


# EFFICIENCY VS. MEANINGFUL WORK: A CRITICAL SURVEY OF HISTORICAL AND CONTEMPORARY DEBATES

DAVID A. SPENCER\* 

*University of Leeds*  
*das@lubs.leeds.ac.uk*

This paper considers the trade-off between the demand for efficiency and the demand for meaningful work. It asks whether this trade-off should be treated as inevitable or potentially resolvable, at least under reformed conditions. It compares historical and contemporary debates where the trade-off features. It focuses initially on Adam Smith's account of the division of labour in which less meaningful work is assumed to be the necessary price of higher efficiency. It then examines Karl Marx's analysis of work, showing how it differs from that of Smith. Marx addressed the scope for achieving meaningful work whilst supporting needs fulfilment in a future socialist society. In addition, the paper looks at how the ideas of Smith and Marx relate to modern discussions that focus on the capacity of new digital technologies to lighten work. Finally, it draws lessons for welfare economics on how meaningful work and efficiency might be reconciled.

## I. INTRODUCTION

Economists have long been concerned with the trade-off between the demand for efficiency and the demand for meaningful work. Adam Smith famously thought society would have to endure less meaningful work in order to improve efficiency. With his analysis of the division of labour, he painted a rather bleak picture of workers losing their intelligence through exposure to a degrading work experience. This cost (measured primarily in stunted intellects) was the price of higher economic growth.

The purpose of this paper is to re-examine the above trade-off, from both a historical and contemporary standpoint. It focuses initially on Smith's analysis of the division of labour. It argues that this analysis contains some key problems. Specifically, Smith failed to see how the costs of work were specific to capitalism and how reforms

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aimed at resolving the meaninglessness of work could be pursued. The inevitability of work degradation that Smith assumed distracted from the scope to create more meaningful work.

In developing these lines of criticisms, the paper draws on the work of Karl Marx. The relationship of Smith to Marx on topic of the division of labour, in particular, has been the subject of a long-running debate (West, 1964, 1969, 1996; Rosenberg, 1965; Lamb, 1973; Hill, 2007). This debate has not always reached a consensus—for example, there has been a lively and heated debate over whether Smith anticipated Marx’s notion of ‘alienation’. In this paper, the two authors’ writings are viewed as antithetical. Marx, unlike Smith, stressed the class origins of work resistance and linked workers’ alienating experience of work to the extraction of surplus value in work. He also argued—again, unlike Smith—that meaningful work could be achieved. Part of Marx’s vision was to suggest that society could work and live better in a post-capitalist (socialist) future. This entailed, as the below discussion will show, democratising work and shifting the focus of production towards needs fulfilment—it also meant overcoming a strict division of labour and allowing some task variety in work. Marx implied that the move to socialism could help to provide meaningful work whilst meeting society’s material needs.

The paper also considers how the ideas of Smith and Marx relate to modern discussions on technology and the future of work. These discussions predict that progress in technology (particularly artificial intelligence (AI)) could reduce the human need to work. The problem identified by Smith of the division of labour destroying the minds of workers may then disappear. Automation, from a different perspective, may also help to create the conditions for meaningful work as envisaged by Marx—that is, it could eliminate drudgery whilst elevating the quality of work. The paper uses the ideas of Smith and Marx to understand the nature and potential of possible futures where technology operates to lighten work in society. Finally, it examines how welfare economics might be adapted to understand—and possibly help to realise—these futures. The arguments developed in this part of the paper aim to broaden debate on ways to reconcile meaningful work with efficiency.

The paper is organised as follows. Section II addresses critically Smith’s account of the division of labour. Section III looks at how Marx’s analysis of work differs from that of Smith, particularly in relation to the scope for transforming work and achieving meaningful work. Section IV considers how Smith and Marx might contribute to modern debates focused on the possibilities for an AI-led automation. Section V draws wider lessons for welfare economics. Section VI concludes.

## II. THE CURSE OF ADAM

The division of labour, as is well-known, provided the opening to Smith’s *Wealth of Nations* (WN). Smith (1976, vol. 1, p. 17) described the different benefits of dividing-up work tasks and allocating those tasks to individual workers. These benefits included greater ‘dexterity’ from workers’ attention being focused on one particular task—the

dedication of a worker to a task could improve her proficiency in performing that task, with positive effects on throughput. Another benefit was time economies since workers were no longer required to move between tasks. A third benefit was the capacity to use the standardisation of production to introduce new machinery and to extend automation.

