Working Paper

Work and meaning in the age of AI

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Abstract: It is often said that work is not only a source of income but also of meaning. In this paper, I explore the theoretical and empirical literature that addresses this relationship between work and meaning. I show that the relationship is far less clear than is commonly supposed: There is a great heterogeneity in its nature, both among today's workers and workers over time. I explain why this relationship matters for policymakers and economists concerned about the impact of technology on work. In the short term, it is important for predicting labour market outcomes of interest. It also matters for understanding how artificial intelligence (AI) affects not only the quantity of work but its quality as well: These new technologies may erode the meaning that people get from their work. In the medium term, if jobs are lost, this relationship also matters for designing bold policy interventions like the 'Universal Basic Income' and 'Job Guarantee Schemes': Their design, and any choice between them, is heavily dependent on policymakers'—often tacit—assumptions about the nature of this underlying relationship between work and meaning. For instance, policymakers must decide whether to simply focus on replacing lost income alone (as with a Universal Basic Income) or, if they believe that work is an important and non-substitutable source of meaning, on protecting jobs for that additional role as well (as with a Job Guarantee Scheme). In closing, I explore the challenge that the age of AI presents for an important feature of liberal political theory: the idea of 'neutrality.'

0. Introduction

Every day, we hear stories of systems and machines taking on tasks that until recently we thought only human beings could ever do: making medical diagnoses and driving cars, drafting legal contracts and designing buildings, composing music and writing news reports. These technological developments have challenged the traditionally rigid distinctions that economists use to distinguish between tasks that can and cannot be readily automated: in particular, the distinction between 'routine' tasks that can be automated and 'non-routine' that cannot (see, for instance Susskind 2019, 2020a). And in turn, this has led to the development of alternative measures to mark out the limits of machine capabilities: for instance, the AI Occupational Impact Measure, the Suitability for Machine Learning Index, and the AI Exposure Score (Acemoglu et al., 2021).

As of a consequence of this technological progress, the economic literature is now characterised by far greater agnosticism with respect to the limits of machine capabilities. There are fewer attempts to demarcate a fixed boundary marking which tasks that machines

can and cannot do. And instead, there is a growing recognition that these technologies are becoming increasingly capable over time, albeit in directions that are difficult to predict with certainty. Many newer models, for instance, use an endogenously determined cut-off in task space to mark the boundary between activities that can and cannot be automated (for instance, in Acemoglu and Restrepo 2018b; Aghion, B. Jones, and C. Jones 2019; Moll, Rachel, and Restrepo 2021). And as technological progress takes place, that cut-off in task space shifts – there is a process of 'task encroachment' at work, where machines gradually, but relentlessly, take on more tasks (see Susskind 2020a, 2020b, 2022).

Unsurprisingly, the traditional economic literature has almost exclusively focused on the economic impact of AI (and other Emerging Technologies or ETs) on the labour market: in particular, the implication of this process of task encroachment for employment and earnings. Significantly, the latest research, with its revised conception of machine capabilities, has challenged the relatively benign view of automation that has dominated the profession of economics until now (Acemoglu and Restrepo 2018a, b, c; Susskind 2022). A change of heart has taken place in the field over the past 80 years or so, accelerated by recent developments in AI – from a blinkered optimism about the impact of technological change on work, to a creeping pessimism (Susskind 2022). This pessimism concerns not only the quantity of work to be done but the quality of that work: recognising the different margins on which technological change can affect the labour market is important and I will return to these later in the paper.

Importantly, though, the impact of AI on the labour market is not limited to this economic dimension. In both popular commentary and more expert analysis, it is often said that paid work is not only a source of an income but of *meaning* as well – an inconsistently defined and used term, designed to capture the way in which work provides some with, for example, a sense of purpose, an opportunity for self-fulfilment, and a sense of direction in life (from now, I refer to 'paid work' as simply 'work'). If that broad claim is right, then the challenge of technological change is not just that the labour market might be hollowed out, leaving some workers without work or with a different type of work, but that it might hollow out that sense of meaning in life as well. This paper is focused on this latter claim about work and its relationship to meaning – whether this claim is correct and what its consequences might be. Section 1 explores the theoretical and empirical literature on the nature of the relationship between work and meaning. Section 2 explains why economists ought to take this relationship more seriously than at present. And finally, Section 3 explains the implications for the politics and the political philosophy of work.

The line of investigation in this paper is likely to be unfamiliar to most traditional economists who explore the impact of technological change on the labour market. The non-economic dimensions of work, and in particular its role as a source of meaning, has not attracted much formal attention. That omission was understandable in a world where the impact of technology on the labour market was expected to be relatively muted. However, given the encroachment of new technologies on an ever-widening range of tasks, and a recognition that their impact may be far more disruptive than previously imagined, it is important – for a variety of reasons that I will explore – to take this non-economic dimension seriously as well.

1. The Relationship Between Work and Meaning

Traditionally, the economic literature has approached the relationship between work and meaning in a very narrow way. In the textbook model of individual labour supply, work

effort is necessarily a source of disutility, and that effort is only provided by a worker in return for a wage. This approach has a rich history, stretching back to Adam Smith's conception of work as a source of "toil and trouble" (Susskind 2020). Of course, in the broad intellectual history of economic thought there have been some deviations from this setup. Among the classical economists, for instance, Alfred Marshall notably claimed that "man rapidly degenerates unless he has some hard work to do, some difficulties to overcome" – in his view, work was not only a source of income but the way to achieve "the fullness of life" (Marshall 1890). And among contemporary researchers, there are 'behavioural' and 'happiness' economists who have treated this relationship between work and meaning more rigorously (see, for instance Loewenstein 1999; Karlsson, Loewenstein, and McCafferty 2004; Chater and Loewenstein 2016; and Cassar and Meier 2018 on the former; Dolan, Peasgood, and White 2008; Layard, Clark, and Senik 2012; and Clark 2018 on the latter). But these efforts are exceptional deviations, rather than the norm: "in economics" stated one survey of the field, "there has been relatively little discussion about the desire for 'meaning'" (Cassar and Meier 2018); "the idea that work has meaning and is meaningful beyond its contribution to personal consumption", wrote another, "has been largely absent from mainstream economics" (Spencer 2015).

Nevertheless, it is unlikely that most economists really believe that, in practice, work is a source of disutility alone, and that such a strictly negative relationship between work and meaning actually holds; as Betsey Stevenson put it, "[m]ost economists are concerned about how we allocate jobs and underneath that concern lies a belief that work matters independent of the earnings that are generated by the work" (Stevenson 2019). One can see this in many of the public comments made by leading labour economists. David Autor, for instance, has argued that "[i]dleness is a terrible thing" whereas "[w]ork gives people's lives structure and meaning" (Wellisz 2017). And in a similar spirit, the MIT Task Force on the Future of Work, co-authored by twenty faculty members, argued that "work provides, in the best case, purpose, community, and esteem to those who engage in it" (Autor, Mindell, and Reynolds 2019). Here, Autor and others are making the simple claim that work is not just a disutility-inducing means to a wage alone, as the traditional models of individual labour supply assume, but a means to other valuable ends as well.

