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Productive Justice in the 'Post-Work Future'³

Justice in production is concerned with ensuring the benefits and burdens of work are distributed in a way reflective of persons' status as moral equals. While a variety of accounts of productive justice have been offered, insufficient attention has been paid to the distribution of work's benefits and burdens in the future. In this paper, after granting for the sake of argument forecasts of widespread future technological unemployment, we consider the implications this has for egalitarian requirements of productive justice. We argue that in relation to all the benefits affiliated with work, other than undertaking social contribution, the technological replacement of work is unproblematic as these benefits could in principle be attained elsewhere. But because social contribution uniquely corresponds to work (when work is understood as more than a paid job), the normative assessment technological unemployment will turn on the value theories of justice give to contributive activity. We then argue that despite technological replacement being plainly beneficial insofar as it relieves persons from the burdens of work, such as dangerous work or drudgery, because the nature of care work makes it less susceptible to technological replacement, egalitarian concern will require the burdens of care work to be shared equally between individuals.

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1. Introduction

It is no less true today than in the past that technological advancement changes the nature and availability of work. From the perspective of workers, some of these contemporary changes might be for the better, while others might be for the worse. For instance, increased computing power has led to it being more feasible for individuals to undertake remote work with its affiliated flexibility. On the other hand, the use of algorithms in organizations often disconnects workers from important details of the work process or can lead to organizational changes making work more precarious (like gig work). Because of the position of work in the economies of today, most people will spend more time working than doing anything else in their life. This means any changes to work's organization, nature, and its availability in society will have significant impacts on how individuals' lives fare overall. The changes brought on the work process by technological advancement, then, are relevant to theories of social justice.

In this paper we focus on the normative issues surrounding one such (predicted) change: the potential of technological advancement to lead to widespread automation and unemployment in the future. This prediction about the ability of technology to bring about a future in which the majority of work (paid and unpaid) is automated, we will call the technological assumption.

Several studies have suggested that approximately half the work currently undertaken in advanced economies could be fully automated in the near-term,⁴ while others predict that it is a real possibility that in a matter of decades automation will be so widespread that most individuals will no longer be able to work for money.⁵ Of course, historical predictions about the effects of technological advancement on the amount of work in society have been notoriously wrong,⁶ and one does not need to look too far to find contemporary skepticism towards the technological assumption.⁷ In reply, what advocates of the technological assumption claim is that the displacement potential of technology is qualitatively different than it was in the past, for two reasons. First, new technologies like artificial intelligence (AI) and machine learning models can replace not just complex physical tasks but complex mental ones too. Second, the rate of change in digital technologies increases exponentially.⁸

⁴ Frey and Osborne, "The Future of Employment"; Manyika et al., A Future that Works.

⁵ Chace, The Economic Singularity; Ford, Rise of the Robots.

⁶ For some examples, see Autor, "Why are there still so many jobs?", 3-4.

⁷ Denning, "The 'Jobless Future' is a Myth"; Atkinson and Wu, "False Alarmism"; Spencer, "Fear and Hope"; Benanav, "A World Without Work".

 $^{^8}$ Ernst, Merola, and Samaan, "Economics of Artificial Intelligence," 3; Danaher, Automation and Utopia, 30–48.

Some examples might help give us a sense of this displacement potential: trading algorithms and AI decision-support tools have replaced much of the work in the finance sector; machine learning outputs often give better medical diagnoses than human doctors; smart robots are beginning to carry out surgeries independently from human doctors; AI now provides reliable legal advice on the likelihood of winning court cases; many news articles are now completely written by algorithms; and many companies have fully automated their customer service through AI chat bots. Even persons in creative occupations, like artists and poets, are vulnerable to replacement by technological automation, given the recent (and forecasted future) developments in deep learning models (as seen in tools like DALL-E and ChatGPT). We will refer to a world in which most work is automated as a 'post-work future', while recognising that not all work can be automated (more on that later).