Smith emphasised the overall positive economic effects of the division of labour. Output per worker could be raised enormously. The example of pin-making was used to illustrate the great productivity gains from a more detailed division of labour. At the firm level, more produce could be achieved for the same labour input. At the economy level, more production could be achieved, adding to the opportunities for consumption. A state of abundance could be realised by the extension of the division of labour.

Smith stressed how all classes in society would benefit from this extension. He spoke of a ‘progressive state’ (1976, vol. 1, p. 99) in which a fast-growing economy—supported by an ever more detailed division of labour—would pave the way for higher living standards. Whilst capitalists and landowners would accrue higher profits and rents, respectively, workers would enjoy higher wages. A ‘happier’ society would be the result of an extended division of labour and rapid economic growth.

In Book I of the *WN*, Smith was clear that the division of labour was beneficial from an economic standpoint. Economic progress depended on work becoming more specialised. Capitalists were to be encouraged to implement the division of labour, whilst workers were to see the economic interests they had in a more detailed division of labour. Workers would ultimately be better-off where the division of labour was extended the furthest.

In Book V, however, Smith presented a very different (and indeed contradictory) message. Specifically, he voiced concern that workers’ well-being would be reduced by the division of labour. By working on the same simple tasks, day after day, week after week, workers would become incapable of thinking for themselves and less able to contribute new ideas in work. In his words, workers would become ‘as stupid and ignorant as it is possible for a human creature to become’ (Smith, 1976, vol. 2, p. 782). The simplification of work would make workers less intelligent and creative beings. They would suffer both physically and mentally. They would be less able to exert ‘courage’, ‘strength’, ‘vigour’, and ‘perseverance’ (*ibid.*). This loss of capability would have severe consequences for the nation since it would leave it less able to establish and reproduce a standing army. It would also damage civic life. Workers who spent their lives doing the same repetitive tasks would become ‘incapable of relishing or bearing a part in any rational conversation’ and ‘of conceiving any generous, noble, or tender sentiment, and consequently of forming any just judgment concerning many even of the ordinary duties of private life’ (*ibid.*). The division of labour would produce workers without the capacity to act as fully engaged and fulfilled citizens.

The optimism of Book I of the *WN* was therefore tempered. Instead, in Book V, there was deep concern that individual workers and society more generally would be harmed by the division of labour. Soulless and soul-destroying work would be a key

cost of the division of labour and society had to embrace reforms if this cost was to be tackled.

The particular reform that Smith favoured was state education. Though often presented as an opponent of state intervention, Smith thought that the state had an important role to play in providing basic education for the masses (Smith, 1976, vol. 2, pp. 785–86). One role of education was to compensate workers for the distresses they faced in work. At least, if they had some years of schooling, they would be able to apply knowledge outside of work. The torpor they suffered in work would be potentially offset, if not eliminated.

An educated workforce had other benefits. Firstly, it would help to create workers who would be more able and effective soldiers. National defence would be strengthened by elevating the minds of workers through education (Smith, 1976, vol. 2, p. 788). The provision of state education, then, had an ulterior (martial) motive. Secondly, education offered by the state would help to create a more orderly and law-abiding society. If workers were more educated, they would be ‘more respectable, and more likely to obtain the respect of their lawful superiors’, ‘more capable of seeing through the interested complaints of faction and sedition’ and ‘less apt to be misled into any wanton or unnecessary opposition to the measures of government’ (*ibid.*). The non-economic benefits of education—in the form of greater social stability and cohesion—would more than compensate for its economic costs.

Importantly, state education could be financed through the proceeds of higher economic growth (itself delivered by an extended division of labour). In this sense, the division of labour could help to mitigate a problem (i.e. the loss of workers’ intelligence) it created, though again, it could never fully resolve this problem, as the division of labour that caused it would have to persist for economic reasons. The moral costs of the division of labour would still be more than outweighed by its economic benefits.

Smith’s interpretation of the dual-sided effects of the division of labour has elicited different responses. Some see this interpretation as confirmation of Smith’s role as a ‘moral philosopher’. Smith was not just concerned with the drivers of economic growth, but also with their consequences for the lives of ordinary workers. In this way, he was no apologist for capitalism, but instead a critical thinker who realised how the capitalist system, if unreformed, could impose high costs on workers (Heilbroner, 1973). Others assert more directly that Smith’s explanation of the human costs of work under the division of labour foreshadowed Marx’s key idea of alienation, placing him in a tradition that has challenged the lack of power of workers over work (Rosenberg, 1965; Lamb, 1973). Yet, critics have highlighted the inconsistencies and problems in Smith’s ideas. West (1964), for example, has argued that Smith’s ‘sociological’ analysis of the division of labour in Book V of the *WN* is inferior to his economic analysis in Book I. For him, Smith’s detour into sociology remains perplexing and a distraction from his key economic argument about the essential merits of capitalism (West, 1996).

