The Future of Work in the Twenty-First Century

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1. Introduction

Evolution of work up to the present:
1. Introduction

The future?:

DO YOU WANT FRIES WITH THAT?
1. Introduction

How will work evolve in the twenty-first century?

Will there be widespread deskilling?

Or a dramatic reduction in working time?

What are the implications of growing knowledge-intensity at work?
2. Deskilling?

Karl Marx in *Capital*:

A specialized skill “vanishes … in the face of … science, the gigantic natural forces, and the mass of social labour embodied in the system of machinery.”
2. Deskilling?

Karl Marx in *Capital*:

The development of capitalism “enables the capitalist ... to set in motion more labour ... as he progressively replaces skilled workers by less skilled.”
2. Deskilling?

In contrast, Alfred Marshall (1890) pointed out that machines first replace the most monotonous and muscular labour.
2. Deskilling?

Frederic L. Pryor (1996):

“Although deskilling in terms of substantive skills has occurred in certain industries, the notion of a general deskilling process for the economy as a whole represents a triumph of ideology over common sense. The ... the evidence shows clearly that the entire job structure is shifting toward work requiring more data analysis, more general education, and also more specific vocational preparation.”
3. The end of work?

John Maynard Keynes (1931):
After having “solved” the “economic problem” of providing for human material needs, Keynes predicted that his grandchildren might have to work only fifteen hours a week.

Later André Gorz (1985) and Jeremy Rifkin (1995) predicted ‘the end of work.’
3. The end of work?

The facts:

Average numbers of working hours have decreased in developed countries, but to nowhere near the levels envisaged by Keynes.

Working time previously spent with tools and machinery is now spent on computers and “smart machines” (Zuboff 1988).
Production has become increasingly complex and information-intensive.

If past futurologists had understood the production of wealth as an information-processing, cognitive, and judgmental – as well as a physical – process …

… then they may not have forecast dramatic reductions in working hours.
4. Capitalism and growing complexity

What are the drivers of rapidly increasing complexity within capitalism?

The expansion and diversification of markets.

Adam Smith (1776) argued that the growth of markets can enable an ever-finer division of labour, which in turn can fuel greater productivity, reduce costs and enable a further enlargement of markets.
4. Capitalism and growing complexity

Allyn Young (1928) argued that “industrial differentiation … remains the type of change characteristically associated with the growth of production.”

He also underlined “the increase in the complexity of the apparatus of living, as shown by the increase in the variety of goods offered in consumers’ markets” plus an allegedly greater “diversification of intermediate products.”
4. Capitalism and growing complexity

Edward Chamberlin (1933):

As competition intensifies within particular markets, profit-seeking corporations innovate and diversify their products, in the unceasing pursuit of new market niches … … thus creating greater diversity and complexity.
Eric Beinhocker (2006) estimated that there are about ten billion distinct goods for sale in New York City. There were far fewer in the year 1800.

By investigating the diversity of products, César A. Hidalgo and Ricardo Hausmann (2009) measured the complexity levels of several national economies.

They showed that these measures of complexity are correlated with a country’s level of income.
The Future of Work in the 21st century

5. Work, exploitation and inequality

With growing knowledge intensity under capitalism is that a greater premium is based on education, knowledge and knowledge-intensive skills.

Unless there are successful efforts to provided adequate advanced education and training for everyone, …

… then there is the possibility of a growing divide – different levels of income and social inclusion – between those with and without knowledge skills.
5. Work, exploitation and inequality

Other asymmetries between labour and capital under capitalism, leading to inequality:

- Labour, unlike capital, is inseparable from its owner (T. H. Green, A. Marshall, J. A. Hobson).
- Wage labour, unlike capital assets, cannot be used for collateral (Hodgson 2015).
- Unequal distribution of knowledge can lead to further inequality.
5. Work, exploitation and inequality

Furthermore, the employment contract diminishes incentives for employers to invest in training:

**Marshall** (1920) “Here again we meet the difficulty that whoever may incur the expense of investing capital in developing the abilities of the workman, these abilities will be the property of the workman himself: and thus the virtue of those who have aided him must remain for the greater part its own reward.”
5. Work, exploitation and inequality

Policy responses to address the drivers of inequality:

- State investment in education and training.
- Basic income guarantee?
- Wealth taxes (Piketty)?
6. Beyond employment?

Some writers see the employment contract (with its asymmetry of power and authority) as central to capitalism and a priority for abolition:

But the employment contract has changed much since 1800 and will change further.
6. Beyond employment?

From authority to internal commitment:

Shoshana Zuboff (1988) “Obedience has been the axial principle of task execution in the traditional environment of imperative control. … When tasks require intellective effort … obedience can be dysfunctional and can impede the exploitation of information. Under such conditions, internal commitment and motivation replace authority as the primary bond between the individual and the task.”
6. Beyond employment?

Shoshana Zuboff (1988) “The explication of meaning that is so central to the development of intellective skills requires that people become their own authorities. … Without the consensual immediacy of a shared action context, individuals must construct interpretations of the information at hand and so reveal what they believe to be significant. In this way, authority is located in the process of creating and articulating meaning, rather than in a particular position or function.”
6. Beyond employment?

As the complexity and knowledge-intensity of production processes increase …

… the key characteristic in the employment contract of detailed managerial control is increasingly bounded and impaired.
7. Conclusion

Multiple scenarios are possible for the development of work in the twenty-first century.

We need policies to develop and spread knowledge and skills throughout the population …

… and to deal with growing inequality within capitalism.