This paper's exploration of the normative issues related to a post-work future is not motivated by accepting the technological assumption as inevitably true or guaranteed, but by acknowledging that the prediction is a non-zero possibility; we are granting the technological assumption for the sake of argument. If the future were a world where technological advancement has meant most people no longer work, would this be a good or bad thing from the standpoint of justice? Some think such a world would be a kind of utopia, 10 but is that right? It is important to get clear on this question, as it will be normatively action-guiding in the present. Since the technological assumption is predicted to materialise in the medium term, a significant number of those affected by it have not even been born yet. If a post-work future would be an unqualified good thing, then perhaps efforts should be made to maximize technological development in order to benefit future people. Or if such a future would lead to the occlusion of certain benefits for future people, then perhaps it gives us reason to put the brakes on the technological advancement, or to at least explore alternative means through which these benefits could be attained outside of work.

While the topic of a post-work future (or at least job displacement) receives significant attention in public discourse and from social scientists and technology ethicists, it receives comparatively little focus from political theorists and political philosophers, and we hope to begin to rectify that here. The prospect of a post-work future is a topic of concern to economic justice because it relates to the distribution of work's benefits and burdens and how society's productive activity is organized and carried out. It is also of concern to intergenerational justice because it is a question of what social institutions the current generation either leave or bring about for

⁹ Susskind and Susskind, The Future of the Professions, 46-100; Ford, "The Rise of Robots," 35–38; Danaher, Automation and Utopia, 7–20.

¹⁰ Bastani, Fully Automated Luxury Communism; Danaher, Automation and Utopia.

future generations, and normative assessment of a post-work future will depend on whether the benefits and burdens of work for individuals in the present will remain benefits and burdens for individuals in the future.

The paper proceeds as follows. We begin in Section II by defining what we should take 'work' and a 'post-work future' to mean. In Sections III and IV we then examine five things that are often taken to be benefits of work and argue that four of them are not inherent in work, but rather contingent on it, so could still be realised in the post-work future. The fifth benefit we take to be inherent in work but argue that there are reasons to think it might no longer be normatively significant in a post-work world, so it too will not necessarily be a reason to prevent the post-work world from materialising. In Section V, starting from the fact that even in the post-work future some work would remain (viz., affective care work), we argue that this remaining work creates concerns central to productive justice. If the post-work world is to be an egalitarian one, then technological displacement must be accompanied by positive efforts to ensure the remaining labour is distributed fairly.

2. Work and the 'Post-Work World'

What do we mean by 'work,' and hence what do we mean by a post-work world brought about by technological advancement?

By work we mean more than a paid job, and we follow several accounts in understanding work as activity that meets others' needs insofar as it generates goods or services that are useful or necessary for others being able to carry out their (reasonable) plan of life. 11 Seeing work in this way, as social contribution that is useful to others, does a good job capturing the sort of activities commonly regarded as 'work'. The account captures market-facing work (such as the paid work undertaken within employment relations and by independent market actors) due to the information function of the price mechanism – if the activity were not useful to others (or at least expected to be useful to others), then nobody would pay for it. 12 The account also

¹¹ Van Parijs, Real Freedom for All, 138; Tilly and Tilly, Work Under Capitalism, 22; Cholbi, "The Duty to Work", 1122; Geuss, A Philosopher Looks at Work, 18.

Resultantly, throughout the paper we characterize work as being 'useful' and as meeting needs interchangeably. Equating meeting needs with useful activity in this way makes it broader than an account of basic needs. You obviously do not need the ice cream you buy in order to survive, but it is useful to you because it helps you carry out whatever aims and plans you have chosen to prioritize (you might use it to relax after a long day's work or need to take it to a friend's dinner party, and so on...). We think defining work in terms of needs in this way is attractive because positive social contributions through work surely capture more than just those things persons strictly need to survive (the ice cream maker is making a social contribution). But at the same time, by remaining objective, it stops work simply becoming activity that meets any and all subjective wants, no matter how unreasonable. We thank an external reviewer for asking us to elaborate on this point.

