LABOR ISSUES IN IT

// CLASS 19

FALL 2015 / SECTION 02 / HOLLY BUCK

RISK ANALYSIS

- We don't actually know what the effect of automation will be
- Not even professional economists agree on this, so we probably won't come up with a definitive answer in our class
- However, if there is a risk that there may be negative effects, it is worth thinking about

WHAT IS AGREED UPON IN TODAY'S WORK CRISIS?

(1) Wages have been stagnant in the US for ~ 35 years.
(2) Inequality has risen.

This is borne out by data. Economists disagree on causes.

AUTOMATION

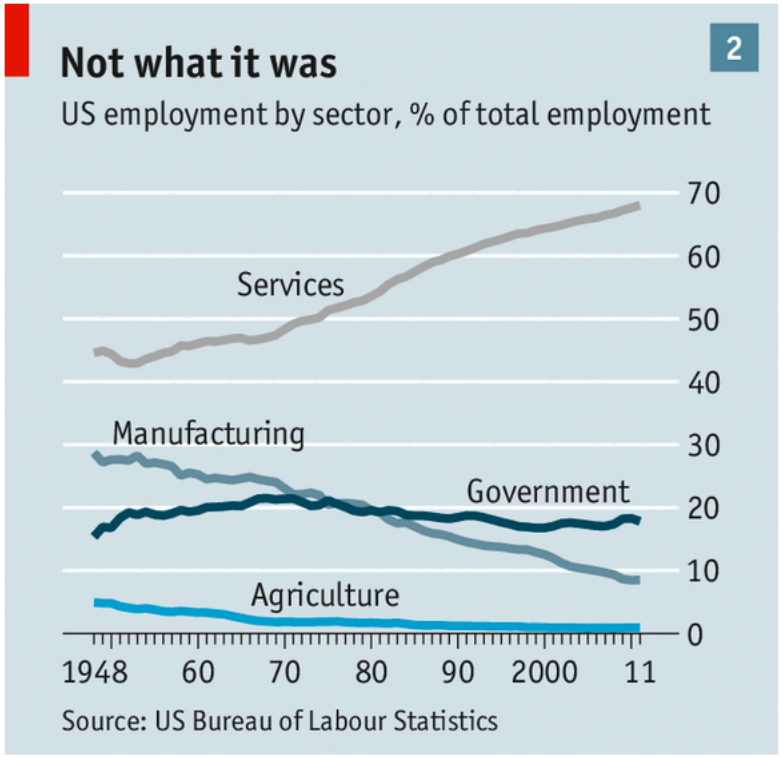
Many economists argue that any automation which reduces labor will increase incomes:

- which generates demand for new products and services,
- which will in turn create new jobs for displaced workers.

Industrialization did not end up eliminating the need for human workers - rather, it created enough employment to provide for expanding population

"Keynes's vision of everyone in the 2030s being a lot richer is largely achieved. His belief they would work just 15 hours or so a week has not come to pass."

— *The Economist*, http://www.economist.com/news/briefing/21594264-previous-technological-innovation-has-always-delivered-more-long-run-employment-not-less



AUTOMATION

However – is the industrial revolution a satisfactory analog? Consider:

Robots crossing the threshold of being able to *think like people* is a possible inflection point

- Replacing physical labor – different than replacing mental labor?
- Access to more data