Other economists have made yet stronger claims about the relationship between work and meaning. Daron Acemoglu, for example, has argued that "it is good jobs, not redistribution, that provide people with purpose and meaning in life" (Acemoglu 2019a), that "good jobs are also necessary for society to enable a meaningful, fulfilling life" (Acemoglu 2019b) and unless we create "meaningful employment" for most people they will lack a "viable social purpose" (Acemoglu 2021). Here, the implicit assumption is not only that work is a sufficient condition for meaning, but a necessary one: without it, people will lack purpose, fulfilment, and direction. Then there are researchers who have made even more significant demands: Robert Shiller, for instance, has argued that since "jobs are more than a source of income" it follows that the "objectives of our [the economics] discipline … shouldn't be the GDP or productivity number so much as the meaning of life number" (Shiller 2019a, b).

Highlighting this conflict between the healthy relationship between work and meaning appealed to by economists in public commentary, and the harmful one reflected in formal models, is not necessarily intended as a criticism. Model building is always an exercise in simplification, and certain features of the real world must be left out to achieve tractability. The central question is whether this lack of modelling realism is sufficiently consequential for the results of interest. In the past, where the focus of these models was overwhelming on

the economic dimension of work, this lack of realism was comparatively inconsequential for those results of interest (though not entirely so). However, as our collective focus increasingly shifts to the non-economic dimension of work – in ways that I will explain in a moment – this lack of modelling realism has become more conspicuous. For example, economists, as just noted, are now appealing to the very opposite relationship between work and meaning in informal discussions and policy advocacy. The contrasting lack of realism in the formal models is therefore more apparent. In turn, the strong public claims made by economists about the nature of this relationship should demand the same critical attention as the positions that they take on more traditional economic questions.

Beyond economics, many classical political philosophers and sociologists were helpfully interested in the nature of the relationship between work and meaning – particularly socialist thinkers. But somewhat unhelpfully, what emerges from this early literature is a strong sense of the ambiguity associated with this relationship. A central theme of Marx's writing, for example, is the idea of "alienation", that the type of work forced upon many people – at his time, in the factories and mills of the Industrial Revolution – was standing in the way of people being their true selves: "[h]e is at home when he is not working and when he is working he is not at home" (Simon 1994). But at the same time, another theme in Marx's writing is that, through the right type of work – and only through that work – people could flourish: work is part of humankind's "species being", their fundamental nature, and "self-realization through work is the essence of Marx's communism" (Elster 1985, quoted in Arneson 1987). For Marx, what appears to be decisive in resolving this ambiguity is whether a worker has discretion or control over the nature of their work, or whether it is "imposed on him and from which he cannot escape" (Marx 1994). In any event, his was a distinction that inspired other thinkers at the time: for instance, William Morris (1886) wrote *Useful Work Versus Useless Toil*, which was likely influenced by Marx's work (Boos and Boos 1986).

This ambiguity in the nature of the theoretical relationship between work and meaning is compounded by looking yet further back in time to the ancient philosophers. What emerges from this literature is a different impression: that the nature of this relationship is highly contingent on time and place. In ancient political philosophy, for instance, the relationship between work and meaning was understood very differently from many modern scholars. When Plato set out an account of his ideal state, he confined certain people who worked with their hands to an "artisan class" and denied them a role in political life on that account: "the best-order state will not make an artisan a citizen", he wrote, before citing the city of Thebes where "there was a law that no one who had not kept out of trade for the last ten years might be admitted to office". In a similar spirit, Aristotle wrote how "citizens must not lead the life of artisans or tradesmen, for such a life is ignoble and inimical to excellence" (see Susskind 2020a for classical references). And in *Oeconomicus,* Xenophon reports comments supposedly from Socrates: "For indeed those that are called mechanical [laborers] are spoken against everywhere and have quite plausibly come by a very bad reputation in the cities … Indeed in some of the cities … no citizen is allowed to work at the mechanical arts" (Sylvester 1999). In short, the picture from these ancient sources is one where the relationship between work and meaning is a negative one, where work is a grubby affair to be avoided if it can be (not, though, for the disutility-inducing reasons that one finds in the traditional economic models of labour supply).

To be clear, these ancient political philosophies are not presented with a view to their appropriateness. Instead, the intention is to show that the conventional wisdom with respect to the relationship between work and meaning can change – and has changed – dramatically

over time. In the contemporary social order, where work sits at the centre of most adults lives – we spend our youth preparing for it, adulthood doing it, and old-age retiring from it – it is hard to imagine how it might be different: we live in a "society of laborers", wrote Hannah Arendt, "which is about to be liberated from the fetters of labor, and this society does no longer know of those other higher and more meaningful activities for the sake of which this freedom would deserve to be won" (Arendt 1998, quoted in Susskind 2020a).

Interestingly, more contemporary political philosophy has not engaged with this relationship between work and meaning with the same enthusiasm. There have been some contributions. For instance, in the middle of the 20th century, Arendt made the influential threefold distinction between "labour", "work", and "action", in a sort of ascending order of meaning and importance (Arendt 1998). Then in the 1980s, the philosophers Richard Arneson and Jon Elster both engaged with the issue: the former on the nature of "meaningful" work, the latter on "self-realisation in work" (Arneson 1987; Elster 1986). More recently, Russell Muirhead and Nien-hê Hsieh have explored the relationship between meaningful work and justice (Muirhead 2004; Hsieh 2008). And new histories of the rise of meritocracy have focused on its relationship with work and meaning (Markovits 2019; Sandel 2020). Nevertheless, this contemporary literature is sufficiently sparse for scholars in the field to take note: "little has been written on the normative character of work, and its implications for political theory and social policy" wrote one survey; "[t]he idea of "meaningful work" has attracted relatively little attention during the past decades wrote another" another (Yeoman 2012; Roessler 2012).

Given the ambiguity and sparsity of the theoretical literature on the relationship between work and meaning, it is sensible to turn to the large empirical literature on the topic to see how workers feel about their work in practice. These findings, though, are also inconclusive. Consider basic survey evidence. A recent survey of adults in seventeen advanced economies, for instance, found that 25 percent mentioned their "occupation and career" when asked to describe what gives them meaning in life and, in twelve of those countries, work was "among the top three most mentioned topics" (Silver et al. 2021). On a generous reading, these results suggest that many people find meaning in their work. But on a less positive interpretation, they imply that most people do not immediately think that their work is a source of meaning when prompted. The latter, more negative, interpretation reflects results gathered in a similar way elsewhere: in the US, other surveys found that almost 70 per cent of workers are either 'not engaged' in or 'actively disengaged' from their work, while only 50 per cent say they 'get a sense of identity from their job'; in the UK, almost 40 per cent of people think their work does not make a meaningful contribution to the world (Susskind 2020a).

There is more formal research on the relationship between work and meaning, most notably in the organizational behaviour and organizational psychology literature (Cassar and Meier 2018). Here, there is a "long tradition" of scholars showing that people get meaning from their work, beyond the utility of earning a wage: there are studies, for instance, showing the apparent importance of 'organisational mission', where workers are willing to work harder or for less in pursuit of a mission they perceive to be valuable. And there are studies showing the importance of 'job design': when workers have autonomy in their roles, can achieve a sense of competence, have positive relationships with colleagues, or feel they are being treated fairly, then they are again willing to work harder and are more satisfied with their jobs (again, see Cassar and Meier 2018 for a full treatment of this literature). Whether or not these results are as robust as their proponents suggest, business leaders have nevertheless assumed that to be the case in recent years, using them to inform organisational strategy and public

relations: most professional firms today, for instance, have a stated corporate goal that extends well beyond a straight-forward statement of simple profit-maximisation and are undertaking serious work on their 'purpose'; most Human Resources (HR) professionals and managers spend a great of their deal of their time engaging with issues well beyond the best wage to set their workers.