¹² Carens, Equality, Moral Incentives, and the Market, 195; Van Parijs, Real Freedom for All, 138; Brown,

captures non-market-facing work activities, such as unpaid domestic and care work, and volunteer work, because each of these activities produces goods and services that are necessary and useful to others. These latter activities – which are disproportionately undertaken by members of disadvantaged groups – are still work despite their going unpaid (because society both racializes certain work and devalues what is regarded as 'women's work'¹³ or because the market fails to produce public goods, or whatever). It is social contribution that explains why we want to call domestic labour and caring 'work', but not reading or going for a jog. This account of work as activity related to what other persons need, also captures how several philosophers treat work as an inherently necessary activity, and that this is what separates work from leisure given the latter has value only for the person or people doing it.¹⁴

With this understanding of work in mind, we are characterizing the post-work society predicted by the technological assumption as not just a society where robots and AI have come in and replaced paid jobs. Rather, we are understanding the postwork society as a society where technology has displaced the majority of both paid *and* unpaid work. It is a society that no longer requires most people to engage in *any* activities that are useful or necessary to others (with some exceptions we will detail later). It is understandable that most of the public concerns about technological displacement relate to paid jobs, given most persons' means to a livelihood is the income they receive through work. However, because there are also nonpecuniary benefits to work, it is the scenario where technology has displaced the complete set of work activities that needs normative assessment. A post-work society of this kind is clearly not right around the corner. Resultantly, our focus is on what justice might say about the prospect of technological displacement in the medium to long-term, and our paper is silent on normative issues surrounding the impact of technology on work processes in the present and near-term future. ¹⁵

3. Four Benefits of Work that Won't be Missed

We identify five distinct benefits that political theorists and philosophers commonly associate with the work activity: income, self-development and excellence, community, meaningfulness, and social contribution. We do not take these five benefits as an exhaustive and complete list of work's benefits, ¹⁶ but they are the benefits most

[&]quot;The Meaning of Markets," 232.

¹³ Daniels, "Invisible Work," 404-405.

¹⁴ Rose, Free Time, 37; Clark, "Good Work," 62-63; Cholbi, "Philosophical Approaches to Work and Labor".

 $^{^{\}rm 15}$ Vredenburgh, "The Right to Explanation"; Bankins and Formosa, "The Ethical Implications of Artificial Intelligence".

¹⁶ For example, see Arneson, "Meaningful Work and Market Socialism," 528-529; Arneson, "Is Work

often put forward as normatively relevant or of concern to theories of social justice. In characterizing the benefits (and burdens) of work we aim to remain neutral in relation to three major factors that differentiate alternative accounts of justice: the appropriate metric of justice (resources, opportunities, capabilities, welfare, etc.), the distributive rule of justice (equality, priority, sufficiency, etc.), and the relationship between justice and the good (perfectionism, nonperfectionism). We do this to delineate what is normatively relevant about the technological assumption to accounts of economic justice generally.

(i) Income

Perhaps the most immediately obvious benefit of (much) work is that it serves as a means to an income. Work has exchange value insofar as individuals can sell their labour to an employer, or their work products or services to buyers in the market. Money received through work is clearly relevant to justice-motivated concerns with individuals' material prospects and income inequality. Rawls' difference principle, to just take one example, measures how persons fare in terms of the income they receive through work. ¹⁷ Pecuniary benefits from work are of course a prototypical case of an extrinsic benefit – the benefit is only what results from work and has nothing to do with features of the work process itself. ¹⁸

(ii) Excellence

But there are also benefits to work that are internal to the work process. The first of these is how undertaking work is connected to individuals' self-development and the attainment of excellence. It is often through work that persons can best accomplish tasks that depend upon the deployment of their developed skills and talents (be they physical, mental, or emotional). A factor that makes work a natural place for self-development is the limits to what can be achieved in a single life (a person can't be all at once a top-tier athlete, a master writer, and a talented therapist). There is then something of a social division of labour between the particular skills and achievements individuals choose or have the capacity to develop.¹⁹

Self-development and the attainment of excellence in work is taken as a justice-relevant benefit for a variety of reasons. The most familiar one might be accounts that give priority to self-realization and skill deployment in work as part of a view of human flourishing, be this in terms of an Aristotelian account of human capacities, ²⁰

Special?" 1132.

