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# Repoliticising the future of work: automation and the end of techno-optimism

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**ABSTRACT**

This review article of Aaron Benanav's Automation and the Future of Work (2020) and Jason Smith's Smart Machines and Service Work (2020) reads both works as an effort to repoliticise the question of unemployment, which has too often been ascribed to technological innovation, especially by proponents of automation theory. It places their works within current debates surrounding the question of automation and its political reverberations across the political spectrum. In the end, we show that the shortcomings of automation discourse reside in their economic analyses of the future of work and employment and that automation theorists encourage a depoliticisation of the question of employment through technocracy, while Benanav and Smith open the way for thinking about the future of work as a collective and social endeavour.

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From one day to the next, COVID-19 radically changed the world of work. A narrative of whirlwind technological transformations sweeping across different sectors has become ubiquitous, but often forgets essential workers, who are unable to work from home. The increase in online trade as a result of successive lockdowns and sanitary restrictions has prompted logistics warehouses to turn to robotisation, coping with labour shortages. Hotels, heavily affected by the pandemic, have invested in UV robots to disinfect rooms (Folmer and Bhatt 2020). Small four-wheeled robots have been seen circulating in some US cities delivering meals to residents locked in their homes (Anon 'COVID-19' 2020). Against the backdrop of an ever-worsening economy, the boom in Big Tech and surging sales in robots only strengthens automation anxiety (Romei 2020). In a world that is preparing for an increase in viral outbreaks, wouldn't it be logical that most people will be replaced by machines and algorithms? Isn't our fully digitalised future inevitable, bringing about an unprecedented job loss? This idea has gained in popularity as proponents of automation

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discourse, supporting the idea that tech will necessarily put us out of work, are found among thinkers and politicians on both the right and the left of the political spectrum.

Aaron Benanav and Jason Smith show that the relation between automation and unemployment is infinitely more complex, depending on factors as broad and unfathomable as historical economic trends, market dynamics, geopolitics, and possibilities of production. As Jason Read (2020) noted in an early joint review, their reading and critique of the fear of automation is not new, but the quasi-simultaneous publication of the two books (in November and December 2020 respectively, in the middle of the Covid-19 pandemic) would '[mark] the emergence of this orientation in a more public form.' Besides both works complementing each other in nuancing the automation myth for a broader audience, they equally repoliticise the question of unemployment. Automation discourse sketches a scenario in which unemployment is a problem beyond politics, a problem that can only be solved by experts. In other words, because unemployment is caused by machines, we need engineers, data scientists, and technocrats, supposedly upholding an ideologically neutral position, to solve our economic problems.

In this review essay, we show that Benanav and Smith, by virtue of being sceptical about automation and repoliticising the automation debate, shed a light on the more fundamental and philosophical shortcomings of automation theory and the teleological assumptions it upholds about technological development. In their forward-looking response to automation anxiety, grounded in empirical data and theoretical claims, both books mark an important contribution to the field of automation studies by opposing automation anxiety.

On the right, the automation claim is primarily upheld by Silicon Valley thinkers and entrepreneurs, such as Martin Ford, author of the best-seller *Rise of the Robots* (2015), or liberal politicians, such as Andrew Yang in the United States or Benoît Hamon in France (who famously proposed a tax on robots during the 2017 French presidential election). Although they are aware that automation has never brought about unemployment in the mass scale that they are expecting in the near future, the belief is that we have now arrived at an exceptional stage of tech innovation, to the extent that the probable has become inevitable.

Artificial intelligence capturing and replicating human skills is the absolute threat on the horizon of silicon progress. For Ford (2015), any skilled job that involves interpreting information is at risk of being automated. Machines are likely to do a better job than humans, putting out of work doctors, lawyers, and most white-collar workers. In a more nuanced approach, Daniel Susskind (2020), a scholar who has also worked for the British government, does not describe a future without work, but a future with less and less work, and where the remaining job opportunities will be increasingly inaccessible to most people. Susskind, however, stresses that technological unemployment also leads to a desirable outcome: the possibility of a post-scarcity future. His main concern is how to respond to the existential questions that a future without work might raise.

