

## INFORMATION SYSTEMS

26/4/15.

### ADVANCED AUTOMATION

AA refers to sophisticated automated systems, ideally with additional capability for self maintenance and repair, mostly requiring little or no human intervention to operate, apart from top level guidance.

Not being reliant on human effort to scale, these systems would hugely magnify our capability for production and decouple human time and effort from industrial productivity, allowing us to create as much of anything that is needed, while releasing people from mindless labour.

This situation will arise when automated handling of raw materials is combined with automated logistics, automated transport systems, robotic manufacturing and self maintenance and repair, creating fully automated production of useful goods.

Technological unemployment - unemployment caused by technological change

- Luddites feared automated looms.
- Due to shift of labour from automated industries, technological unemployment has been called the Luddite fallacy.

Lump of labour fallacy: originated to refute claims that reducing working hours would also reduce employment. Reassured that remaining quantity would be left undisturbed and that firms would have to hire additional workers. Fallacy also had application to claims that ~~overemployment~~ immigration decrease amount of jobs available for domestic workers. Controversy remains concerning whether the assumption is correct.

- Marx's prediction of continual boom and bust under capitalism has been proven.
- This is an inevitable feature of capitalism, the booms shorter and recessions longer.
- This does not make revolution inevitable, it means however, that revolutionary situation will arise and that until there are good, revolutionary reasons to take advantage of these, lead to the struggle.

- Profit motive: driving force in capitalism which posits that ultimate goal of a business is to make money.
- Profit motive is said to ensure that resources are being allocated efficiently.
- Profit tells companies whether or when it is worth producing.

Desired that mimic and even surpass human dexterity or automate labouring functions can improve productivity, safety and medical technology on a wide scale.

- Sometimes the creation is better than the creator. Robots can do...
- In exchange for such inevitable benefits, the robotic revolution demands that we adapt to new roles and responsibilities.

- Industrial revolution - cheap products  $\rightarrow$  manufacturing pollution

### Robot

- If robot makes mistakes, who is responsible? Many in China that release manufacturers from the responsibility

- Moral - better than nothing?

- Better than like bad?

- Robots will soon invade our daily lives, at home and in business

- End of work as we know it?

- Robotization should provide an opportunity to think about new jobs which people freed from tasks performed by robots - will be able to create

- Not everything can be automated

- This is what we must work on - Mobilizing our collective imagination so that the era of robots is not one of dehumanization, but rather an enrichment of human activity and intelligence

# INFORMATION SYSTEMS

8/04/15.

## ADVANCED AUTOMATION

- Refers to sophisticated automated system requiring complex software
- Currently a semi open system
- Logic of advanced automation is to become a closed system

### Logic of Advanced Automation

- Tools - ineffective, costly over the long run, > division of labour.
- Machine - better - more productive, costly over short run, standardisation of parts, job growth (skilled and unskilled).
- Automation - more effective, costly  $\rightarrow$  job displacement
- Advanced Automation - Even more effective - cost droppings, job polarization

Technological unemployment as concept that goes back millennia

$\rightarrow$  refused by the lump of labour fallacy, luddite fallacy

### The challenge to Capitalism

- profit, wage, legitimate

Advanced automation eroding knowledge (non-routine, cognitive tasks) work  
- health, law etc

### Bottlenecks to advanced automation

Perception and manipulation, creative intelligence, social intelligence