¹⁷ Rawls, A Theory of Justice, 78, 96-98; Rawls, Justice as Fairness, 63.

¹⁸ See Cholbi, "Philosophical Approaches to Work and Labor".

¹⁹ Rawls, A Theory of Justice, 23-525.

²⁰ Clark, "Good Work".

or a Marxian account of persons being connected to their species-being through skilled work.²¹ But accounts need not be perfectionist to see self-development and excellence in work as justice-relevant, given the "internal resources" of intelligence and virtuosity cultivated through skilled work can be regarded in the interests of persons generally since they are useful in other realms of life.²² Furthermore, self-development might be taken as a benefit of work because it is connected to increases in individual welfare and enjoyment, and acts as a major motivating factor for individuals choosing some types of work over others.²³ Regardless of the reasons that self-development is taken to be justice-relevant, the institutional upshot for accounts of economic justice is to prioritize work processes that have a degree of complexity and which give scope for agency. These work processes are antithetical to work that is drudgery, such as when there is a detailed horizontal division of labour resulting from work being organized according to principles of scientific management.

(iii) Community

The work process is also a common way for individuals to attain the good of community. This is especially so for individuals who work not as independent market actors but as employees of organizations, where interactions with colleagues and shared involvement in a collective project that is valued can foster relations of sociability and cooperation.²⁴ Examples might be mechanics in an auto shop each deploying their own expertise to fix a tricky issue, doctors and psychologists working together to help a sick patient, a collective of artists expressing beauty each in their own way, and even philosophers working together to advance knowledge. Insofar as workers value the work-related end of their activity (the mechanics value maintaining cars for its own sake, and so on) then workplaces can be forms of community. Just like self-realization and excellence, community in and through work can be valued for a variety of reasons. Community at work can be taken as important because it provides workers with a context in which their skills can receive recognition and appraisal, and hence be taken as worthwhile.²⁵ But it can also be seen as valuable in more 'political' terms, where relations of community and solidarity in workplaces are valued because they foster a sense of the common good, the latter which forms part of the democratic virtues that maintain political stability.²⁶ The concern with

²¹ Attfield, "Work and the Human Essence"; Elster, "Self-Realization in Work and Politics".

²² Arnold, "The Difference Principle at Work".

²³ Gheaus and Herzog, "The Goods of Work," 75 and the references there.

²⁴ Estlund, Working Together, 3-7; Gheaus and Herzog, "The Goods of Work," 76.

²⁵ Doppelt, "Rawls' System of Justice", 275-276.

²⁶ O'Neill, "Three Rawlsian Routes Towards Economic Democracy", 42-48.

community in work most commonly takes aim at hierarchical relations. Anca Gheaus and Lisa Herzog for instance, while acknowledging some forms of organizational hierarchy are surely legitimate, argue that from the standpoint of community, workplace democracy and worker cooperatives are the ideal form of workplace organization. 27

(iv) Meaningfulness

Meaningfulness or 'meaningful work' is another commonly identified benefit of work. While some writers regard meaningful work just as work that enables the other benefits of work to be attained²⁸, meaningfulness through work is often taken as a distinct kind of benefit. Having confidence that one's work is significant, purposeful and extends 'beyond the self' in some way is one common descriptor of meaningful work²⁹, while other writers understand meaningful work as work that gives the worker scope to exercise autonomy and agency.³⁰ Many accounts take meaningful work to be important as part of a larger claim about the ethical significance of individuals having a secure sense of meaning in life more generally³¹, while other writers characterize meaningful work in less philosophically demanding terms and see it as valuable merely out of its connection to persons' political status and their sense of self-worth.³² For these latter writers, the 'meaningful' in meaningful work is understood not in terms of fundamental meaningfulness or meaning in life, but instead only in terms of what might make work as a distinct activity meaningful.³³ Regardless of the exact way meaningful work is characterized, institutional implications for accounts of justice that value meaningful work include guarantees of complex and interesting work, as well as work that gives workers a democratic say in managerial decisions.34

Why will these four benefits not be missed in a post-work world? If income, self-development and excellence, community, and meaningfulness (and the values with

 $^{^{27}}$ Gheaus and Herzog, "The Goods of Work," 77-78; Schwarzenbach, "Rawls and Ownership", 149–150, 162–163.