A similar narrative is also the hallmark of some currents on the left, notably of post-workerism or post-operaismo and subsequent movements inspired by this tradition, in particular French autonomism and post-capitalism (Pitts 2017). Primarily building upon a short passage from Marx's Grundrisse, the 'Fragment on Machines,' which foresees that the accumulation of collective knowledge (the so-called general intellect) in fixed capital would invalidate the Labour Theory of Value and would subsume workers to machines (Tomba and Bellofiore 2014), post-operaismo considers new technological developments, as well as economic trends under post-Fordism, as potentially holding the seed for a communism from within (Garo 2019, pp. 136–137), offering space for the development of creative skills antithetical to calculability.

In 1996, Maurizio Lazzarato argued that capitalism would become increasingly dependent upon what he calls immaterial labour: a form of labour that requires the subject to develop their intellectual and creative capacities, opening up a path towards a revolution of 'the anthropological realities of work' (1996, p. 140). The same argument is found in Antonio Negri and Michael Hardt's work a decade later. Different versions of the idea that new tech disalienates working conditions is found in the work of André Gorz (2010), Yann Moulier-Boutang (2015), and McKenzie Wark (2004).

More recently, this fundamental post-operaist faith in the liberating capacities of technology transpired in a teleological conception of technology that in Britain manifests itself in the post-capitalism of Paul Mason (2015), Aaron Bastani (2019), Srnicek and Williams (2016).[1] Characterised by a general mistrust in the Labour movement and the traditional left, post-capitalists sketch an image of unavoidable technological progress holding the potential for building a world beyond capitalism. The domain of politics is never identified to be pre-technological but only applies to the harnessing of the necessary march of the general intellect. This teleological narrative is most striking in Bastani's *Fully Automated Luxury Communism* (2019). Despite stressing that his particular vision of a post-scarcity communism isn't inevitable, he rewrites human history and pre-history in terms of technological disruptions: the invention of agriculture, the cultural revolution, and now a third information disruption. In these stories, technological development inevitably leads to the reduction of work and the possibility of communism, if not the necessary end of capitalism.

Benanav and Smith help uncover the theoretical fallacy that underpins the understanding of technology mentioned above. In these techno-optimistic accounts, as well as other narratives foreseeing the end of work, technology is conceptualised as existing within a social void, as being neutral, at least when it comes to its potential to realise its ideal form, whether this be exclusively negative (less and less work) or potentially positive (the advent of a post-scarcity future). As Benanav shows, technology, innovation, and investment therein are undeniably shaped by politics and a global economic order. The best example he gives of this is the US post-war decision to share its technological advances with Japan and Germany, in their fight against the Eastern Bloc (2020, pp. 33–34). As a result, this put pressure on the wages of US workers and in the long run led to global overcapacity, triggering a long downturn. With the spread of competition that globalisation entails, costs were cut by reducing wages, which in turn led 'to falling rates of profit, then to lower rates of investment, and finally to lower output growth rates' (p. 35). Another, seemingly obvious yet much overlooked factor, is that as an effect of globalisation an increasing number of people are entering the workforce (p. 38).

Smith complements this macro analysis by reflecting on more fundamental questions as to what constitutes the new and the innovative. He holds that whereas innovations of the second industrial age profoundly changed our daily lives (petroleum and its by-products, the dynamo, electricity grids, telecommunications), the technology that popped up in the last two decades is anything but ground-breaking (Smith 2020, pp. 41–45). Recognising that new technologies change the experience of our daily lives (shopping, cultural consumption, financial speculation), devices like smartphones and digital platforms do not really increase productivity: 'The technologies characteristic of the past two decades – since the dotcom crash of 2000 – have been concentrated in entertainment and leisure: toys, not tools' (Smith 2020, p. 43). Besides these more obvious devices lending themselves to entertainment, Smith also reminds us that the technology behind Uber and Lyft does not change it from simply being a taxi-service. The real innovation is rather to be found in how it smartly circumvents labour regulations. In fact, the robots we imagine to be taking away our service jobs are anything but capable of carrying out the most mundane tasks like folding clothing (Smith 2020, p. 24).

