

THE HAMILTON PROJECT

THE FUTURE OF WORK IN THE AGE OF THE MACHINE

February 19, 2015

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BROOKINGS

THE SECOND MACHINE AGE

**WORK, PROGRESS, AND PROSPERITY
IN THE TIME OF
BRILLIANT TECHNOLOGIES**

**ERIK BRYNJOLFSSON
& ANDREW McAfee**

The Future of Work in the Machine Age

Erik Brynjolfsson and Andrew McAfee

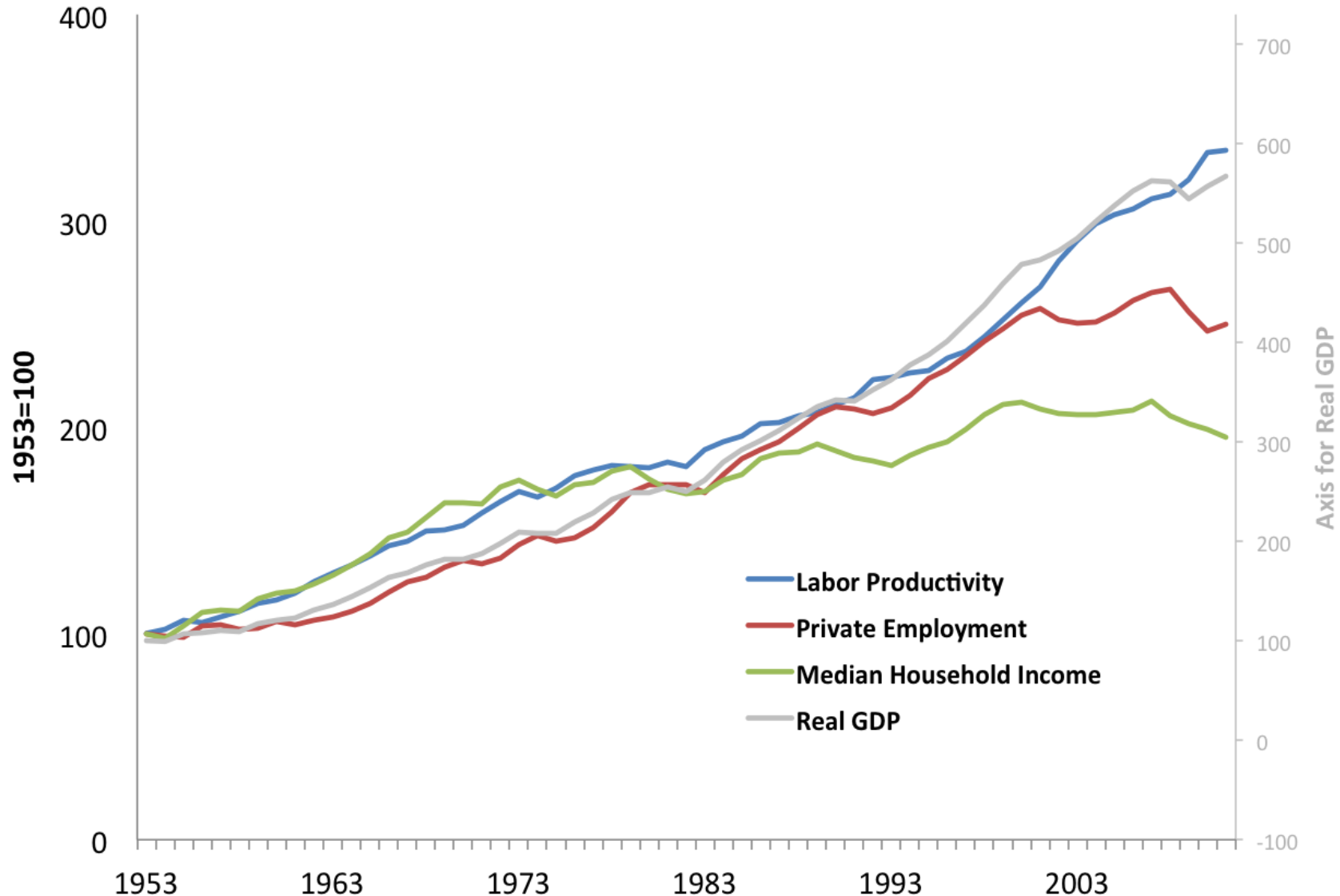
MIT Sloan School

Hamilton Project Forum

February 19, 2015

The Great Decoupling

US Productivity, GDP, Employment, and Income: 1953-2011



State of Understanding, 2005

Uniquely Human Abilities

1. Autonomous mobility and fine motor control
2. Language and complex communication
3. Pattern matching and unstructured problem solving