This paper sides with the view that Smith’s analysis of the division of labour opens the way to a critical account of work under capitalism. Whilst Smith differed strongly

from Marx—unlike the latter, he opposed the abolition of private property and thought progress meant sticking with capitalism (see section III)—he recognised how particular forms of work could render workers as less than human. At the same time, however, his analysis also contained certain weaknesses that restricted the effectiveness and veracity of his criticisms of workers' treatment in work.

Firstly, his starting point was that work was bad in itself. He defined work generally and universally as a source of 'toil and trouble' (Smith, 1976, vol. 1, p. 47). Workers, it appeared, would feel pain in work under all conditions. This necessarily diminished the force of the criticisms he made about the division of labour. For even without it, workers would suffer some hardship for their labours. Task specialisation was simply adding to a problem that already existed and that had no immediate solution. This problem was the inherent cost of work itself. Whilst identifying a specific problem of work linked to the division of labour, Smith implied that workers would need to accept work as painful. He offered no hope for change and no cause for optimism for a future with meaningful and joyful work. Instead, he resigned workers to their fate as beasts of burden (Perelman, 2010, p. 489).

Secondly, Smith seemed to justify the division of labour based on its ability to support innovation amongst an elite group of people who were not themselves subject to its effects, at least directly. As such, he was willing to sacrifice the lives of workers for the sake of the welfare of this group. This fact overshadowed his otherwise sympathetic attitude towards the plight of workers in society.

Smith (1976, vol. 2, p. 783) explained how the division of labour would create an opportunity for what he termed 'philosophers' to take a dispassionate view of necessary work tasks and to identify areas for innovation (Rosenberg, 1965, pp. 134–36). Their immunity from the division of labour (and seemingly from the 'toil and trouble' of work) would enable them to become innovators and add to technological progress. This form of reasoning helped to reconcile two contradictory elements of Smith's political economy. Whilst on the one hand, workers were degraded and robbed of their intellect, thwarting the innovation process, on the other hand, a minority group of philosophers could be relied upon to develop their knowledge and come up with new ideas that would create the basis for rapid innovation. Again, this implied net positive economic gains from the division of labour and justified the loss of meaning faced by workers in work. In short, this loss was required to support innovation led by an elite—the latter, to the extent that they worked, would not suffer directly, but instead would receive direct reward for their exertions. The above justification can be disputed on the basis that it ignored the need for progress in the working conditions of workers (the majority class in society). It also missed the opportunity for innovation that could be achieved where workers had scope to develop their minds in work. Ironically, as someone who backed individual freedom, Smith's support for the centralisation of knowledge prevented him from seeing ways to improve innovation that depended on enhancing the autonomy and creativity of workers in work.

Thirdly, Smith looked upon the interests of workers from the side of their wants as consumers. He regarded their sacrifice of meaningful work as necessary to enlarge their

opportunities to consume. Whilst he took seriously the loss of meaning in work faced by workers, he did not regard this loss as so important to restrict workers' exposure to meaningless work. Rather, he thought they would be compensated for the said loss with higher consumption. The point here is that Smith presented an implied hierarchy of needs, placing the need for higher consumption above that of more meaningful work. This perhaps stemmed from his conception of work as an instrumental activity. But whatever its origins, it meant that work's cost was accepted not challenged and that it was seen as offset by economic gains (again born of the division of labour). There was no explicit recognition by Smith that work might need to be reformed and that the quality of work could be improved in the course of developing and transforming the economy.

Fourthly, Smith's recommendations for reform were relatively minor when set against the problem he identified. All he could offer workers for the distresses they confronted in work was some years of schooling prior to entering the workplace. This offered no direct solution to these distresses since it left unreformed the content of work itself. Even with more education, workers faced losing their intelligence by performing the same simple tasks. Economic growth might, in the future, deliver more leisure time for workers. But then the risk was that the dehumanising conditions of work would undermine the ability of workers to find meaning in leisure. Mindless work would likely result in mindless leisure (Murphy, 1993, p. 7). The only solace for workers appeared to come from the prospect of spending more money on goods and services in the market. This suggested a rather shallow way of living, relative to enjoying meaningful activities during work and non-work time.