The empirical psychology literature also provides a complementary set of insights on the relationship between work and meaning – but it does this most compellingly in an indirect way, by showing the disutility associated with unemployment. This is a well-established and widely discussed empirical fact in the sociological literature as well, stretching back to the pioneering observational studies of Marie Jahoda and colleagues in the village of Marienthal, Austria, in the 1930s (Jahoda, Lazarsfeld, and Zeisel 2009). The village was characterised by widespread worklessness after the closure of a nearby flax mill at the start of the Great Depression – by 1932, three-quarters of the families in the village had nobody in work – and their findings were striking: "growing apathy, a loss of direction in life … increasing ill will to others … [p]eople borrowed fewer library books … dropped out of political parties and stopped turning up to cultural events … men without work walked more slowly in the street and stopped more frequently" (Susskind 2020a; see Dawson and Fouksman 2020; Dawson 2022; and Fouksman 2022 for complementary research from South Africa on attitudes when mass unemployment is more common). Many studies have shown that unemployment is associated with a collapse in life satisfaction. But the important additional claim is that, even controlling for the decline in income associated with workless, this fall in wellbeing is substantial (see Frey and Stutzer 2002; Clark 2018; Nikolova and Cnossen 2020; for literature reviews). On one reading, this suggests that work is a means to other valuable ends, not only an income.

What should we make of this interdisciplinary body of research? To begin with, from a methodological point of view, there are clearly questions about the internal validity of the basic surveys that are often appealed to in popular commentary. In turn, many of the more formal studies use identification methods that would raise doubts among empirical economists – using non-representative samples, over-interpreting simple correlations, and relying on different measurement scales (Nikolova and Cnossen 2020).

But alongside these technical concerns, there are also questions about the external validity of even the more robust results – particularly in some of the more dramatic scenarios associated with the impact of AI on the labour market. To see this, consider the claim that automation might leave most adults without work at some point in the future. Whether or not one believes that this claim is true, the important point is that it is far from clear that any relationship credibly identified in our existing world would hold in this possible future world (see, for instance, Monteith, Vicol, and Williams 2021, which explores this idea from the perspective of various different current global case studies). That relationship has been identified in a setting where work sits at the centre of most adults' lives, and where the social order is built around that centrality of work – but in a world where most adults do not work, that fact would no longer hold. It may be that humankind is forced to find meaning in whatever activities they spent most of their time doing and now that is work – but in the future, unable to work, people may find that meaning in other activities instead. Again, whether that dramatic scenario is likely to unfold in the future, the thought experiment is useful because it draws attention to reasonable doubts that one might have about how robust any relationship between work and meaning is likely to be in social orders quite unlike our own.

A more fundamental problem across these literatures is that scholars do not agree on what the meaning of 'meaning' ought to be or whether such a definition is possible (see, for example, Rosso, Dekas, and Wrzesniewski 2010; and Roessler 2012). Many competing and overlapping conceptions of 'meaning' have been used at different moments, and the concept remains highly differentiated. Work, for instance, is variously thought to be meaningful if, for instance: it achieves some social purpose; if it engages a worker's capabilities; or if a worker enjoys their work and finds it fulfilling; among much else. For some, it is a worker's subjective view of their work which matters for determining whether it is meaningful or not; for others, though, the view is that the criteria ought to be more objective, able to be considered independent of a worker's personal perception of the meaningfulness of their work. In turn, there are also tensions between social perceptions of meaningful work and the reality for individuals in those roles. The anthropologist David Graeber's idea of 'bullshit work' is a good example of this: these are jobs which from the outside are generally thought to be 'good' jobs with a degree of social esteem – for instance, in financial services, corporate law, consulting – yet for those in the roles they are thought to be pointless (Graeber 2013, 2018). Given this lack of precision about the definition of 'meaning', one lesson from the literature is the importance of being far more explicit about what meaning of 'meaning' is being used in any discussion or analysis.

The overall conclusion to be drawn from both the theoretical and empirical literature is that the relationship between work and meaning is highly contingent – it depends upon individual preferences, the moment in time, the geographical place, and the nature of the available work. Put differently, some but not all people care about having meaningful work, some but not all work is meaningful, and the balance between the two can look very different in different places and at different moments in history. In short, the relationship between work and meaning is far more ambiguous and less exclusive than is commonly supposed. And in the cases where that relationship is a positive one, that is only evidence or reasoning that work is a sufficient condition to find meaning – certainly not a necessary one.

2. Taking the Relationship Seriously

There are three reasons that policymakers and economists ought to take this relationship between work and meaning more seriously than at present. To begin with, there is the simple reason that this relationship appears to determine economic outcomes of interest. Of course, it is well-established that non-monetary features of a job might affect labour market outcomes. Any undergraduate student of labour economics, for example, will be familiar with the 'fair wage' or 'efficiency wage' hypotheses, where workers concerned with 'fairness' are more willing to exert effort in response to a higher wage (Akerlof 1982; Akerlof and Yellen 1990). And, as others have noted, scholars have argued as far back as Adam Smith that the different non-economic features of different jobs could make up for variations in wages – or, in Smith's words, "make up for a small pecuniary gain in some employments, and counter-balance a great one in others" (Smith 1998). Today, this idea of "compensating differentials" is "not novel or controversial" in the mainstream profession (Lazaer 2018).

But despite this general recognition of the importance of non-monetary and non-economic aspect of work, little formal research has been done on the relationship between work and meaning specifically: according to one recent review of this literature, "only two economics papers have called for incorporating work meaningfulness in standard labour supply models" (Nikolova and Cnossen 2020). And this matters because, as noted, this dimension of work

can determine traditional economic outcomes of interest. For example, perceptions of meaningful work – defined in this case as involving activities that "individuals view as purposeful and worthwhile" – are said to predict "retirement intentions, absenteeism, and skills training" (Nikolova and Cnossen 2020). Given results like these, the fact that many workers do not appear to gain a sense of meaning from their work is significant.

The second reason that policymakers and economists ought to be more concerned with this relationship between work and meaning is that it matters for understanding how technological change affects not only the quantity of work, but its *quality* as well. Popular commentary on the future of work has tended to focus on the former – on the number of 'jobs' that have to be done, which 'jobs' are most at risk of automation, whether there are going to be enough 'jobs' for people to do. In that spirit, one influential study, by Oxford's Carl Frey and Michael Osborne, is regularly reported as claiming that 47 per cent of US jobs are at risk of automation in the coming decades (Frey and Osborne 2017). But this focus on jobs is too narrow: there are many other margins on which the labour market can adjust to technological change, not only the number of jobs alone.