Machine Intelligence

Interacting with physical world

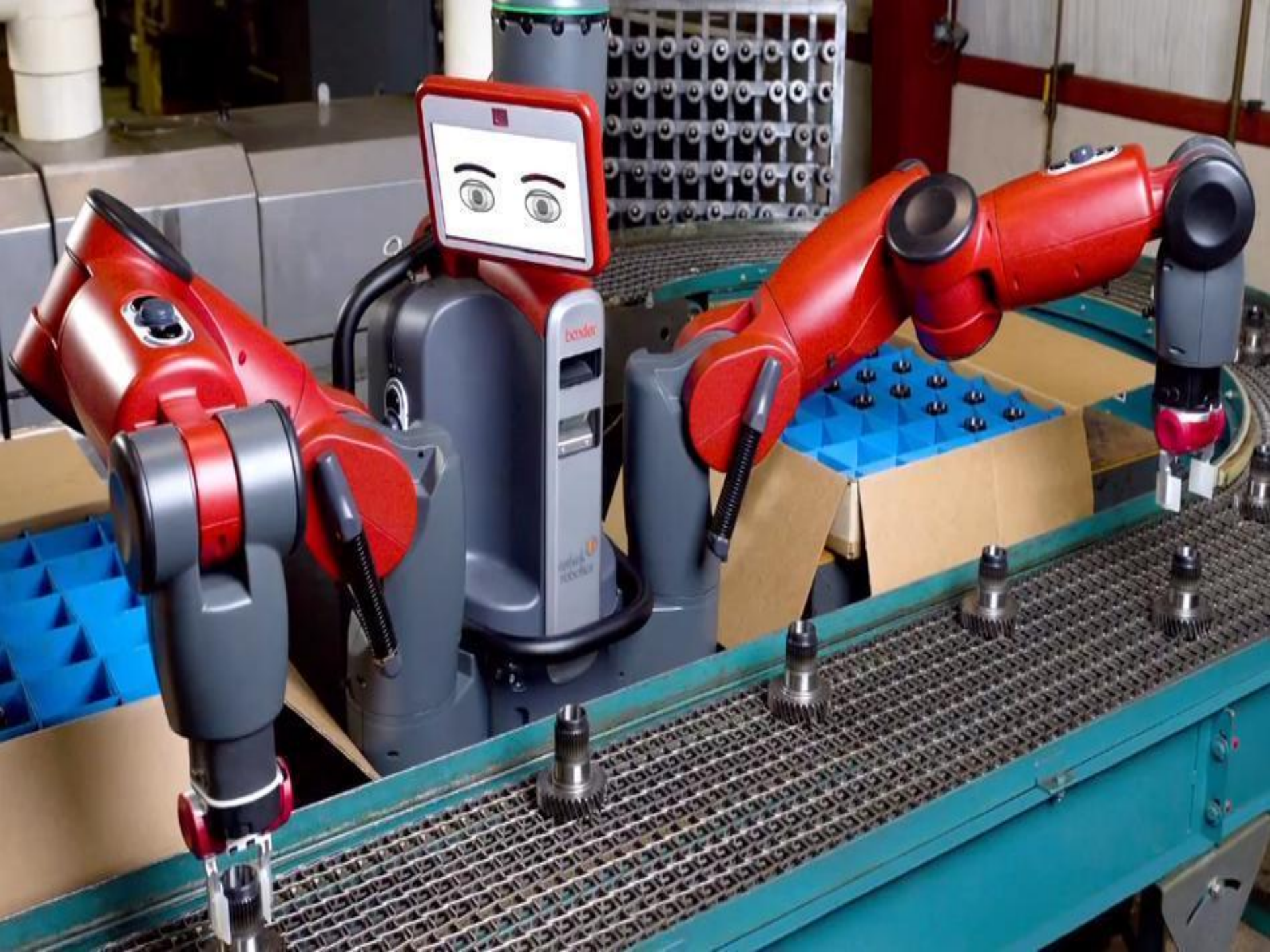
- Fine and gross motor control
- Vision and other senses

Language

- Voice recognition
- Natural language processing
- Creating narratives

Problem Solving

- Answering unstructured questions
- Rule based analysis
- Pattern recognition and classification



Siri

Voice recognition



Lionbridge

Translation



Narrative Science

Authoring News Stories



Forbes Earnings Preview: Apple

By Narrative Science

+ Comment Now + Follow Comments

Apple reports its second-quarter earnings on Wednesday, April 23, 2014, and the consensus earnings per share estimate is \$10.21 per share.