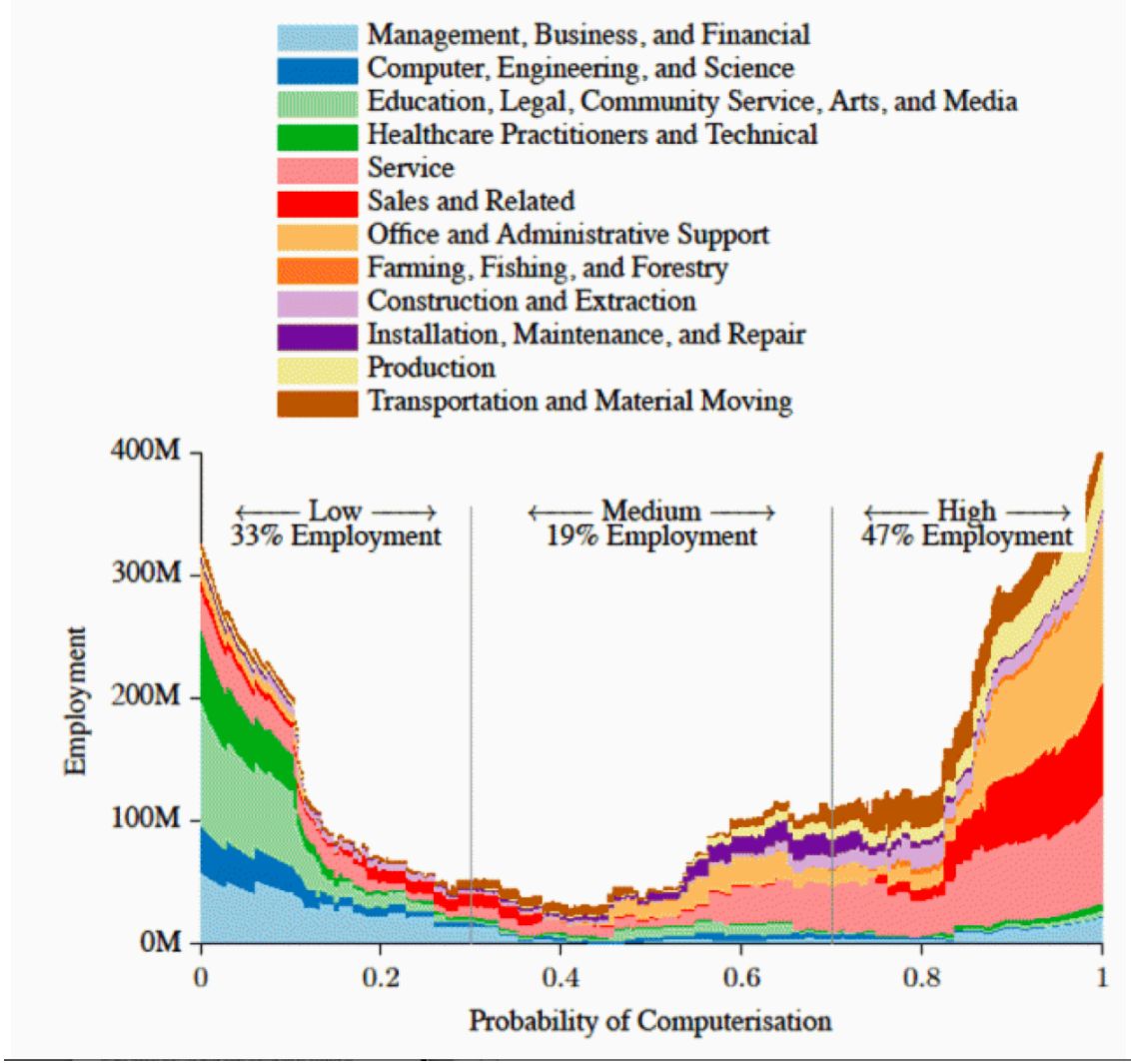
"The combination of big data and smart machines will take over some occupations wholesale; in others it will allow firms to do more with fewer workers. Text-mining programs will displace professional jobs in legal services. Biopsies will be analysed more efficiently by image-processing software than lab technicians. Accountants may follow travel agents and tellers into the unemployment line as tax software improves. Machines are already turning basic sports results and financial data into good-enough news stories." (Economist)

WHICH JOBS WILL BE LOST?

Frey and Osborne (2013): 47% of jobs at risk from computerization

A better question: who is accruing the gains in productivity from automation?

Wage stagnation for ~35 years: suggests that gains are going to owners, not the workforce



ADJUSTMENT IS NOT AUTOMATIC

"Adaptation to past waves of progress rested on political and policy responses."

e.g. - institution of universal secondary education and then rise of university attendance

"Boosting the skills and earning power of the children of 19th-century farmers and labourers took little more than offering schools where they could learn to read, write and do algebra." (Economist)

Today, what is needed?

GROUP ASSIGNMENT

- Who benefits from increased automation?
- Who is harmed by increased automation?
- Do we as individuals or society have an ethical obligation to equalize the benefits (and mitigate the harms)?

Go through the steps of the ethical framework— including possible policies, stakeholders, principles and values, consequences, laws, tradeoffs — and **post your analysis on Piazza, 2-3 paragraphs, by Saturday 11:59 pm: #automation**