²⁸ E.g., Gheaus and Herzog, "The Goods of Work", 71.

²⁹ Fried and Ferris, "The Validity of the Job Characteristics Model"; Grant, "Relational Job Design"; Lips-Wiersma and Morris, "Discriminating Between 'Meaningful Work' and the Management of Meaning".

³⁰ Schwartz, "Meaningful Work"; Roessler, "Meaningful Work: Arguments from Autonomy".

³¹ Yeoman, "Conceptualising Meaningful Work as a Fundamental Human Need"; Veltman, *Meaningful Work*: Tyssedal, "Good Work".

³² Moriarty, "Rawls, Self-Respect, and the Opportunity for Meaningful Work"; Althorpe, "Meaningful Work, Nonperfectionism and Reciprocity".

³³ See Althorpe, "What is Meaningful Work?", 587–588.

³⁴ Esheté, "Contractarianism and the Scope of Justice", 43; Schwartz, "Meaningful Work," 639–642; Hasan, "Rawls on Meaningful Work and Freedom," 481-482; Breen, "Meaningful Work and Freedom", 59–61.

which they are affiliated) are all relevant to concerns of social justice, won't a world where these benefits are no longer attainable through work be a bad thing? To see why not, we need to recognize that these benefits are only contingently connected to work - there is no inherent connection. This is obviously true of income but it is also true of the nonpecuniary benefits that are internal to the work process, and is something of which several accounts of economic justice are aware—these benefits are only benefits of work because we spend so much of our time working. Each of them can, at least in principle, be realised outside of work. As put by Gheaus and Herzog, "[w]e would have less, if any, reason, to be concerned with the distribution of the nonmonetary goods of work if we were to reform employment such that people spent much less time in paid work and had more time flexibility". 35 Clearly, the post-work future envisaged by the technological assumption is one such reform, and so long as technological advancement occurs alongside some kind of policy providing individuals a guaranteed revenue stream (one common example being a universal basic income funded by an automation tax³⁶), the benefits outlined above would still be available to persons living in a post-work world.

First of all, as a basic income shows, income can obviously be provided in ways other than compensation for work. But what such a post-work world also does is open up opportunities to engage in and derive benefits from non-work pursuits. Without work sapping much of persons' energy and effort, they could devote their (much increased) leisure time to personal projects, hobbies, and interests, all which could involve significant skill development and the deployment of talents. While such talents would no longer be as closely tied to social necessity, such activities would still enable the values affiliated with self-development and excellence to be realized. Just to take one example, even if in the post-work world sport entertainment was provided by robots, what is relevant to accounts that give value to excellence and self-development it is the fact that people will still be able to maximize their potential and develop their capacities as an athlete. Similarly, while community with colleagues will no longer be an option in a post-work world, community will be possible with friends, or with fellow hobby enthusiasts, or in religious organizations, and so on, given these are also avenues for persons to engage in shared activity relating to collectively valued ends. Finally, at least when meaningful work is understood in terms of meaning in life generally, this will not be unique to work because work is not the only sphere through which a person's activity can extend 'beyond the self' in the relevant sense - this can just as easily occur in things like democratic and political participation, religious beliefs, art, literature, or even

³⁵ Gheaus and Herzog, "The Goods of Work," 80.