In summary, whilst Smith can be applauded for uncovering the regressive side to the division of labour, his seeming willingness to see progress in society despite and indeed because of this side overshadowed the critical import of his ideas. Indeed, it made him appear as a rather tame and reluctant critic of work and capitalism. In the next section, we extend this line of criticism by examining the connection between Smith and Marx.

### III. SMITH VS. MARX

Smith and Marx pursued answers to different questions. Smith was concerned to explain the causes of wealth creation in society. Marx, by contrast, wanted to explain the conditions that enabled the capitalist class to exploit the working class. This led Marx to examine the division of labour, but only as a mechanism for increasing the exploitation of workers. He also envisaged futures where this exploitation might be ended and where meaning in work might be realised.

Marx (1976, p. 483n) acknowledged Smith's writings on 'the harmful effects of the division of labour', but he was concerned that these writings overlooked the politics of work. The use of the division of labour by capitalists had an economic dimension linked to the drive for higher efficiency, but it also had a political side associated with the quest to subordinate workers within production. Knowledge was power and the

separation of workers into simple tasks helped to centralise knowledge in the minds of capitalists (Marx, 1976, p. 482). It aided capitalists in cementing their power over the labour process and provided them with a means to extract more surplus value from workers.

Marx also directly criticised Smith for suggesting that workers' suffering could be alleviated by state education. The provision of the latter amounted to 'homoeopathic doses' (Marx, 1976, p. 484). It did not help to ease the plight of workers because it failed to resolve the exploitation they faced at work. Even if educated, workers would go on producing surplus value and suffer exploitation in work. Their lives would still be limited by their work, however, much they could experience the benefits of education.

Marx did not dispute the idea that capitalism was technologically progressive and that it would allow for improvements in efficiency, which could add to the wages of workers. Rather, he argued that notwithstanding its positive effects on efficiency and wages, capitalism placed inherent limits on the well-being of workers and that its demise was a necessary condition for progress in society. Marx, indeed, looked forward to capitalism being replaced with socialism. This replacement, which Marx believed was inevitable and would be achieved by a revolution led by the working class, would bring about an improvement in the quality of work along with a reduction in work hours.

In arguing this point, Marx was required to reject Smith's conception of work. Smith, as we saw above, insisted that work was a bad thing. Marx (1973, p. 611) challenged this view directly, arguing that Smith had failed to see how people might embrace work for intrinsic reasons and how work might be changed, from a drudge into a source of meaning. Smith had confused the resistance to work under capitalism linked to alienation with the essence of work itself. As Marx outlined in the *Economic and Philosophical Manuscripts (EPM)*, work was an essential human activity that could add to the quality of life. In fact, it was important in realising the 'species-being' of humans (Marx, 1977, p. 68). But capitalism—by imposing work on workers and reducing their autonomy over work itself—turned workers against work: it made them see and experience work as an alien activity. Marx, however, asserted that this alienation could be overcome. Indeed, it would be overcome with the inevitable move to socialism. Unlike Smith, Marx (1978, p. 531) offered workers the hope of a future where they could embrace work as an end in itself.

On what exactly work and life might be like under socialism, Marx left only fragments of thought—there were hints at how work and life might be arranged differently, but no extended or definite statements on their form and content. There are also some ambiguities in what Marx wrote that make it difficult to infer what precisely he wanted to see achieved.

Firstly, consider the differences between the 'young' and 'old' Marx. For example, in the early *EPM*, Marx alluded to the potential to negate alienation and restore meaning to work. The constraints on meaningful work were specific to capitalism and there would be scope to remove these constraints under socialism. At least, he implied

that returning power and control to workers over their work could turn work into a meaningful and fulfilling activity.

In volume 3 of *Capital*, the more mature Marx (1992, p. 959) drew a distinction between the ‘realm of freedom’ and ‘realm of necessity’. The former encompassed self-determined activities, whereas the latter included necessary work. He stated that one goal of socialism would be to extend free time. This goal would be aided by reusing technology developed under capitalism. On the surface at least, this implied that Marx was preoccupied with extending freedom from work and that he regarded socialism as beneficial principally because of its capacity to give people more time for themselves.