In contrast, economists have traditionally been concerned with those other important margins: less focused on how technological change affects the number of jobs and more on the nature of those jobs. Consider the following indicative statements: David Autor writing that "[e]ven if automation does not reduce the quantity of jobs, it may greatly affect the qualities of jobs available" (Autor 2015); Laura Tyson and John Zysman that "[w]e are skeptical that AI and ongoing automation will support the creation of enough good jobs" (Tyson and Zysman 2022); Andrew McAfee paraphrasing Robert Gordon, that "we don't have a job quantity problem, we have a job quality problem" (Matheson 2019); Daron Acemoglu asking "where do good jobs come from?" (Acemoglu 2019a); and Lawrence Summers, that "[s]omething very serious has happened with respect to the general availability of quality jobs in our society" (Summers 2015). There is a growing focus on how technological progress can be 'directed' in a way that promotes 'good' work alongside other policy priorities, and a strong emphasis on how the present path of automation is not inevitable (Acemoglu 2019b, 2021; Klinova and Korinek 2021; Korinek and Stiglitz 2021; Gray and Suri 2019; Sambasivan and Veeraraghavan 2022). This 'quantity' verses 'quality' distinction has also attracted the attention of politicians and policymakers: in the UK, for example, the British government commissioned an independent report entitled "Good Work", published in 2017, which argued that "focusing more closely on the quality of work as well as the number of people employed, will take us in the right direction" (Taylor et. al. 2017): in response, the government published the 'Good Work Plan' the following year (UK DBEIS 2018).

What is meant, though, by the 'quality' of work? And what does 'good' work involve? A variety of criteria have been used. The most common among economists is the wage level. For instance, the fall in the real wage of less-educated workers in several countries has preoccupied many researchers (Dustmann, Ludsteck, and Schönberg 2009; Acemoglu and Autor 2011: Blundell et al. 2018; Autor 2019) and technology is often thought to be the culprit: automation has eroded middle-skill employment opportunities (i.e. in production roles, as well as administrative and clerical work) for less-educated workers in urban areas (Autor 2019). Another important aspect of 'good' work identified by economists is job 'security': "[g]ood jobs", writes Acemoglu, "are those that provide not only a wage consistent with a comfortable … living standard but also some amount of stability"

(Acemoglu 2019b). In this spirit, it is possible to assemble additional narrow criteria: Adam Smith, for instance, had five of them mind when writing about "compensating differentials".[2]

Yet defining a job as 'good' according to these narrow aspects alone will lead to a shallow conception of what it means for work to be 'good' or 'high quality'. A richer conception must engage with the idea that work is a source of meaning for some as well. This claim is supported by the – albeit ambiguous – theoretical and empirical literature on the nature of this relationship from earlier. This claim is increasingly recognised by philosophers of work: Joshua Cohen, for instance, distinguishes between the "standard goods" of a 'good' job – which include "compensation" and "stability" – and the more "ambitious" aspects like "purpose" (Cohen 2020). And this claim is one that many economists have already internalised, as evidenced by their public comments on the importance of the relationship between work and meaning set out before. Economists are right to make claims of this nature: if they are to make a substantive contribution to debates about the impact of AI on the quality of work, they cannot simply focus on technical issues like pay and flexibility. But it is also right that the strong public claims they have begun to make about this relationship are subject to the same critical attention as their positions on more traditional economic questions. This requires more engagement with the nature of the relationship between work and meaning.

At times, there is a complacency with respect to the impact of technology on the relationship between work and meaning. There is a sense that new technologies will take on the 'boring' or 'repetitive' work – often, a legacy of the view that it is easy to automate 'routine' tasks but harder to automate 'non-routine' tasks – leaving workers to do the supposedly more meaningful work that remains. Indeed, this is reflected in the language we use to talk about new technologies; the word 'robot', for instance, is derived from the Czech word 'robota' which means drudgery or toil (Susskind 2020a). Yet this sense is mistakenly optimistic, for a variety of reasons. To begin with, these technologies can now take on the 'non-routine' tasks that are often thought to be more meaningful: making medical diagnoses, designing beautiful buildings, generating captivating imagery, and so on. In turn, the 'non-routine' tasks that cannot be automated are often not self-evidently more meaningful than the 'routine' ones that can: many, for instance, involve activities in low-paid, insecure service roles. And then there are the various ways that new technologies themselves are reducing the quality of work that is not automated – through, for example, supporting more intensive worker surveillance, more precise performance target setting, and more insecure on-demand shift scheduling (Scherer and Brown 2021; Delfanti and Frey 2021; O'Sullivan et al. 2019).

The third reason that policymakers and economists ought to take the relationship between work and meaning more seriously concerns the longer term. As noted at the start of this paper, because of recent developments in AI and other ETs, a noticeable shift has taken place in the economic literature – towards a set of arguments that support a far more pessimistic view of the impact of technological change on work. And in some of these scenarios, that progress not only affects the quality of work, but the *quantity* of work that must be done as well. To be clear, 'automation anxiety' is not a new phenomenon: ever since modern economic growth began three centuries ago, people have suffered from periodic bursts of worry about the disruptive technologies of the time taking on their work (Susskind 2020a).

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[2] "The agreeableness or disagreeableness of the employments themselves; secondly, the easiness and cheapness, or the difficulty and expense of learning them; thirdly, the constancy or inconstancy of employment in them; fourthly, the small or great trust which must be reposed in those who exercise them; and, fifthly, the probability or improbability of success in them" Smith (1776).

And in the past, those fears have turned out to be misplaced: by and large, there has always been enough work for people to do (and when there has not been enough work, the causes have not been technological). But emboldened by some of this formal scholarly research, there is a growing sense that this time may be different, because of the remarkable technological changes that are unfolding.

In response, policymakers, economists, and politicians have begun to explore the more radical interventions that might be required to respond to the challenge of there not being enough good work for everyone to do. The two interventions that have attracted the most attention are the 'Universal Basic Income'(UBI) and the 'Job Guarantee Scheme' (JGS) (for instance, Van Parijs 2017; Tcherneva 2020). At present, though, the broader debate about their merits is clouded by a failure to explicitly engage with the dual purpose of work: that is both a source of income and meaning for some as well.

To see this limitation, it is useful to distinguish between the two distinct problems that a society would face in a world where there is not enough work for people to do. First there is the economic problem: how to provide people with an income. This is a problem of distribution which, until now, has predominantly been solved through paid work. If the labour market is a less reliable option in the future, though, then an alternative distribution mechanism will have to take its place. But there is also a meaning problem: how to provide people with meaning if work no longer sits at the centre of their lives. Given the heterogeneity in the nature of the relationship between work and meaning identified before, this problem will be more acute for some. Yet it is still a distinct problem, nonetheless.

This decomposition of the challenge of workless into two different problems is useful for thinking clearly about the relative appeal of interventions like a UBI or a JGS. With respect to the economic problem, both interventions are similar responses to a first approximation. Both the UBI and the JGI provide people with an income, independent of their status in the labour market: the former does it on account of membership in the political community (for that reason it is sometimes called a 'citizen's income'); the latter does it in return for a state-provided job (i.e. one that would not otherwise be provided by the labour market). From an economic point of view, the differences between the two interventions are technical rather than substantive. However, these interventions differ more markedly with respect to the meaning problem. This is because they tend to be based on different assumptions about the nature of the relationship between work and meaning (Susskind 2021).

For instance, if one believes that work and meaning are necessarily linked, then a JGS is likely to be appealing – not only does it provide an income, but it also restores the sense of meaning that a person might have got through traditional work in the labour market. In contrast, if one is more sceptical about the strength of the relationship between work and meaning, or is more confident that people would be able to find meaning in non-work activities, then a UBI is likely to be more favourable -- it provides people with an income but allows them to find meaning through those other activities instead. Advocates of these different interventions rarely express their support or disagreement in these terms or make this distinction between the different problems that are being solved. But implicitly, this is often what is taking place.