The consensus estimate has risen over the past month, from \$10.20, but it's below the estimate of \$11.02 from three months ago. For the fiscal year, analysts are projecting earnings of \$42.72 per share.

Analysts project revenue to fall less than a percent year-over-year to \$43.55 billion for the quarter, after being \$43.60 billion a year ago.

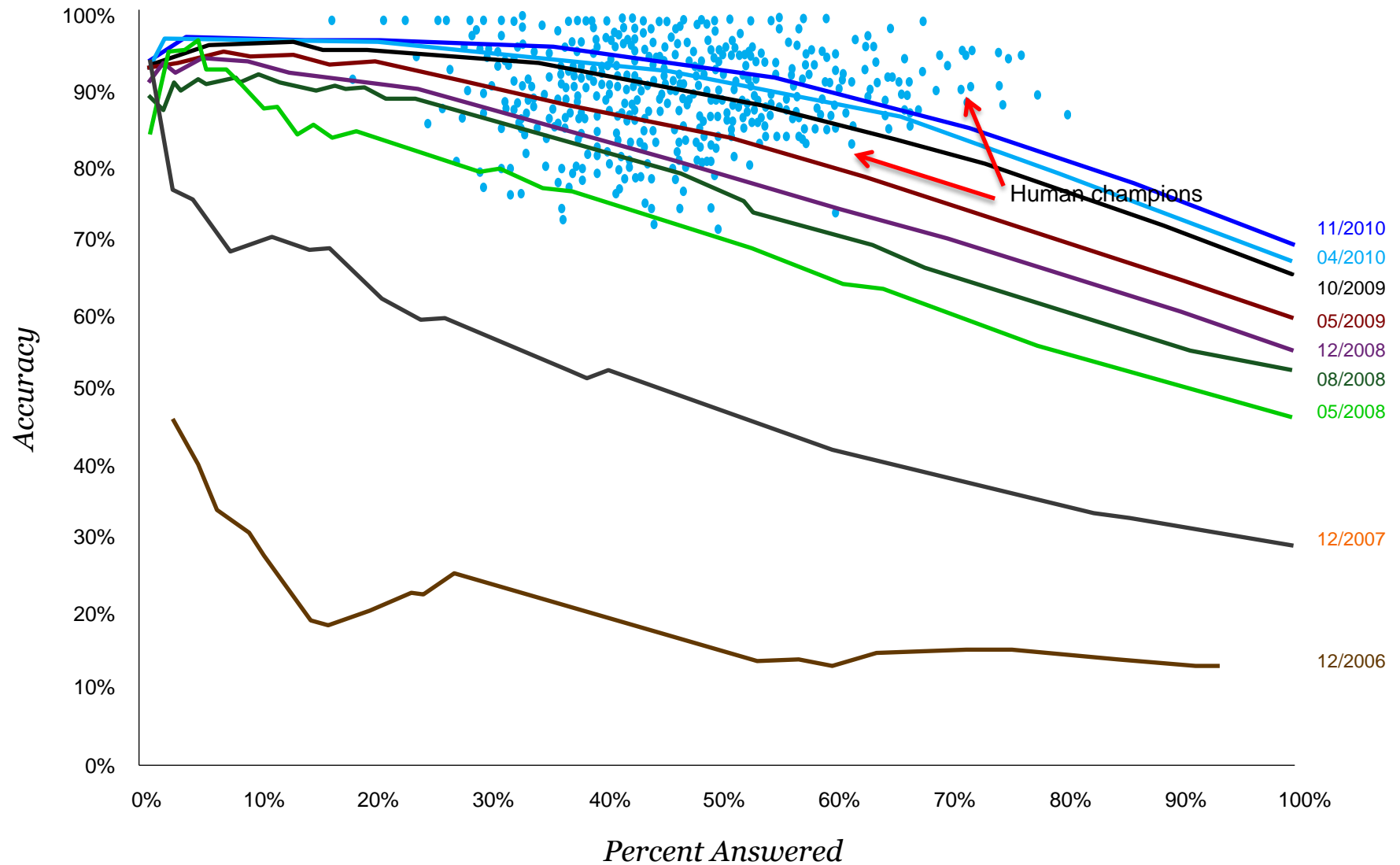
Analysts are expecting revenue to stay flat at \$43.55 billion this quarter. For the year, revenue is projected to come in at \$180.22

