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Facing the future: progress as technological change

Abstract

When we speak of the human progress, what do we mean? This research programme will defend the view that the progress of human history is measured by technological development, by which is meant the invention and diffusion of new skills and knowledge. This claim has two main components. First, as an empirical and predictive thesis: that human history has progressed and regressed as it has enabled or prevented technological change, and that the future progress of humanity is also likely to be characterised as such. Second, that the notion of technological change has special normative value; we *should* make and do things better (which does not imply the claim that technological change always *is* better, but rather that it always improves our *capacity* to do better).

Talking about the progress of humanity in these terms allows us to ask an important further question: how should we react to (the prospect of) technological change? The answer to this question is unavoidably a normative enterprise. If we reject (complete) technological determinism, then the actions of present persons are important in at least the following three senses: (i) to decide which technologies are prioritised for development; (ii) to decide what benefits are realised from the development of these technologies and (iii) to appropriately distribute the benefits from the realising these technologies. These questions pose a series of conceptual and ethical problems that are critical for decisions made about the future of humanity.

Thesis plan

Chapter 1 – historical materialism revisited

While best remembered as a revolutionary socialist, Marx was first a philosopher, and the core of his mature philosophy was a thesis about the advance of history – historical materialism. However, his thesis of history as technological change is deficient in that it (i) relies upon a *weltgeist*, or mover of history to ground its determinism and (ii) it posits that technological change ceases to drive history with the advent of communism. This chapter reconstructs and rescues the core of Marx's thesis while jettisoning these problematic aspects.

Chapter 2 – the social bases of historical development: a critique

This chapter considers the main rival account of historical change to the technological account – that it is fundamentally social rather than technological factors that drive historical progress, such as the way individuals interact – and claims that it is deficient, in part because it cannot take account of the material bases of historical development. So-called 'cyclical' views of history are also refuted.

Chapter 3 – technological change and economic growth

This chapter refutes the connection between human productive power and economic growth and shows that distinguishing between these two concepts allows us to give a general answer to the question (ii) in the abstract above – which types of technological change should be pursued. Human productive power can increase without it also being a basis for the increase in economic 'exchange' value, when for example it allows individuals to perform non-profit activities in a more efficient or otherwise better way.

Chapter 4 – using technological change

The additional capacity to do activity *a* that comes from better skills and/or knowledge poses a question as to how to use the opportunities generated by this. For any given consumption good, the benefits of technological change can generally be used to (i) increase consumption of goods or (ii) to decrease production of those goods. Given that consumption goods do not drive technological change and so increase productive power, it is appropriate far more often than is currently the case to favour (ii) over (i).

Chapter 5 – distributing benefits and burdens over time

A number of theorists have attempted to answer the question: what weight should we give to future persons in devising current distributive policies? This chapter shed new light on this debate by considering that one central intergenerational transfer is the transfer of productive power from one generation to the next. Given that productive power is cumulative, it is possible to devise a 'social discount rate' in proportion to the amount that a given generation adds in productive power.