To see an example of this in economics, consider Daron Acemoglu's concern about interventions like UBI as a response to the challenge of automation. In recent commentary, he has expressed his scepticism about the feasibility of redistribution like this: "building

shared prosperity based predominantly on redistribution is a fantasy" (Acemoglu 2019a) and "no society has achieved shared prosperity by just redistributing income from the rich to the less fortunate" (Acemoglu 2019b). But the weight of his argument is less on technical concerns, that such a scheme would be large and unwieldy, and more that such a scheme would fail to solve the meaning problem: without work, people would be without "a viable social purpose" (Acemoglu 2019a) and "it is unlikely that individuals could find a similar meaning or purpose from pure redistribution, no matter the scale" (Acemoglu 2019b).

The point here is not to take a position on the merits of UBI, but instead to show how arguments about the bold interventions that might be required often rest on two – often tacit – assumptions: that work is a source of meaning and that, in turn, non-work activities are a poor alternative source of meaning. These assumptions cannot be taken for granted. The first relationship – between work and meaning – is challenged by the theoretical and empirical heterogeneity described before. The second relationship – between non-work activities and meaning – is challenged by the intuitive observation that many people do in fact find meaning outside of the formal labour market, not only in hobbies and recreational activities, but also in the great variety of work that is goes unpaid – care services, volunteering, work in the domestic economy. Engaging with the truth of these assumptions is hard, given the fact that work sits at the centre of most people's lives today – not least among those who write about this subject – and given the dominance of the work ethic that determines what it means to be a valuable member of society today, it is difficult to imagine how things might be done differently. But if technological progress is carrying us towards a world that is quite different from our own, where there is not enough demand for the work that human beings do to keep everyone in a good job, then we must engage with the nature of this relationship between work and meaning more seriously.

3. Liberal Neutrality

A fundamental feature of liberal political theory is the idea of 'neutrality'. This is the claim that "the state should not reward or penalize particular conceptions of the good life but, rather, should provide a neutral framework within which different and potentially conflicting conceptions of the good can be pursued" (Kymlicka 1989). In short, neutrality means that the state should not 'take a position' on what it means to live a good or meaningful life. In the context of the labour market, the consequence of neutrality is that the state should not take a position on the availability or the content of meaningful work either – for if it did take such a position, that would violate the principle of neutrality in elevating one conception of the good life over another (e.g. a particular type of work, or time spent at work over time spent with the family or in the community). Under neutrality, work is instead "conceptualised as a preference in the market", an act of self-determination that must be left to individual beliefs about what is meaningful or not (see Yeoman 2012, 2014).

To see the theory of neutrality applied in the labour market context, consider the work of John Rawls, the leading liberal political philosopher of the 20th century. In *A Theory of Justice* he recognises the relationship between work and meaning and emphasises its importance: "[w]hat men want is meaningful work in free association with others" he argues at one point, and "no one need be servilely dependent on others and made to choose between monotonous and routine occupations which are deadening to human thought and sensibility" at another (Rawls 1971). But despite this recognition, he still does not include meaningful work as one of the "primary goods" in his conception of a well-ordered society (alongside, for instance, income and wealth). To do so would violate the principle of neutrality, by

prioritising one source of meaning above others. Nor does Rawls explicitly define what he means by "meaningful work", other than by hinting at it in omission (i.e. if "no one … is made to choose between monotonous and routine" occupations, then one can assume Rawls does not think that work is meaningful). Again, this is understandable when looked at from the point of view of maintaining neutrality: if the concept of 'meaningfulness' is a subjective one, and neutrality means there is no role for the state in prioritising one conception over the other, then to define 'meaningfulness' is a useless exercise since there is no role for whatever conception is settled upon. Instead, "the question of what should and what should not count as meaningful work will always be disputed in a liberal democracy" – and that is satisfactory to a liberal under the principle of neutrality (Roessler 2012).

In my view, the advances in AI and other ETs present both a theoretical and a practical challenge to the feasibility of neutrality. The more theoretical concern is a simple one: that neutrality cannot be achieved in a world where the labour market does not create enough work for everyone to do, because of the remarkable technological changes that are taking place. In many theoretical accounts of neutrality, there is a tacit assumption that the labour market in a well-ordered society will necessarily provide sufficient work for people to do – or at least, sufficient work that people are able to act effectively on their preferences in the labour market by choosing one type of work and not another. Rawls, for instance, imagines that "each [person] can be offered a variety of tasks so that the different elements of his nature find a suitable expression" – and says little else, assuming that a suitable variety of tasks will be made available (Rawls 1971). Nor is this assumption unique to the liberal traditional. Consider, for instance, the libertarian Robert Nozick and his work *Anarchy, State, and Utopia*. In his discussion of "meaningful work", he also quietly assumes that the labour market will necessarily provide a wide variety of possible opportunities for work: he writes, for example, of workers engaging in a "trade-off" between "some wages for some increase in the meaningfulness of their work" or vice-versa, and the choice that different workers have "among their employment activities on the basis of the overall package of benefits it gives them" (Nozick 1974). But both these ideas – the presence of a trade-off, the existence of effective choice – are predicated on a labour market that provides a sufficient variety of jobs to make the trade-off or choice practicable. The philosopher Beate Roessler captures this observation well: under the liberal tradition, "in a well-ordered society, people would freely consent to the jobs they have to do, and the market would take care of the sufficient provision of meaningful work. The neutrality of the state could be preserved, since the market would provide meaningful jobs and compensate for meaningless work through higher remuneration" (Roessler 2012).

In the second half of the 20th century, when both Rawls and Nozick were writing, the assumption that the labour market would necessarily create sufficient work for people to exercise effective choice – and that any deviations from full employment which did take place were thought to be an unfortunate but temporary problem – was more understandable. But looking to the second half of the 21st century, with advances in AI and other ETs, that claim is now far more in question. This uncertainty is a challenge to the idea of neutrality. If the opportunity for individuals to exercise effective choice between different types of meaningful work in the labour market is dramatically and permanently diminished, then the state must be compelled either to act to restore that choice by creating work for people to do, or not to act. It is then hard to see how that action or inaction could be compatible with maintaining neutrality. If the state chooses to act, for instance, that will undermine neutrality by prioritising certain types of meaningful work over others – unless a sufficiently diverse range of work were created to maintain the sort of effective choice that had existed in the

labour market, a task of questionable feasibility. But if the state chooses not to act, that will also undermine neutrality by prioritising other sources of value – the family, the community, political activity, and so on – over work. In short, in a world with permanently less work, the neutral state would face a sin of omission or commission.

In his later work, Rawls recognised that the labour market might malfunction more permanently, leaving insufficient work for people to do (though not because of automation). In the introduction to the 1996 paperback edition of *Political Liberalism*, for instance, he writes that there was a role for "[s]ociety as employer of last resort through general or local government, or other social and economic policies" since "lacking … the opportunity meaningful work and occupation is not only destructive of citizens' self-respect but of their sense that they are members of society and not simply caught in it" (Rawls 2005). The implication appears to be that if the labour market were to fail to provide meaningful work, that would be unacceptable, and the state would need to respond. But Rawls does not attempt to reconcile this fear, and what it would demand from the state, with his liberal attachment to neutrality. Others have begun to explore this in his place (for instance, Hsieh 2008, 2009; Moriarty 2009; Arnold 2012; Hasan 2015) arguing in different ways that meaningful work does have a place in *A Theory of Justice* -- even though it is not explicitly included by Rawls as a primary good, as one might reasonably anticipate if it were thought to be important. Yet despite these contributions, one might still ask how the state can provide meaningful work on a sustained basis, in place of a well-functioning labour market, without violating the principle of neutrality – either through the sins of omission or commission as before.

