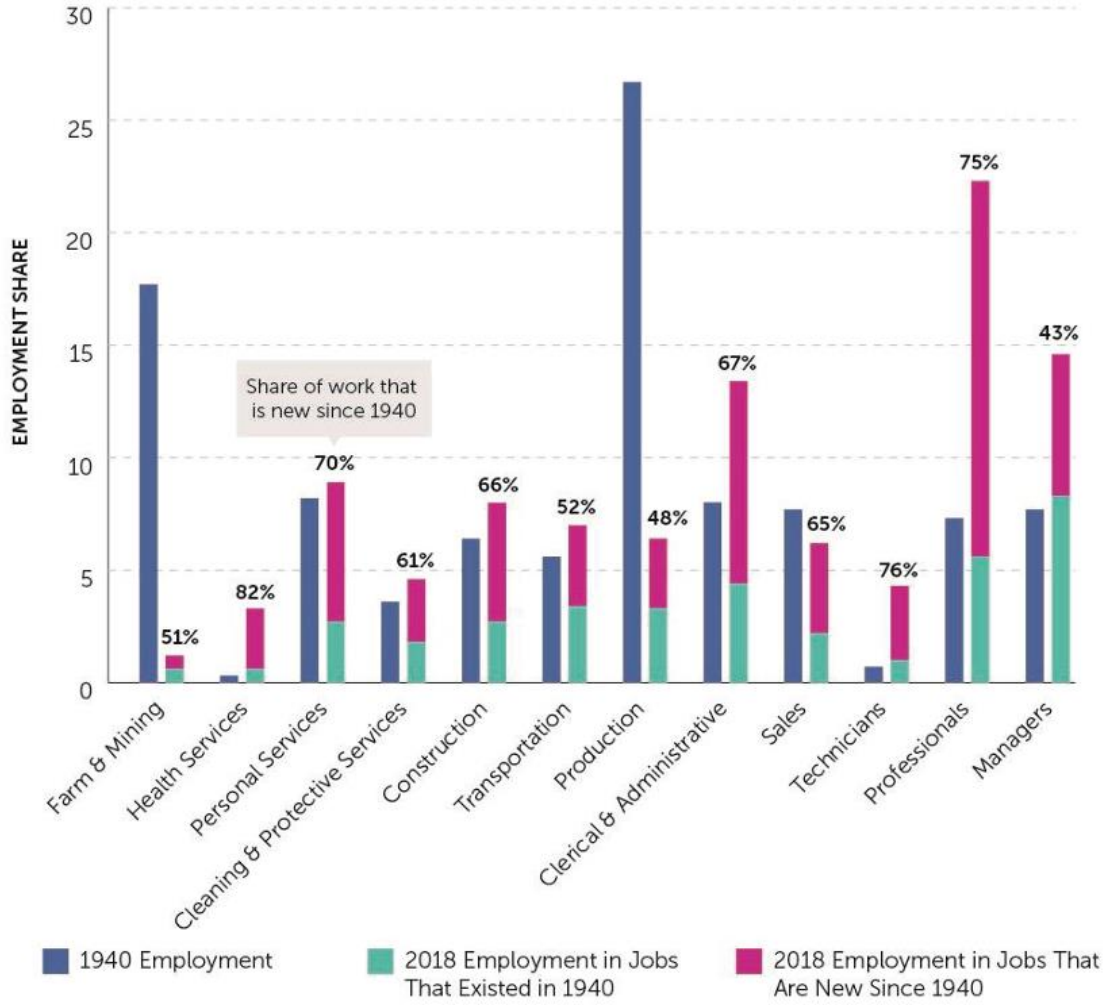


Exhibit from Autor, David. (2022). "The Labor Market Impacts of Technological Change: From Unbridled Enthusiasm to Qualified Optimism to Vast Uncertainty.' NBER Working Paper No. 30074.