³⁶ Bruun and Duka, "Artificial Intelligence, Jobs and the Future of Work".

philosophical reflection. If anything, we might think that meaningfulness in these realms of life is going to be more important to individuals than any meaningfulness derived from work, given non-work activities are often more closely tied to people's personal conceptions of the good or beliefs about fundamental value than any work activity can be (similar comments might apply to the prospects of community in non-work activities and the subsequent recognition and appraisal received). It is true however that if the 'meaningful' in meaningful work is understood only in terms of what might make work as a distinct activity meaningful (and not in terms of meaning in life), then it won't be available in a post-work future. But as far as we can ascertain, when meaningful work is understood in this way then any benefit it is taken to have relies on it extending the work process 'beyond the self' by giving workers an opportunity to use their developed skills to positively contribute to others.³⁷ This means that concerns about the availability of the benefit of meaningful work so understood fold into concerns about opportunities for social contribution, which we consider in the next section.

Therefore, at least in relation to these four benefits of work, the technological displacement of work will not be a problem for future people (so long as it occurs alongside the provision of something like a universal basic income). Indeed, we might even have reason to think that opening up the range of activities through which these benefits could be attained is something justice requires, given that having them available only through the work activity (when an alternative possibility is available) would be privileging one kind of conception of the good and way of life over others.³⁸ This is perhaps especially so for theories of justice that have a nonperfectionist bent, but even if the benefits were taken as valuable in perfectionist terms it seems at odds with such an approach to limit the ways through which the good or human flourishing can be acquired. Maximizing the opportunities future people have for excellence, say, requires opportunities for excellence are available across a wide range of activities, not just work.³⁹

³⁷ Just as one example, take for instance the way Elizabeth Anderson characterizes meaningful work as: "work that affords a means for a person to exercise their agency and skill in the course of helping other people" ("The Struggle for Meaningful Work," 75). See also Hasan, "Rawls on Meaningful Work and Freedom." 503–504.

³⁸ Birnbaum, "Should Surfers be Ostracized?", 400-403; Weeks, *The Problem with Work*, 97–103; Jenkins, "Everybody's Gotta Do Something"; Beverinotti, "Beyond Work: Life, Death, and Reproduction and the Postwork Society", 264–266.

³⁹ E.g., see Wall, "Perfectionist Justice and Rawlsian Legitimacy," 423-424.

4. One Benefit of Work that Might be Missed

(v) Social Contribution

The final benefit of work that is often mentioned is social contribution. Different accounts of labour locate the value of social contribution in different places. Some accounts regard social contribution as objectively valuable, either for perfectionist or nonperfectionist reasons. Examples of the former are accounts that prioritize the value of unalienated labour and how this is tied to work that not only 'completes' the worker, but which also 'completes' and is appreciated by its beneficiary⁴⁰, and those that give positive value to pro-sociality. An example of the latter might be when social contribution is taken as valuable because it relates to persons' political status as members of society characterized as a system of social cooperation. Different accounts, meanwhile, take social contribution as valuable in terms of its relation to individuals' subjective attitudes, where the emphasis is put on the idea that it is only through work individuals are able meet their desire to contribute to and help others. As

Regardless of which account you accept, unlike the previous four benefits of work the benefits affiliated with social contribution are not merely contingent on work but are inextricably linked to the work activity. This naturally results from what we argued above was the most convincing description of work – activity that is useful or necessary for others to carry out their plan of life. Therefore, while just like with the benefits considered in the previous section, a post-work society will bring about a scenario where this benefit is no longer attainable through work (because there isn't much work), since social contribution is inherent to the work process and not merely contingent to it, this means that it will not be available through other kinds of activities like the other benefits will be.

Before considering the normative implications of this, we will first respond to the rejoinder that even if social contribution is inherent to work, in a post-work world there will still be sufficient opportunity to undertake activities that are useful to others, and so the benefits affiliated with social contribution can be retained. One way to characterize the idea could be to say that while individuals might not be able to contribute to others through working, they will be able to contribute to others by playing games (in Bernard Suits' sense, where games are "the voluntary attempt to overcome unnecessary obstacles" 1. Indeed, several writers think it likely the play-

⁴⁰ Brudney, "Two Marxian Themes"; Kandiyali, "The Importance of Others",

⁴¹ Tyssedal, "Good Work".

⁴² Althorpe, "Meaningful Work, Nonperfectionism, and Reciprocity".