Putting to one side the theoretical plausibility of maintaining neutrality in a world with less work, there is also the practical question of achieving neutrality in the real world. From the analysis in this paper, there are good reasons to believe that technological progress is already making this far harder. To begin with, the growing focus on the 'quality' of work as a policy objective, noted before, necessarily requires that the state must make a judgement about what makes work 'good' and 'meaningful' or not – violating neutrality, by promoting one conception of meaningful work over another. Secondly, if the state chooses to prioritise work over leisure in a world where it may be increasingly feasible for some not to work – for instance, by promoting a JGS rather than a UBI as discussed before – then it is also making a judgement that work is a 'more meaningful' activity than leisure (and vice-versa for a UBI over a JGS) – violating neutrality, by promoting one conception of a meaningful life over another. And finally, there is the nature of the leisure time itself: if some people are unable to work or choose not to work, and leisure becomes an increasingly prominent feature of life, then the different ways in which that time is haphazardly shaped by the state for 'better' (or 'worse') will become increasingly apparent – violating neutrality, by promoting one conception of meaningful leisure over another. Think, for instance, of the Department for Digital, Culture, Media & Sport in the UK, which already plays a critical role in shaping the spare time of British citizens: by encouraging all children to ride a bike and learn to swim, for instance, or making it free to visit museums and galleries (Susskind 2020a). In each of these three areas – the nature of work, the balance between work and leisure, the nature of leisure – it appears that the disruptive impact of AI on the labour market is compelling the state to engage with normative questions about what it means to live a 'good' or 'meaningful' life. That suggests neutrality is increasingly infeasible in an age of AI.

One important response to this practical concern about neutrality is to argue that the particular conception of neutrality that I am using is very demanding – and that as a result, on this very demanding understanding of the term, neutrality is already being violated. With that

criticism in mind, it is useful to make a further distinction between two conceptions of neutrality. The first is a strong demand, which "requires that the state seek to help or hinder different life-plans to an equal degree" – in short, there should be neutrality in the "consequences" of state intervention. This is 'strong neutrality'. The second is a weak demand, that "government action may help some ways of life more than others but denies that government should act in order to help some ways of life over others" – in short, there should be neutrality in the "justification" of state intervention (Kymlicka 1989; Raz 1986). This is 'weak neutrality'.

This distinction between 'strong' and 'weak' neutrality is helpful for thinking about the claim that neutrality is already being violated in practice – and, by implication, that worries about any new challenges to neutrality presented by AI and other ETs are therefore misplaced. Today, it is certainly possible to identify interventions that influence the nature of work, the balance between work and leisure, and the nature of leisure, in the ways I have described. But until recently, it was also reasonable to think that only strong neutrality was violated in these sorts of cases: these were plausibly accidental influences, and the primary justification for any intervention was not to achieve a particular normative conception of a 'good' or 'meaningful' life. Take the pension systems in most countries today, for instance: these might encourage people to take serious time off work at the end of their lives, but that is more likely an accident of technical decisions about the best way to provide people with an income when they retire from life-long work, rather than the direct result of a normative view that the twilight of life is the best moment for leisure time. The same is true of interventions more closely related to the issue of automation. Take the US tax system: it might encourage automation by treating investments in capital more favourably than those in labour (see Acemoglu, Manera, and Restrepo 2020) but again that is more likely to be an unintentional consequence of attempts to raise government revenue efficiently, rather than the direct result of the normative view that we ought to shift the balance between work and leisure in favour of the latter.

However, as AI continues its relentless advance – further transforming the nature of work, further pressuring the balance between work and leisure, and further highlighting the state's influence on our leisure time – then these normative questions will become more pressing. They will demand more of our attention. And it will become much harder to ignore them when making the case for or against any specific policy intervention. The choice between a UBI or a JGS is a practical example of this: it is not possible to make a comprehensive case for either intervention without also appealing to a deeper sense of what a good or meaningful life ought to be, as noted before. And that is why AI and other ETs pose a new challenge to the practical feasibility of liberal neutrality: they will not only force us to violate strong neutrality, as many existing policy problems do today, but to violate weak neutrality as well.

This final section is a challenge to most contemporary liberal political philosophers. They have tended to assume that the state does not need to engage with normative questions about what it means to live a good or meaningful life. But new technologies pose a threat to this cornerstone of their tradition. In turn, this section is also a challenge to economists and policymakers. They have tended to assume these normative questions were out of their research remit as well, thinking of themselves as 'engineers' engaging with technical problems, not 'ethicists' engaging with moral questions (Sen 1987). But, in the age of AI, they will also be forced out of necessity to engage with these normative questions – as some have already begun to do.

To conclude, the relationship between work and meaning ought to matter a great deal for economists and policymakers concerned with the impact of technology on work. It is important for predicting traditional labour market outcomes of interest and for understanding the broader effect of AI and other ETs on work. It matters when designing the sorts of bold policy interventions that increasingly feature in public debate and expert analysis. And it raises broader philosophical questions about whether it is possible for the state to remain neutral on the question of what it means to live a good or meaningful life. Yet despite this importance, as noted, the relationship remains underexplored. This paper is a small step towards remedying that.

References

Acemolgu, Daron. 2019a. Where Do Good Jobs Come From?" *Project Syndicate*. April 26, 2019. https://www.project-syndicate.org/commentary/automation-vs-job-creation-by-daron-acemoglu-2019-04

Acemolgu, Daron. 2019b. *It's Good Jobs, Stupid*. Economics for Inclusive Prosperity Research Brief. https://econfip.org/wp-content/uploads/2019/06/Its-Good-Jobs-Stupid.pdf

Acemoglu, Daron. 2021. "AI's Future Doesn't Have To Be Dystopian." *Boston Review,* May 20, 2021. *https://www.bostonreview.net/forum/ais-future-doesnt-have-to-be-dystopian/*

Acemoglu, Daron, and David Autor. 2011. "Skills, Tasks and Technologies: Implications for Employment and Earnings." In *Handbook of Labor Economics*, Vol. 4B, edited by Orley Ashenfelter and David Card, 1043–1171. Amsterdam: Elsevier, 2011.

Acemoglu, Daron, and Pascual Restrepo. 2018a. "Modelling Automation." *AEA Papers and Proceedings* 108: 48–53.

Acemoglu, Daron, and Pascual Restrepo. 2018b. "The Race Between Man and Machine: Implications of Technology for Growth, Factor Shares, and Employment." *American Economic Review* 108, no. 6: 1488–1542.

Acemoglu, Daron, and Pascual Restrepo. 2018c. "Artificial Intelligence, Automation, and Work." In *The Economics of Artificial Intelligence: An Agenda*, edited by A. Agrawal, J. Gans, & A. Goldfarb. Chicago: University of Chicago Press, 2018.

Acemoglu, Daron, Anrea Manera, and Pascual Restrepo. 2020. "Does the US Tax Code Favour Automation?" *Brookings Papers on Economic Activity,* Spring 2020.