U.S. Policy Could Support The Worker-Friendly Version of AI

Choosing a Pro-Worker Path for AI

Areas with potential consensus

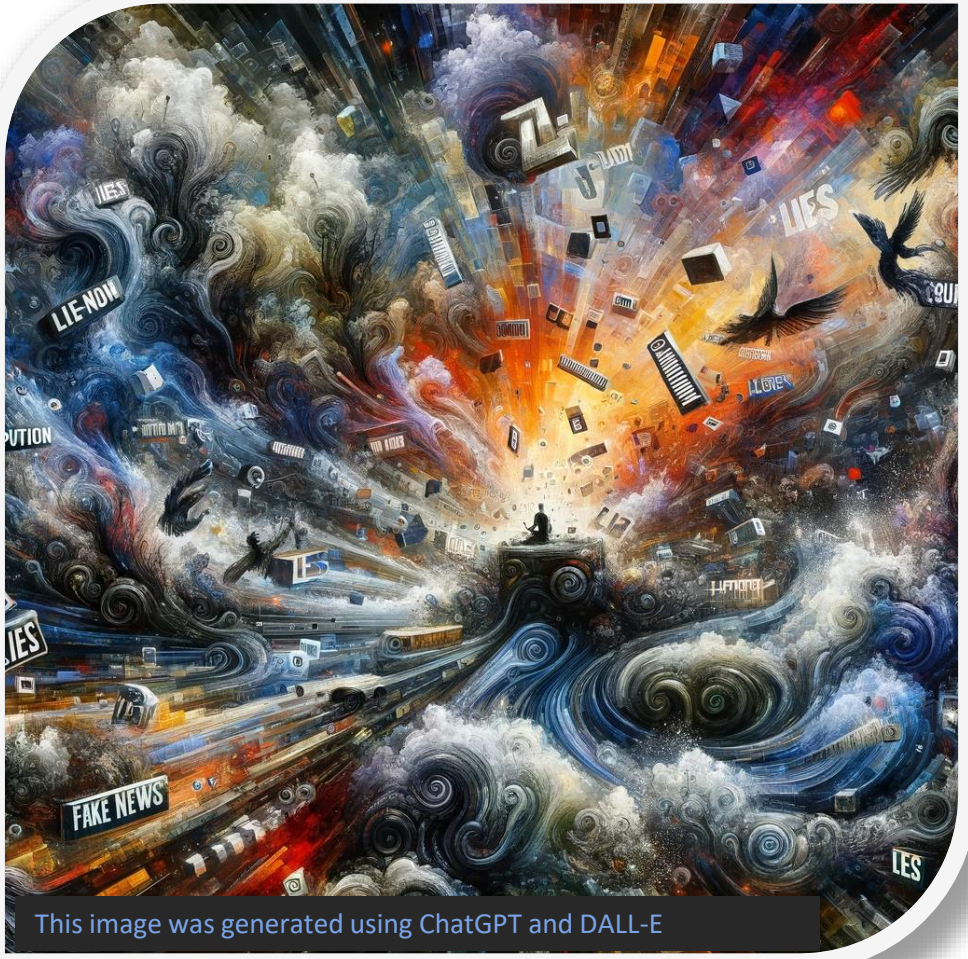
- **DARPA-type Grand Challenges**: education, healthcare, government services, consumers
- **OSHA Protections**: standards for workplace surveillance: safety vs. privacy
- **OSTP**: build AI expertise all levels of government

Needs strong, widespread buy-in

- Shift corporate norms: worker-augmentation over burdensome surveillance or outright replacement
- Workers articulate needs (e.g., better training) to make use of new breakthrough technology

But democracy is in danger: digital ads…

- Misinformation and disinformation



This image was generated using ChatGPT and DALL-E

See also, Acemoglu, Daron, David Autor and Simon Johnson. (2023). "Can We Have Pro-Worker AI? Choosing a Path of Machines in Service of Minds." MIT Shaping the Future of Work Initiative, policy memo.

Our 1000-Year Struggle Over Technology & Prosperity

POWER AND PROGRESS

DARON ACEMOGLU

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SIMON JOHNSON

Co-author of 13 BANKERS

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