⁴³Gheaus and Herzog, "The Goods of Work," 75.

⁴⁴ Suits, The Grasshopper, 41.

ing of games would become a dominant activity in a post-work world, ⁴⁵ and the thought might go that because such games will bring pleasure and provide an end to ourselves and others, they will contribute in that way. For example, we might invite a depressed friend out for a round of golf to cheer him up, or we might even play with them the game of 'housebuilding' or 'taxi driving.'

But this line of thought misunderstands the nature of social contribution tied to the work activity. Work as a form of social contribution is not just about doing all the things that can be useful to our immediate social circles (friends and family with whom we would play games), but about doing the things that are necessarily useful to people with whom we are unassociated. This is true even for domestic and care work because raising a child (for example) is useful not just to the child, but to society at large. Playing golf with your friend and raising a child might both be useful to others, but only the latter is a form of social reproduction and contribution (society depends upon the rearing in a way it doesn't depend upon the golf game between friends). Given the scenario of technological displacement under consideration here, the game of 'housebuilding' is no more necessary from a social point of view than playing golf. If someone really needed a roof over their heads, then they would get the robots to make them one.

Given then that the post-work world will deprive us of the benefit of social contribution, does that mean that any accounts of social justice that give normative weight to the act of social contribution have reason to object to the technological displacement of work? It appears that they might, and that this derives from an obligation to prevent future people being deprived of a justice-relevant benefit. Such an outcome would after all be based on the same normative considerations (e.g., the value of unalienated labour, or the way social contribution is tied up with selfworth) that underpin the way such accounts criticize how contemporary relations of work fall short of what justice requires.

But while our aim in this paper is not to interrogate the merits of this or that account of economic justice, we do think the technological assumption might give us reason to be skeptical of using the premises on which these accounts base the normative significance of social contribution to criticize the prospects of a postwork future. After all, the attractiveness of these claims about the benefit of social contribution must at some point fall back on claims about the inherent interdependence between persons (as otherwise the value given to social contribution seems arbitrary). Marxian accounts, for instance, characterize the importance of unalienated labour that completes others and situates the worker closely to social contribu-

⁴⁵ Suits, *The Grasshopper*, ch. 15; Black, *The Abolition of Work and Other Essays*; Danaher, "In Defense of the Post-Work Future".

⁴⁶ Althorpe, "What is Meaningful Work?".

tion in terms of persons producing in a "human manner" that "objectif[ies] the human essence". ⁴⁷ And while connecting social contribution to the human essence might be plausible in the here and now (we are making no judgement about that), it seems such a connection would be significantly undermined in a future world where robots are able to do the majority of the productive work. And if interdependence (through undertaking activities useful to others) is no longer inherent to the human essence, Marxian-style arguments that prioritize the benefit of social contribution appear to lose much of their normative thrust. While some writers bite the bullet here by claiming a future world where robots do the vast majority of the work would no longer be a human society, ⁴⁸ this is just begging the question. These accounts have a burden of proof to show why our human essence couldn't be defined by some other feature.

Similar comments apply to accounts that value social contribution in nonperfectionist terms by connecting social contribution to the characterization of society as a system of cooperation. Such a characterization explains why social contribution is normatively significant insofar as it is connected to persons having a secure sense of self-worth as participating members of society, or persons satisfying their desires to meet others' needs and be useful to others. At least in the present, it may well be reasonable to care about contributing socially since we (accurately) see ourselves as part of a reciprocal system where everyone is required to do their part through work. But in a post-work world where machines will be doing the majority of work, the idea that social contribution will continue to be constitutive of society as a system of cooperation will surely be undermined in the same way as any account of human essence based on social contribution. ⁴⁹ And if social contribution is no longer tied to the features of political society, then there seems no reason to think it ought to be tied to persons' sense of worth or self-respect as members of society, or be connected to desires to contribute that would matter to an account of justice that is focused on the provision of all-purpose means. The ideals we have currently, as producers, or of society as a system of cooperation, might be reasonable and provide justification for individuals in the here and now, but this might not be the case for people in the long term, post-work future.