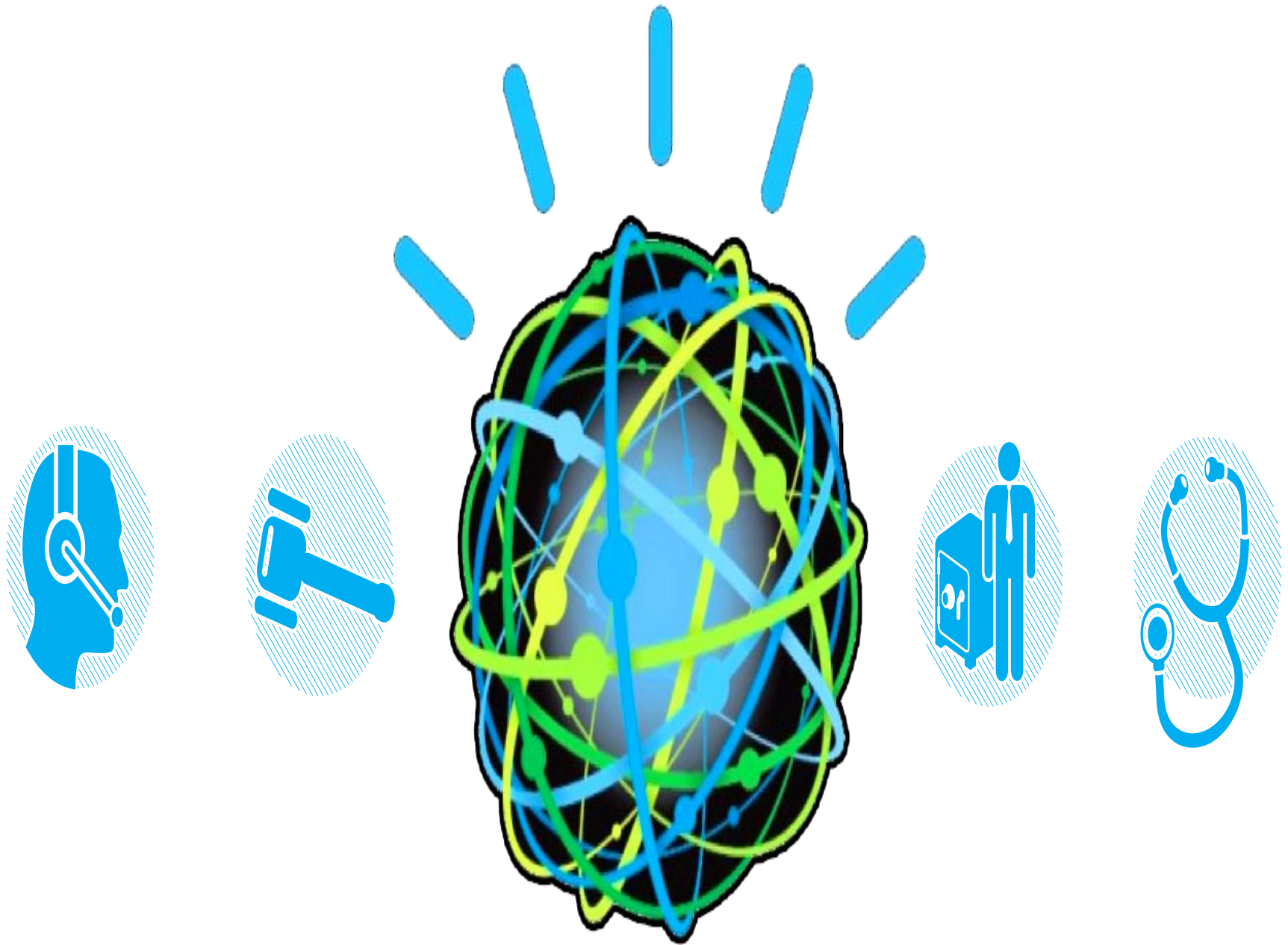
billion.