Again, demonstrating that automation discourse depoliticises the unemployment question, Smith notes that Big Tech is specifically a post-crisis phenomenon and a market illusion. Benanav, reaffirming Smith's observation, holds that technology blaming offers an easier explanation to looming unemployment than a thorough analysis of the global economy would. This was indeed the case after the 2007–2008 crisis, when the automation imaginary took off, its timeline corresponding to increases in job insecurity and unemployment. At the same time, market metrics gave the impression that Big Tech was booming. Within a few years' time, Big Tech became the top multinational firms in terms of market capitalisation (Benanav 2020, pp. 48–49). Instead of investing in fixed capital or R&D, companies like Apple spend lavishly on stock buybacks: a market mechanism that drives up share prices and creates the illusion of profitability and substantial success, despite the fact that many tech giants are losing enormous amounts of money. Uber, for example, recorded its biggest loss in 2019 (it is interesting to note that such a loss would have caused

the bankruptcy of any large industrial group): 5.2 billion USD in 3 months (Rapier and Wolverton 2019). The same year, Tesla lost 408 million USD despite an all-time high production volume (O'Kane 2019). Deliveroo has also been losing hundreds of millions of dollars, despite being hailed as a tech company (Shead 2021). Putting the blame on automation thus diverts attention away from that which caused the crisis and ensuing unemployment: financial innovation and deregulation.

Benanav and Smith thus converge on this point: new technologies will not save a capitalism in crisis. Besides their more theoretical considerations regarding the idea of the new, and the observation that technology is always inscribed within a complex geopolitical world order, Benanav's and Smith's argument against automation theorists is primarily an economic one. Although they do not deny that the automation of certain occupations or in certain sectors of activity can help increase productivity and thus 'replace' workers, they both show that economic stagnation is central to understanding the current limits to automation. This phenomenon makes firms reluctant to invest in their productive capacities, hindering technological innovation.

Secular stagnation was first observed in the early 2010s (Gordon 2012), and denotes the difference between the registered growth rate and the potential growth rate: an ongoing phenomenon since the 1980s in most OCECD countries (Galiana 2017, Cette *et al.* 2017).[2]

Adopting a global and historical perspective, primarily drawing on Robert Brenner's (2006) notion of the long downturn, Benanav seeks to explain the decline in labour demand in developed countries. Due to industrial overcapacity resulting from post-war economic development and geopolitical Cold War tensions, industrial output growth shrank and so did productive investment. Counterintuitively, when productivity declines, investment in new technologies also shrinks as relative costs are much higher. In turn, this equally translates into low demand for goods and services in the expansion of production – and thus also in demand for labour. As such, 'seen from the perspective of the total economy, overcapacity appears as underinvestment – albeit one without a clear solution, since it is structural in character' (Benanav 2020, p. 31). In this, the decline in demand for labour is not the result of the growth in labour productivity associated with new technologies, but rather a product of the economic stagnation of capitalism: 'what automation theorists describe as the result of rising technological dynamism is actually the consequence of worsening economic stagnation, following on decades of manufacturing overcapacity and underinvestment' (Benanav 2020, p. 39).

Like Benanav, Smith notes a decline in productive investment since the 1980s. To this he adds that technological advances in recent decades have had little or no effect on labour productivity. To explain this, he uses Baumol's (1967) classic distinction between what he calls, the 'progressive sector,' subject to technological innovation, and the 'stagnant sector,' which cannot be automated. The stagnant sector largely corresponds to the services. Broadly speaking, Baumol's idea is that the progressive sector, by virtue of being tech-heavy, gradually pushes workers into the services, resulting in a decline in producvity.

Building on Marx, Smith however slightly challenges Baumol's emphasis on the service sector as the stagnant sector, noting how the rise in the services is the effect of reclassification rather than the fundamental aspects of work having changed. Instead, Smith suggests that we should be speaking of circulation labour, which would cover all those activities that assure the supervision of capital, such as cashiering, warehousing, and legal services (Smith 2020, pp. 100–113).

If we are not heading towards a future without work, what are the prospects for employment in the context of secular stagnation? Both Benanav and Smith point out that tomorrow's challenge is that of underemployment rather than of unemployment. Benanav stresses that the general effect of decelerating economic growth will be an increase in precariousness, a shortage in quality jobs that equally affects workers with higher eduction (Benanav 2020, p. 46). Smith, on the other hand, frames his circulation labour hypothesis, itself the effect of economic stagnation, as the key explanation for underemployment.

