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Opinion | Will Artificial Intelligence Replace Us or Empower Us?

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Jan. 13, 2025



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I took three Waymo rides this month while in San Francisco for an economics conference. The smooth trips made for a haunting vision of the potential future of artificial intelligence. Inside the cabs, there was gentle New Age music and no one in the driver's seat.

Such could be the future of the economy in general if artificial intelligence substitutes for human labor in more and more occupations. The unemployed masses could come to depend on the charity of billionaires and trillionaires who own the means of intellectual production.

But A.I. could also be designed to empower people rather than replace them, as <u>I wrote a year</u> ago in a newsletter about the M.I.T. Shaping the Future of Work Initiative.

Which of those A.I. futures will be realized was a big topic at the San Francisco conference, which was the annual meeting of the American Economic Association, the American Finance Association and 65 smaller groups in the Allied Social Science Associations.

Erik Brynjolfsson of Stanford was one of the busiest economists at the conference, dashing from one panel to another to talk about his hopes for a human-centric A.I. and his warnings about what he <u>has called</u> the "Turing Trap."

Alan Turing, the English mathematician and World War II code breaker, <u>proposed in 1950</u> to evaluate the intelligence of computers by whether they could fool someone into thinking they were human. His "imitation game" led the field in an unfortunate direction, Brynjolfsson argues — toward creating machines that behaved as much like humans as possible, instead of like human helpers.

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Henry Ford didn't set out to build a car that could mimic a person's walk, so why should A.I. experts try to build systems that mimic a person's mental abilities? Brynjolfsson asked at one session I attended.

Other economists have made similar points: Daron Acemoglu of M.I.T. and Pascual Restrepo of Boston University use the term <u>"so-so technologies"</u> for systems that replace human beings without meaningfully increasing productivity, such as self-checkout kiosks in supermarkets.

People will need a lot more education and training to take full advantage of A.I.'s immense power, so that they aren't just elbowed aside by it. "In fact, for each dollar spent on machine learning technology, companies may need to spend nine dollars on intangible human capital," Brynjolfsson <u>wrote</u> in 2022, citing <u>research</u> by him and others.

A big question is who will pay for all that education. Employers fear that if they train their work force, the employees might take their in-demand skills to a competitor. And the workers may not be able to afford it on their own. This implies, Brynjolfsson wrote, that governments "should directly provide this training or provide incentives for corporate training."

Empowering workers might seem utopian but it's the historical norm. Waymo aside, most technologies over the centuries have made people more powerful and effective (mechanized looms) or created new products (nylon).

Interestingly, Waymo's parent, Alphabet, is doing some of the coolest work on A.I. that extends human reach. Two researchers at Google DeepMind in London — a unit of Alphabet — <u>shared</u> the 2024 Nobel Prize in Chemistry with an American scholar for predicting the structure of proteins with the help of artificial intelligence.

Various units of Google are also working on better weather forecasts, flood prediction and quantum computing, James Manyika, the senior vice president for research, technology and society at Google, who spoke at the San Francisco conference, <u>said</u> last year. The flood prediction system was first tested in Bangladesh and is being used in 100 countries with a combined 700 million people. Google is also using A.I. to reduce jet vapor trails and detect diabetic retinopathy, a preventable cause of blindness.

Google is putting much of its energy into "agentic systems," meaning intelligent agents working for people, Manyika stressed at the conference.

A day may come when A.I. is so powerful that it's better at every conceivable human activity, including child-rearing, according to Nick Bostrom, a Swedish-born philosopher whose book I covered in a newsletter last year.

But there's no reason for humanity to race toward that dystopian outcome. As Brynjolfsson wrote in his 2022 essay: "The future is not preordained."