Yet, as other authors have argued (Kandiyali, 2014; James, 2017), Marx also outlined in the same passage in volume 3 of *Capital* the scope for socialism to transform work in the ‘realm of necessity’. He referred, for example, to workers taking ‘collective control’ over work and working ‘with the least expenditure of energy and in conditions most worthy and appropriate to their human nature’ (Marx, 1992, p. 959). This implied an improvement in the quality of work and the negation of alienated labour. It suggested that, under socialism, workers would not only work less but also work in ways that would enhance their well-being—whilst work would remain a necessity, it could still be undertaken freely like non-work activities (Sayers, 2005). On this interpretation, there would appear a direct continuity in Marx’s later and earlier writings. Hence, even in volume 3 of *Capital*, Marx can be found stressing the need and benefit of elevating the quality of people’s lives at work under socialism. Extending freedom, for Marx, continued to mean not just increasing people’s time away from work but also enhancing their capability to act with autonomy in work. Achieving freedom from toil and freedom to work well meant ceding control to workers over the means of production and creating democratic workplaces.

Secondly, there is the specific issue of whether efficiency could be maintained under socialism. More directly, was there scope to combine efficiency with meaningful work? Again, Marx did not answer this question directly, but there are hints at what answer he might have given to it.

It can be noted that Marx, unlike Smith, did not insist that the division of labour be used to maintain efficiency. Rather, he implied that, with the democratisation of work under socialism, workers could come to adopt different roles in work and life more generally. In *The German Ideology*, he painted an idyllic picture of a future socialist society where people would do ‘one thing today and another tomorrow’ (Marx & Engels, 1976, p. 53). Task rotation—facilitated by workplace democracy—would help to create variety in work and would enhance the quality of work and life. The fact that the movement of workers between tasks might incur economic losses (including the potential loss of established skills and expertise) was ignored or discounted by Marx. He also neglected to say how people could develop the talents required to fill varied tasks and how they would coordinate production whilst they performed so many different tasks on a daily basis.

Marx, in general, appeared optimistic that socialism could succeed economically. Firstly, the level of production under socialism need not expand constantly but rather



could be kept within limits set by human needs for consumption. Work in activities such as finance and supervision could be reduced and the time saved could be used for more leisure activities. The removal of the profit imperative could also help to keep production in line with consumption. Secondly, work incentives could be enhanced under socialism. Workers who worked for society would have an extra incentive to work, whilst their interest in work would be heightened by their direct participation in work. Their ability to self-govern their work and to influence decision-making within workplaces would add to their motivation to work, boosting productivity. Marx (1972, p. 257) wrote about how the reduction of working time and the improvement in communal relations at work under socialism could add to both the productivity and quality of work. Thirdly, there would be the potential for the development of new technology. Workers who had the ability to develop their minds in work would be better able to contribute positively to the process of innovation. The shift in social relations evident under socialism (including the move to improve the quality of work) would provide a spur to technological progress.

The above is admittedly speculative and depends on reading into Marx ideas that were not written down precisely by him (at least not to the knowledge of this author). In truth, Marx was ambiguous on the efficiency of socialism. There was the impression that socialism would harness for different ends the technology of capitalism, meaning that it might, as argued above, compete with the efficiency of the latter. Experiments in socialism during the Soviet era, however, brought this view into question—hence, under these experiments, the maintenance of production required highly labour intensive industries, some of which lagged behind (in terms of productivity and the quality of work) their capitalist counterparts in the West. Still, for Marx, efficiency was not the be-all and end-all. Socialism was to be judged by different standards, including the capacity to improve well-being. In this case, some sacrifice of production (without jeopardising human survival and comfort) could be tolerated for the sake of higher-level goals.

The ambiguity left by Marx, however, can be seen as a problem, not least in identifying precisely how efficiency and meaningful work might be achieved simultaneously under socialism. It could not dispel the idea that socialism, as in the Soviet Union, would face a real and acute problem of economic efficiency and how its ability to meet human needs might still depend on subjecting a large number of workers to boring and dissatisfying work. The risk was that socialism could embed the same drive for higher production that existed under capitalism and could fail to evolve into a system that would support the well-being of workers. Marx's socialist dream of work being fulfilling for all workers might then not be realised, at least not immediately following the demise of capitalism (Pagano, 1985, pp. 58–61).