At first, the logic of stagnation causing a rise in precarious employment appears logical. But for the time being this claim overinterprets the data. Although Benanav uses France, Germany, Italy, and the United Kingdom as examples where precarious work has progressed (2020, p. 60), data

suggests we should maintain a more nuanced view. In the case of France, 84% of employees still work on permanent contracts, 10.8% on fixed-term contracts, 3% on agency jobs and 1.6% on apprenticeships. What is interesting is that when we compare the proportion of permanent jobs among employees between 2007 and 2017, we note that they fell from 86.4% to 84.6%, which is a relatively small decrease in times of economic crisis (INSEE 2008, 2018). Similar things have been said on the limited progression of precarious work in the US (Moody 2017) and the United Kingdom (Choonara 2019). In the same way, we can follow Kim Moody (2020) who points out the problem of focusing on underemployment, when unemployment sometimes affects up to 30% of the working population in rich countries.[3]

Another example of precarisation that of course comes to mind is uberisation. Both Benanav and Smith point out that new technologies are indeed part of the emergence of platform capitalism (Srnicek 2017). However, the few estimates that do exist claim that the platform economy still concerns only a very small fraction of the labour force in rich countries (OECD 2019). Again, this does not mean that job insecurity has not increased. It just means that its progression in rich countries is still limited for the time being.

Whereas Benanav's and Smith's claims regarding underemployment would benefit from a more nuanced discussion, their repoliticisation of the question of work offers a forward-looking way out of unemployment and degraded labour conditions, stressing the need for democratic deliberation. Whereas automation discourse favours the rule of the expert and technocratic solutions such as Universal Basic Income, Smith and Benanav put more faith in collective struggle. Smith, agreeing with Benanav that bargaining power is seriously reduced when incomes decline (Smith 2020, p. 138, Benanav 2020, pp. 25–26), gives examples of the teacher strikes in the US and the Gilets Jaunes in France. Because the nature of jobs in the services are difficult to automate, Smith imagines that people in these sectors in effect hold some bargaining power (Smith 2020, pp. 143–144). In a way, Benanav picks up where Smith left off. Closing his book with a call to action citing James Boggs ('the trick, is how to take them [the means to live]'), one of Benanav's objectives is to imagine a post-scarcity world that does not rely on some imaginary of possible fully automated production (2020, pp. 117–125). He imagines a future based on planned cooperation and democratic decision making. Building on an unusual combination of thinkers, including Thomas More, Karl Marx, and Peter Kropotkin, he pictures a society that puts people before technological progress and sees robots as an option to reduce drudgery but not as an end in themselves. Equally welcoming and optimistic about the increase of social struggles, he stresses the need to move from a defensive to a more constructive attitude.

Benanav's and Smith's work mark a turn away from the techno-optimism that dominated the 90s and the early 2000s. Even if the illusions of that period have largely waned, the same teleological conception of technology, as some neutral entity necessarily realising its full potential of necessary mass unemployment, persists today in automation discourse and post-capitalist claims. COVID-19 has rekindled fears about the automation and digitalisation of large parts of the economy. But for how long? The pandemic has also deepened inequalities and impoverished people around the world. The question of a collective alternative that does not rely on technological solutions then becomes relevant. *Smart Machines and Service Work* and *Automation and the Future of Work* contribute to this alternative as they shed a light on how complex the question in fact is, and not only that of technology but of the very dynamics of capitalism, which is the result of overcapacity, underinvestment, and geopolitics. The automation claim is certainly no longer viable on economic grounds. Despite the fact that their claims as to underemployment and precarious labour open up an important discussion, both works announce a pathway to rethinking technology and unemployment and proclaim a dire need to repoliticise them.

## Notes

1. For a detailed account of how post-operaismo relates to postcapitalism, see Pitts (2017).

2. It can also refer to stagnation of total factor productivity, which refers to the share of growth that is not due to labour or capital, but rather results from technology or efficiency in production.
3. It should be mentioned that Moody is responding to Benanav's articles in the *New Left Review*, upon which his book builds.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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