Acemoglu, Daron, David Autor, Jonathan Hazell, and Pascual Restrepo. 2021. "AI and Jobs: Evidence from Online Vacancies." NBER Working Paper No. 28257. https://www.nber.org/papers/w28257

Aghion, Philippe, Benjamin Jones, and Charles Jones. 2019. "Artificial Intelligence and Economic Growth." In *The Economics of Artificial Intelligence: An Agenda*, edited by A. Agrawal, J. Gans, & A. Goldfarb. Chicago: University of Chicago Press, 2018.

Akerlof, George. 1982. "Labor contracts as partial gift exchange." *The Quarterly Journal of Economics* 97, no. 4: 543-69.

Akerlof, George and Janet Yellen. 1990. "The fair-wage effort hypothesis and unemployment." *The Quarterly Journal of Economics* 105, no. 2: 255-83.

Arendt, Hannah. 1998. *The Human Condition*. London: University of Chicago Press, 1998.

Arneson, Richard. 1987. "Meaningful Work and Market Socialism." *Ethics* 97, no. 3: 517-545.

Arnold, Samuel. 2012. "The Difference Principle at Work." *The Journal of Political Philosophy* 20, no. 1: 94-118.

Autor, David. 2015. "Why Are There Still So Many Jobs? The History and Future of Workplace Automation." *Journal of Economic Perspectives* 29, no. 3:3-30.

Autor, David. 2019. "Work of the Past, Work of the Future". *AEA Papers and Proceedings.* 109: 1-32.

Autor, David, David Mindell, and Elisabeth Reynolds. 2019. "The Work of the Future: Shaping Technology and Institutions." *MIT Work of the Future.* November 1, 2019. https://workofthefuture.mit.edu/research-post/the-work-of-the-future-shaping-technology-and-institutions/

Blundell, Richard, Robert Joyce, Agnes Norris Keiller, and James P. Ziliak. 2018. "Income Inequality and the Labour Market in Britain and the US." *Journal of Public Economics* 162: 48–62.

Boos, Florence, and William Boos. 1986. "The Utopian Communism of William Morris." *History of Political Thought* 7, no. 3:489-510.

Cassar, Lea and Stephan Meier. 2018. "Nonmonetary Incentives and the Implications of Work as a Source of Meaning." *Journal of Economic Perspectives* 32, no. 3: 215-238.

Chater, Nick, and George Loewenstein. 2016. "The Under-Appreciated Drive for Sense-Making." *Journal of Economic Behavior & Organization* 126, Part B: 137–54.

Clark, Andrew. 2018. "Four Decades of the Economics of Happiness: Where Next?" *The Review of Income and Wealth* 64: 245-269.

Cohen, Joshua. 2020. "Good Jobs". MIT Research Brief, October 29.

Dawson, Hannah, and Elizaveta Fouksman. 2020, "Labour, laziness and distribution: work imaginaries among the South African unemployment." *Africa* 90, no. 2: 229–51.

Dawson, Hannah. 2022. "Living, not just surviving: The politics of refusing low-wage jobs in urban South Africa." *Economy and Society* 51, no. 3: 375-397.

Delfanti, Alessandro, and Bronwyn Frey. 2021. "Humanly extended automation or the future of work seen through Amazon patents." *Science, Technology, & Human Values* 46, no. 3: 655-682.

Dolan, Paul, Tessa Peasgood, and Mathew White. 2008. "Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being." *Journal of Economic Psychology* 29, no. 1: 94-122.

Dustmann, Christian, Johannes Ludsteck, and Uta Schönberg. 2009. "Revisiting the German Wage Structure." *Quarterly Journal of Economics* 124, no. 2: 843–81.

Elster, Jon. 1985. *Making Sense of Marx*. Cambridge: CUP, 1985.

Elster, Jon. 1986. "Self-Realisation in Work & Politics: the Marxist Conception of the Good Life." *Philosophy & Social Policy* 3, no. 2: 99-100.

Fouksman, Elizaveta. 2020. "The moral economy of work: Demanding jobs and deserving money in South Africa." *Economy and Society* 49, no. 2: 287-311.

Frey, Carl, and Michael Osborne. 2017. "The Future of Employment: How Susceptible Are Jobs to Computerisation?" *Technological Forecasting and Social Change* 114: 254–80.

Frey, Bruno, and Alois Stutzer. 2002. "What Can Economists Learn from Happiness Research?" *The Journal of Economic Literature* 40, no. 2: 402-435.

Graeber, David. 2013. "On the Phenomenon of Bullshit Jobs: A Work Rant." *Strike! Magazine.* Issue 3, August 2013. https://www.strike.coop/bullshit-jobs/

Graeber, David. 2018. *Bullshit Jobs: A Theory.* London: Allen Lane, 2018.

Gray, Mary, and Siddharth Suri. 2019. *Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass.* Harper Business.

Hasan, Rafeeq. 2015. "Rawls on Meaningful Work and Freedom." *Social Theory and Practice* 41, no. 3: 477-504.

Hsieh, N. 2008. "Survey Article: Justice in Production." *Journal of Political Philosophy* 16: 72-100.

Hsieh, N. 2009. "Justice at work: arguing for property-owning democracy." *Journal of Social Philosophy* 40, no. 3 (2009): 397-411.

Jahoda, Marie, Paul Lazarsfeld, and Hans Zeisel. 2009. *Marienthal: The Sociography of an Unemployed Community*, 4th printing. Piscataway, NJ: Transaction Publishers.

Karlsson, Niklas, George Loewenstein, and Jane McCafferty. 2004. "The Economics of Meaning." *Nordic Journal of Political Economy* 30: 61–75.

Klinova, Katya, and Anton Korinek. 2021. "AI and Shared Prosperity." In *Proceedings of the 2021 AAAI/ACM Conference on AI, Ethics, and Society*, 645–51. AIES '21. New York, NY, USA: Association for Computing Machinery. https://doi.org/10.1145/3461702.3462619.

Korinek, Anton and Joseph Stiglitz. 2020. "Steering Technological Progress." Working Paper. https://drive.google.com/file/d/1iuYuDE_oIsF3kEnfquaEh-5Cwa1ItS3e/view

Kymlicka, Will. 1989. "Liberal Individualism and Liberal Neutrality." *Ethics* 99, no. 4:883-905.

Layard, R., A. E. Clark, and C. Senik. 2012. "The Causes of Happiness and Misery." In *World Happiness Report 2012*, edited by J. Helliwell, R. Layard, and J. Sachs, 58–89, Columbia Earth Institute, New York. https://www.earth.columbia.edu/sitefiles/file/Sachs%20Writing/2012/World%20Happiness%20Report.pdf

Lazaer, Edward. 2018. "Compensation and Incentives in the Workplace." *Journal of Economic Perspectives* 32, no. 3: 195-214.

Loewenstein, George. 1999. "Because It Is There: The Challenge of Mountaineering for Utility Theory." *Kyklos* 52, no. 3 (1999): 315–43.

Markowits, Daniel. 2019. *The Meritocracy Trap: How America's Foundational Myth Feeds Inequality, Dismantles the Middle Class, and Devours the Elite.* Penguin, 2019.

Marshall, Alfred. 1890. *Principles of Economics,* 8th ed. London: Macmillan and Co., Ltd, 1920.

Marx, Karl. 1994. *Selected Writings,* ed. Lawrence Simon. Indianapolis: Hackett.