Returning to the focus of this section, it is evident that Smith and Marx were at opposite ends of the economic and political spectrum. Rosenberg's (1965, p. 127) comment that Smith's discussion of 'the deleterious effects of the division of labour upon the work force constitute a major source of inspiration for the socialist critique of capitalist institutions' could not be more wrong. Whilst Smith may have highlighted

the above effects, he was not in any way seeking to endorse or condone the move to socialism—to the contrary, he was illustrating how these effects could be dealt with adequately and effectively under capitalism. Marx, by contrast, saw that workers suffered in a more systemic way than just their division in work—rather, their lives were degraded and stunted by dint of their enforced role as wage-labourers. Whereas Smith wanted to preserve peace and order in society, Marx wanted to create the conditions for a revolution. In the end, he wished to see capitalism fall and looked to socialism as the basis for a better society. In the latter, he hoped that work quality could be improved with more free time and with enough for everyone to live well. On these points, Smith and Marx could not have been more different. As we shall see below, some of the problems and issues raised by Smith and Marx (e.g. on the scope for raising efficiency with less or more meaningful work) have resurfaced, if often indirectly, as modern economists have addressed the effects of AI on work.

#### IV. AUTOMATION AND WORK IN THE FUTURE

Debates in economics now make certain predictions about the future of work. Progress in AI, it is argued, has the potential to reduce the amount of work required in society (Brynjolfsson & McAfee, 2014; Ford, 2015; Frey & Osborne, 2017; Acemoglu & Restrepo, 2019). In the future, machines with the capacity to replicate human thought and action will replace more and more humans in work. Indeed, with rapid progress in AI, there remains the real possibility for a ‘world without work’ (Susskind, 2020).

This possibility is greeted with both fear and hope. There is fear concerning the loss of jobs and income for workers. How will workers survive materially if there are fewer jobs for them to do? Another related concern is rising inequality, as the owners of technology gain at the expense of the rest of society (Ford, 2015). Divisions in society may grow on the back of rising economic inequality. The hope, however, stems from the belief that an AI-led automation can set workers free from work and enable them to spend more time as leisure. If smart machines can do more necessary work and society can provide a means for people to live without work, then human life will be enhanced immeasurably. At least this outcome is implied by some optimistic accounts of ‘full automation’ and work-less utopias (Srnicek & Williams, 2015).

The relevance of the above debates for the present paper is that they raise issues over the place of work in life and the scope for overcoming the costs of work, in either Smithian or Marxian terms. If, like Smith, work is considered to be a curse, then its automation can be seen to represent a benefit to society. The idea of work’s loss being a negative can be discounted on the basis that work has no intrinsic benefit. The issue comes in ensuring that the division of labour continues, but that it is populated by machines. That way, machines can turbo-charge economic growth whilst allowing society to enjoy the benefits of higher consumption. Redistribution of the gains from economic growth, which Smith assumed to be automatic in a fast-growing economy, could pose a problem, but not one that should distract from the unalloyed benefit of the disappearance of the human need to work.

Smith (1976, vol. 2, p. 783), as mentioned above, suggested that innovation would only occur under capitalism if some people (a minority in society) were exempted from the division of labour. These people could use their freedom to contemplate the difference and variety in work and production across the economy as a whole. This freedom would help to facilitate knowledge creation, leading to further advances in technology (Rosenberg, 1965, p. 136). In automated workplaces, the same freedom could be maintained and used to support higher innovation. In this case, however, there would not be a need for workers to suffer a loss of intelligence—rather, dull and intelligence-sapping work could be done by machines. Automation, then, would provide a potential solution to Smith’s problem of meaningless work coinciding with higher efficiency. Indeed, it would act to protect some workers from having to work at all and could potentially create new opportunities for innovation as these workers take on the role of ‘philosophers’. Again, assuming the gains from higher economic growth could be shared equitably, all in society could live well with a reduced need to work. From a Smithian perspective, the substitution of machines for human workers could be viewed as a clear positive.

Marx’s analysis points to a different view. It implies that there will be limits to how far technology will advance. Capitalists will avoid certain forms of technology—even whilst feasible and welfare-enhancing for workers—if they reduce their ability to exert control over the labour process. Equally, they will implement technology and other methods of production that, whilst advantageous to surplus value extraction, will damage the welfare of workers. Writers in the Marxian tradition (Braverman, 1974; Marglin, 1974) have long argued that technological progress is shaped by political factors and how regressive processes such as deskilling and work intensification can persist, despite the potential for their resolution through automation. This tradition has also shown how technology itself may be used to discipline, cheapen, and exploit labour. In the present, the ‘gig-economy’ would be one example of where new technology has been employed to create lower paid and low-skilled jobs. The use of technology, in this case, has operated to benefit capital at the expense of labour.