Jeopardy!



Accuracy and Questions Answered on *Jeopardy!*





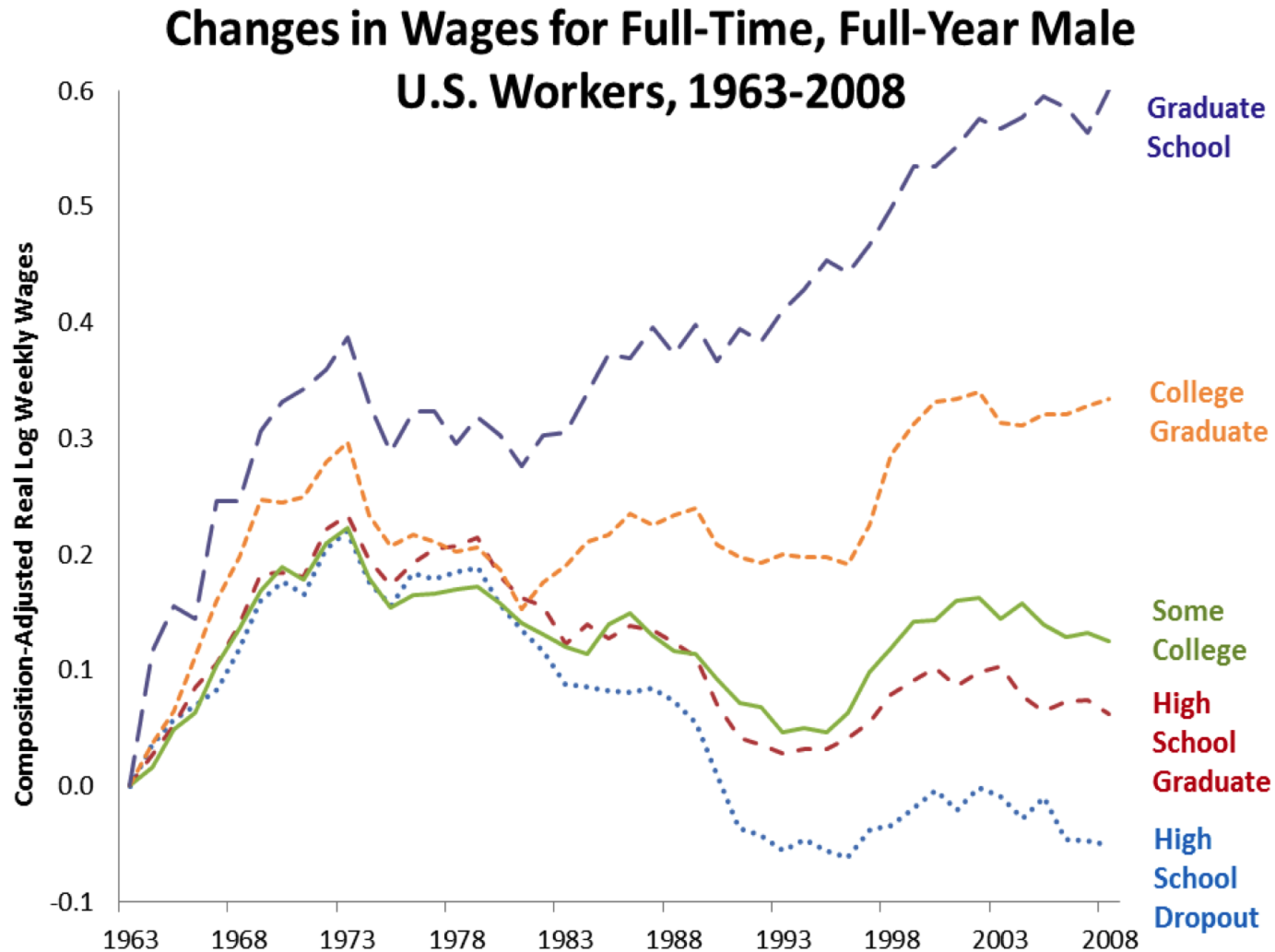
The Hard Truth



Technical progress makes
the economic pie bigger.
But there is no economic
law that everyone, or even
most people,
automatically benefit.