Matheson, Rob. 2019. "MIT AI conference aims to prepare workers for the jobs of the future." *MIT News,* November 22, 2019. https://www.csail.mit.edu/news/mit-ai-conference-aims-prepare-workers-jobs-future

Moll, Benjamin, Rachel Lukasz, and Pascual Restrepo. 2021. "Uneven Growth: Automation's Impact on Income and Wealth Inequality." NBER Working Paper No. 28440. https://www.nber.org/papers/w28440

Monteith, William, Dora-Olivia Vicol, and Philippa Williams. 2021. "Introduction: Work Beyond the Wage." In *Beyond the Wage: Ordinary Work in Diverse Economies*, edited by William Monteith, Dora-Olivia Vicol, and Philippa Williams, 1-20. Bristol University Press, 2021.

Moriarty, Jeffrey. 2009. "Rawls, Self-Respect, and the Opportunity for Meaningful Work." *Social Theory and Practice* 35, no. 3: 441-459.

Morris, William. 1886. *Useful Work and Useless Toil.* London: Social League Office.

Muirhead, Russell. 2007. *Just Work.* Massachusetts: Harvard University Press, 2007.

Nikolova, Milena, and Femke Cnossen. 2020. "What Makes Work Meaningful and Why Economists Should Care about It." *Labour Economics* 65 (August): 101847. https://doi.org/10.1016/j.labeco.2020.101847.

Nozick, Robert. 1974. *Anarchy, State, and Utopia.* New York: Basic Books.

O'Sullivan, Michelle, Jonathan Lavelle, Juliet McMahon, Lorraine Ryan, Caroline Murphy, Thomas Turner, and Patrick Gunnigle. 2019. *Zero Hours and On-call Work in Anglo-Saxon Countries.* Springer.

Rawls, John. 1971. *A Theory of Justice.* MA: Harvard University Press.

Rawls, John. 2015. *Political Liberalism (Expanded Edition)*. New York: Columbia University Press.

Raz, Joseph. 1986. *The Morality of Freedom.* Oxford: Oxford University Press.

Roessler, Beate. 2012. "Meaningful Work: Arguments from Autonomy." *The Journal of Political Philosophy* 20, no. 1: 71-93.

Rosso, Brent D., Kathryn H. Dekas, and Amy Wrzesniewski. 2010. "On the Meaning of Work: A Theoretical Integration and Review." *Research in Organizational Behavior* 30 (January): 91–127.

Sambasivan, Nithya, and Rajesh Veeraraghavan. 2022. "The Deskilling of Domain Expertise in AI Development." In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems*. CHI '22. New York, NY, USA: Association for Computing Machinery. https://doi.org/10.1145/3491102.3517578.

Sandel, Michael J. 2020. *The Tyranny of Merit: What's Become of the Common Good?* First edition. New York: Farrar, Straus and Giroux.

Scherer, Matt and Lydia X.Z. Brown. 2021. "Warning: Bossware May Be Hazardous to Your Health." Center for Democracy & Technology, *Privacy and Data*. July 24, 2021. https://cdt.org/insights/report-warning-bossware-may-be-hazardous-to-your-health/

Schwartz, Adina. 1982. "Meaningful Work." *Ethics* 92, no. 4: 634-646.

Sen, Amartya. 1987. *On Ethics and Economics.* Oxford: Blackwell Publishing.

Shiller, Robert. 2019a. "Jobs are more than a source of income." Uploaded on March 14, 2019. YouTube video, 2:00 min. CEPR & VideoVox Economics. https://www.youtube.com/watch?v=vXRTpAxrywo

Shiller, Robert. 2019b. "Narratives about technology-induced job degregation then and now." Cowles Foundation Discussion Paper No. 2168. https://cowles.yale.edu/sites/default/files/files/pub/d21/d2168.pdf

Simon, Lawrence. 1994. ed. *Karl Marx: Selected Writings.* Indianapolis: Hackett.

Silver, Laura, Patrick Van Kessel, Christine Huang, Laura Clancy, and Sneha Gubbala. 2021. "Finding meaning in what one does." Pew Research Center*, What Makes Life Meaningful? Views From 17 Advanced Economies.* November 18, 2021. https://www.pewresearch.org/global/2021/11/18/finding-meaning-in-what-one-does/

Smith, Adam. 1998. *An Inquiry into the Nature and Causes of the Wealth of Nations,* paperback edn. Oxford: Oxford University Press.

Spencer, David. 2015. "Developing an understanding of meaningful work in economics: the case for a heterodox economics of work." *Cambridge Journal of Economics* 39, no.3:675-688.

Stevenson, Betsey. "Artificial Intelligence, Income, Employment, and Meaning: Betsey Stevenson."
In *The Economics of Artificial Intelligence: An Agenda*, edited by Ajay Agrawal, Joshua
Gans, and Avi Goldfarb. University of Chicago Press, 2019.

Summers, Lawrence. 2015. "The Future of Work." Comments at "The Future of Work" panel hosted
by The Hamilton Project event at the Brookings Institution. February 19, 2015.
http://larrysummers.com/2015/02/23/the-future-of-jobs/

Susskind, Daniel. 2019. "Re-Thinking the Capabilities of Technology in Economics." *Economics
Bulletin* 39, no. 1: 280–88.

Susskind, Daniel. 2020a. *A World Without Work: Technology, Automation, and How to Respond*.
London: Allen Lane.

Susskind, Daniel. 2020b. "A Model of Task Encroachment in the Labour Market." Oxford
University Working Paper. https://www.danielsusskind.com/s/SUSSKIND-Task-
Encroachment-April-2020.pdf.

Susskind, Daniel. 2021. "A World With Less Work." *Boston Review.* May 20, 2021.
https://www.bostonreview.net/forum_response/a-world-with-less-work/

Susskind, Daniel. 2022. "Technological Unemployment." In *Oxford Handbook of AI Governance*
edited by Justin B. Bullock, Yu-Che Chen, Johannes Himmelreich, Valerie M. Hudson,
Anton Korinek, Matthew M. Young, and Baobao Zhang. Oxford University Press, 2022.
(forthcoming.)

Sylvester, Charles. 1999. "The Classical Idea of Leisure: Cultural Ideal or Class Prejudice?", *Leisure
Sciences*, 21: 3-16.

Taylor, Matthew, Grey Marsh, Diane Nicol, and Paul Broadbent. 2017. *Good Work: The Taylor
Review of Modern Working Practices.* July 2017. Department for Business, Energy &
Industrial Strategy. https://www.gov.uk/government/publications/good-work-the-taylor-
review-of-modern-working-practices

Tcherneva, Pavlina. 2020. *The Case for a Job Guarantee.* Polity Press.

Tyson, Laura, and John Zysman. 2022. "Automation, AI & Work." *Daedalus*, Spring 2022.

United Kingdom Department for Business, Energy & Industrial Strategy. 2018. *Good Work Plan.*
December 17, 2018. https://www.gov.uk/government/publications/good-work-plan/good-
work-plan.

Van Parijs, Philippe. 2017. *Basic Income: A Radical Proposal for a Free Society and a Sane
Economy*. MA: Harvard University Press.

Wellisz, Chris. 2017. "Late Bloomer." *IMF Finance & Development* 54, no. 4. December 2017.
https://www.imf.org/external/pubs/ft/fandd/2017/12/people.htm

Yeoman, Ruth. 2012. *Meaningful Work and Workplace Democracy.* Ph.D diss., Royal Holloway,
London, 2012.

Yeoman, Ruth. 2014. "Conceptualising Meaningful Work as a Fundamental Human Need." *Journal of Business Ethics* 125, no. 2: 235-251.

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