As we have seen above, however, Marx also highlighted the possibility for positive change in work. Just as technology could embed and deepen injustices in capitalist society, so it could be turned into a progressive force beyond capitalism. The optimism in Marx’s writings stemmed from the hope that technology could be repurposed, moving from a mechanism to enrich the capitalist class, to a device for progressing the aims of workers for less as well as better work. This entailed the move to socialism and the liberation of technology from the grip of the profit imperative. Within Marx’s writings, therefore, there is scope to see how an AI-led revolution might yet benefit the whole of society rather than just a privileged few.

Two points can be stressed. Firstly, views about the meaning of work matter to how the effects of technology are assessed. Moving from Smith to Marx means thinking more broadly and critically about work, not just as a means to an end, but also as an activity that forms and shapes workers directly. Worries about technology reducing work are magnified because of the concern that workers may be left without the

meaning that work can bring. At the same time, however, hopes are raised about creating more opportunity for workers to perform meaningful work by automating drudgery. It is not about eliminating work through automation, but using technology to realise the benefits of work as well as leisure. Marx's vision was wider than that of Smith in the sense that it included the possibility of reinventing work as a positive undertaking and of increasing free time.

Secondly, there is the issue of how technology is directed and governed. Leaving technology to the whim of a corporate elite will not guarantee that it will deliver the benefits (including meaningful work) that workers need and desire. Rather, it is likely to lead to unequal returns—this extends to the persistence of meaningless work. Smith may have put his faith in capitalists directing technology towards a kind of shared prosperity (though one without meaningful work), but there are grounds for thinking, like Marx, that the direction of technology by capitalists will embed rather than resolve problems in society. This highlights the need for broader and deeper reform in the organisation of work. One key lesson of Marx was that the problem of alienation will not be resolved, unless and until workers have a direct ownership stake in the work they do and the places they work. Only then will they be able to direct technology in ways that promote their well-being, both in work and outside of it. This lesson remains an important one when assessing the possibilities for technological progress in the present.

## V. IMPLICATIONS FOR WELFARE ECONOMICS

The above discussion on work and efficiency together with technology raises more general issues for welfare economics. Specifically, it calls into question some core assumptions that are made in the latter. It also highlights the scope and need to broaden welfare economics by highlighting the possibility and benefits of improving work's place in life. Some key implications are explained below.

Firstly, there is the issue of how work is defined. The conventional economics assumption—one that stems from Smith's own writings—that work is a 'disutility' cannot stand (Spencer, 2014). Rather, it must be replaced with a different conception that takes into account how workers are moulded by the work they do (Cassar & Meier, 2018). Negatively, work can degrade workers by thwarting their potential. Positively, it can support the well-being of workers and be pursued and enjoyed for its own sake. Understanding the full effects of work on human well-being, therefore, requires a more nuanced definition of work that captures its formative impacts directly.

Secondly, there are the interests of those participating in work. Workers have needs and wants for consumption, but this does not exhaust the range of their interests. Rather, they also have interests in realising meaningful work and leisure. Their interest in working well suggests a latent positive motive for work—one that may be unfulfilled in many existing jobs. Their interest in leisure reflects a motive to achieve meaning in activities beyond work. Leisure here is not some general term for 'not working' (as is often implied in welfare economics), but rather it captures the time that people have

to do and be things they value outside of work. Meeting the interests of workers, then, extends to providing meaningful activities for workers, both within and outside of work.

Thirdly, there is the goal of efficiency itself. The idea of producing more output with less labour has obvious appeal in creating the opportunity not just for more consumption but also for more leisure time. But efficiency cannot be the only goal. Smith showed how society would face a trade-off between efficiency and meaningful work and how this trade-off needed to be included in the assessment of the welfare impacts of economic progress. The problem is that, as emphasised already, he saw no antidote to the trade-off and simply lamented the costs borne by workers in creating more efficient production. Marx, at least, hinted at a solution, though without specifying clearly how it might be realised. The challenge for welfare economics in the present is to show how the economy might achieve efficiency with more meaningful work.

Fourthly, the division of labour needs to be rethought. In line with Smith's argument, some attempt to allocate workers to specific tasks may be beneficial in terms of their contributing to economic output and to the welfare of society. Doctors, for example, can hone their skills and become better at their work if they specialise rather than move between different tasks. Some production systems may also be aided by dividing-up tasks and allocating them amongst workers. But even where task specialisation occurs, changes in work organisation can help to spread opportunity and mitigate losses from low work quality. Hospitals, like other large organisations, can be governed in ways that enable different stakeholders (not just doctors and other high status workers but also nurses and associated auxiliary staff) to participate in decision-making (Sayer, 2009). Self-governing groups, where members allocate tasks and decide on things like the pace of work, can be operated in production settings. The point is that efforts can be made to safeguard and improve the lives of all workers and the maintenance of some specialisation in work need not always coincide with lower work quality. Indeed, under collective decision-making, action could be prioritised to reduce drudgery and to ensure that workers performing the most undesirable tasks have options for other more rewarding work. Welfare economics, then, needs to recognise how dividing tasks is different from dividing workers and how the democratic reform of work organisation can help to meet not just economic goals but also ethical goals, including those relating to protecting and elevating work quality.