Three Sets of Winners and Losers

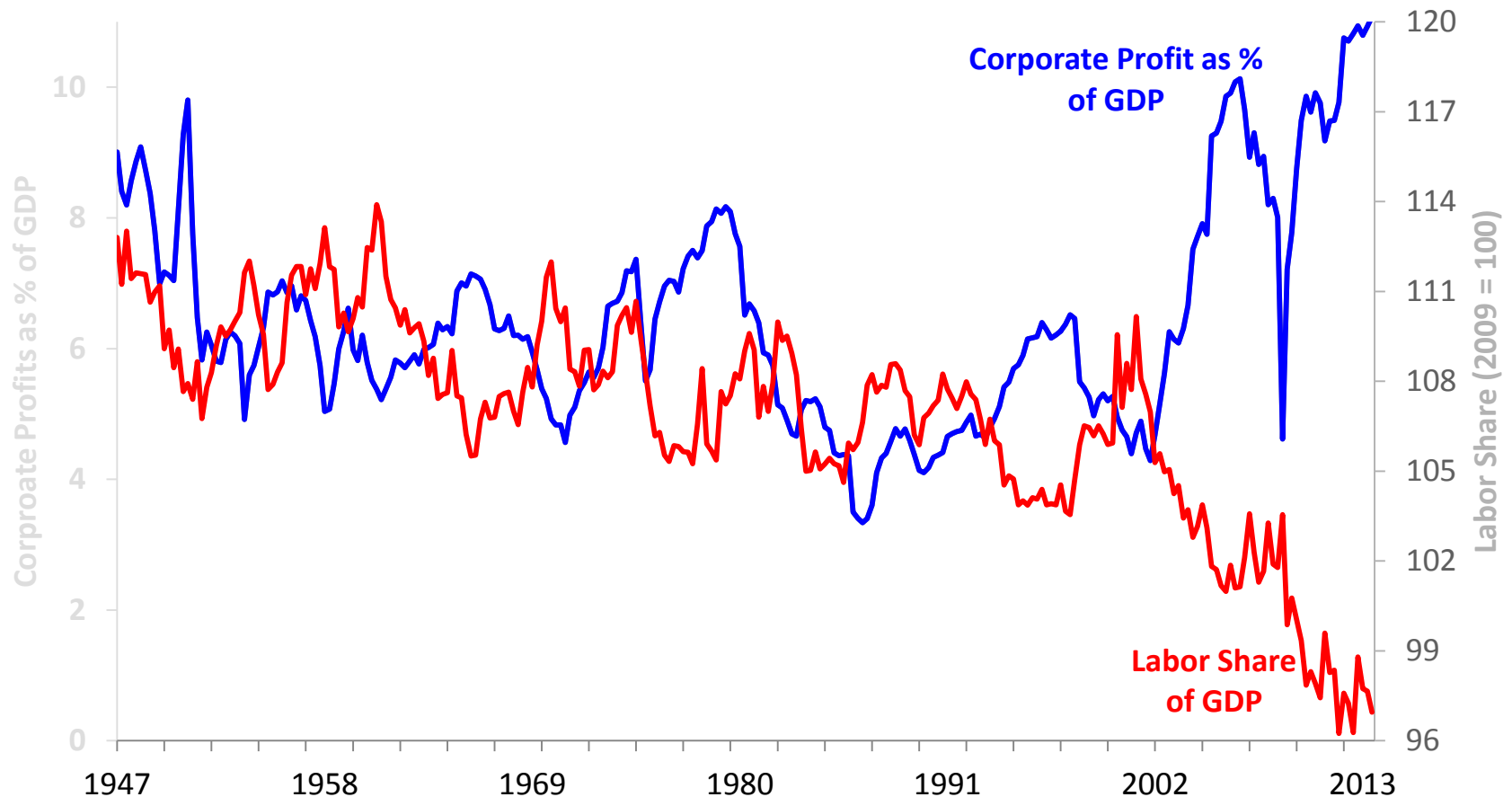
1. Skill Biased Technical Change



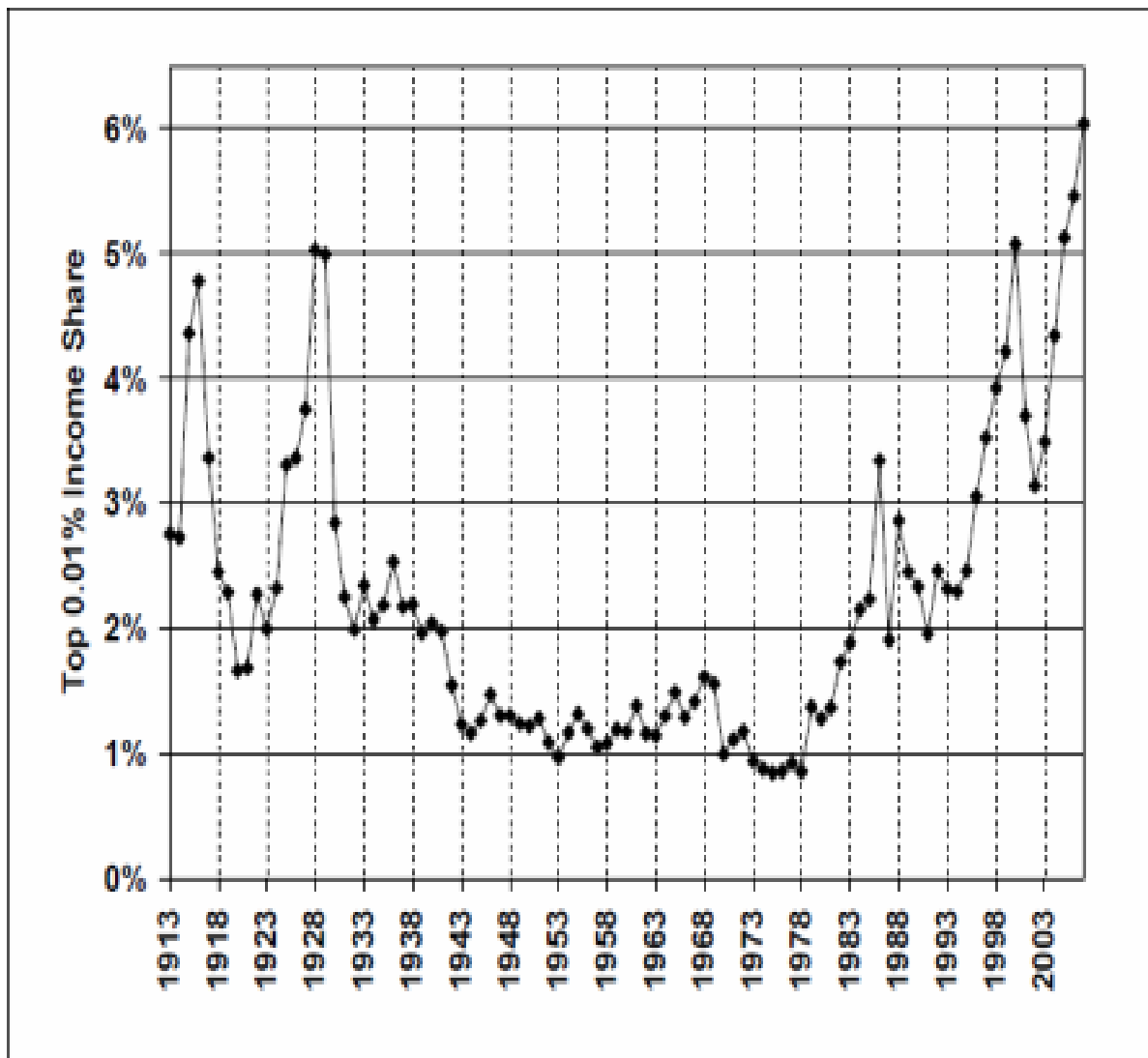
Source: Acemoglu and Autor

2. Capital vs. Labor

Corporate Profits After Tax as % of GDP & Non-Farm Labor Share, 1947-2013



3. Superstars vs. rest



The New Grand Challenge

- Digital technologies will continue to accelerate.
- Our skills, organizations and institutions are lagging.
- Business as usual won't solve this problem.
- *We need to reinvent our economy and society to keep up with accelerating technology*



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ROUNDTABLE: THE FUTURE OF JOBS

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ROUNDTABLE: THE FUTURE OF BUSINESS INNOVATION

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