Fifthly, suppose that efficiency is impaired by improving the quality of work. Would that be reason enough not to improve work quality? This, in effect, was Smith's view. He thought that the increase in efficiency necessarily entailed losses in work quality—society could not grow richer materially without subjecting more workers to degrading toil. But this view can be challenged. As mentioned above, there is scope for technology to replace workers in work, saving them from low quality work. More heretically, some loss of output may be accepted if it preserves the quality of work. It is not about maximising efficiency whatever the cost to work quality but finding the right balance between efficiency and work quality. This balance could be something to address in an expanded welfare economics.

Sixthly, there is the question of reform. Welfare economics has focused more on the level of consumption than on the quality of work in the evaluation of workers' well-being. Reforms have invariably entailed raising consumption for the same given labour input. The ideal view of life, on this basis, has been equated with a no-work state where consumption is maximised. Smith suggested a broader understanding of welfare—one that considered how well workers' lives at work are going. The problem was that he put the consumption of workers ahead of their welfare at work and ignored the scope for work reform. Marx took the important step of showing how work might be transformed and how the pursuit of democratic reform at work could improve the qualitative experience of work. The argument for democratising work can be seen as an important one and one that modern welfare economics could look to embrace and promote.

Seventhly, the notion of what it means to work (and live) well can be addressed. Smith may have failed to clarify how workers' lives might be improved by work, but he at least pointed to problems relating to meaningless work. There was the hint that life might be better for workers if their work was more meaningful. Marx more than hinted at this point—rather, he stressed the need for workers to secure work that made them feel and act like human beings. The writings of Smith and Marx, for different reasons, help to stimulate a wider debate about what work is and ought to be like. They can also provoke debate, as argued above, about the scope for reform and the goals to be achieved by reform (see also [Spencer, 2022](#)). Rather than avoid normative considerations about the meaning of work, it can be argued that welfare economics can benefit directly from studying—with Smith and Marx—the place of work in meeting human needs (both material as well as creative).

## VI. CONCLUSION

This paper began by identifying some problems in Smith's analysis of the division of labour. These included the idea that workers were to tolerate the degradation of work for the sake of higher efficiency. Smith's mistake was to overlook how work might be reformed and how progress in the quality of work was an important and vital objective in its own right.

The paper also addressed the ideas of Marx. These showed how work's costs could be addressed directly and how meaning could be brought to work. It was shown how Marx did not say definitively whether meaningful work and efficiency could be realised together but that his analysis hinted in this direction. Indeed, his case for socialism was built on its potential to offer material affluence with more meaningful work and more free time. Nonetheless, there is outstanding work to be done in resolving the ambiguity in Marx's political economy of socialism.

Finally, the paper has drawn lessons firstly for modern debates on digital automation and secondly for conventional welfare economics. On the former, it is evident that AI and other digital technologies do not hold the key—by themselves—to a better future of work. What matters is how they are developed and used. From the perspective

of reconciling goals of efficiency and meaningful work, there is a need to harness technology differently. Smith's concern about workers' losing their intelligence can be addressed by directing technology towards the automation of drudgery. Equally, the concern of Marx about the creation of meaningful work can be addressed by using technology to improve the quality of work whilst prolonging time away from work. The point is not to fully automate work but to ensure that it is conducted in ways that enrich life.

For welfare economics, a crucial lesson is that the needs and demands of workers extend beyond just more consumption. The focus on consuming more and more is deeply rooted in economics. Smith's characterisation of the division of labour as a growth-engine set the foundation for this way of thinking. Moving beyond it requires us to recognise the importance of enhancing the quality of work, including via reform in the workplace—a point stressed by Marx. It also means extending time away from work, so people have more time for themselves. In developing welfare economics—and making it more relevant to a world facing challenges of an AI-led automation—attention must be given to creating a future where work, consumption, and leisure contribute positively to well-being and where people are free to indulge their passions, whether in work or beyond it.

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