It is helpful here, we think, to note how many writers criticize the normative weight given to work as problematically ideological. Common forms of this criticism are that beliefs about work's value are just an unhelpful historical carry-over from

 $^{^{47}\,\}mathrm{Marx},$ "On James Mill", 132. See also Brudney, "Two Marxian Themes"; Kandiyali, "The Importance of Others".

⁴⁸ E.g., Deranty, "Post-Work Society as an Oxymoron", 426-427.

 $^{^{49}}$ Of course, society may still cooperate for other beneficial reasons, for example, by all obeying the law in order to maintain safety and security.

pre-industrial society, or result from an updated secularized version of the Protestant worth ethic where persons continue to uncritically prioritize and internalize duties towards work and beliefs about its importance. And the argument goes that insofar as processes such as these explain the continuing importance given to work and social contribution, then such beliefs are unjustified or at best misplaced, and we need to move beyond them. ⁵⁰ As Richard Arneson puts it in discussing the way contemporary society ties social esteem and status to work, this is just a cultural belief that could be changed, and "perhaps an egalitarian norm ought to reject this way of thinking". ⁵¹ What these writers emphasize is that we can surely define ourselves as humans and derive our purpose and self-worth in the spheres of life that exist outside of work and social contribution. ⁵²

We do not raise this line of argument because we think all contemporary valuation of work is necessarily ideological, but because we think it is hard to deny that this criticism has a lot of bite when applied to the scenario of a post-work future. What gets counted as a justice-relevant benefit ought to be sensitive to changing social conditions. And the potential 'transcending' of interdependence through technological development that the post-work future promises is a such a significant change that we need to be very careful that any objection to its development is not in effect imposing a set of values that might be appropriate in one time and place onto individuals who will (or could) live in a very different world.

To sum up the discussion thus far, four benefits of work were found not to be inherent in work itself, but are rather a result of the sheer amount of time individuals currently spend in work. In a post-work future, these benefits would be realisable through other activities undertaken in significantly increased discretionary time. However, because the benefits affiliated with social contribution are inherent to work itself, these could not be generally realised in a post-work future where the majority of work is done by machines. While this might initially appear to be one reason to object to the prospects of a post-work future, we argued that there are good reasons to think the overcoming of the inherent interdependencies the technological assumption claims can be brought about, would result in social contribution becoming significantly less valuable in a post-work world. The consequence of this analysis is that there is likely no reason, from a benefits-of-work point of view, to object to the technological assumption materialising. In the next section, however, we argue that given there is one kind of work (affective care work) that is likely to remain in the post-work future, and because the changes brought about by the tech-

⁵⁰ E.g., Russell, "In Praise of Idleness"; Frayne, *Refusal of Work*. But see generally Muirhead, *Just Work*, 95-113; Deranty, "Post-Work Society as an Oxymoron"fab, 105-111.

⁵¹ Arneson, "Is Work Special?", 1133.

⁵² Weeks, The Problem with Work, 230-233.

nological assumption are unlikely by themselves to undermine norms and expectations around who ought to do this work, there are egalitarian reasons to ensure that the technological displacement of work in the future is accompanied by positive efforts to ensure the labour that remains is distributed fairly.

5. Equality in a Post-Work Future

In order to consider whether the benefits of work commonly identified can be used to object to a post-work future generally, we have so far considered the effects/value of work on people in a noncomparative sense, assuming that the effects of the technological assumption will apply equally. However, a full assessment of the technological assumption from the standpoint of economic justice will need to also take into account that members of different social categories are differently situated to the institution of work. Indeed, the nature of these social categories and how they relate to others are often intimately linked to work. For example, some argue that the reason care work often goes unpaid is because historically it has been done primarily by women and has therefore been undervalued by patriarchal societies. Another example is the theory of racial capitalism that claims social categories of race play a functional role in justifying the unequal consequences of capitalist systems and operate in ways that maintain their stability. The final question we want to interrogate, therefore, is whether the post-work future is likely to disrupt, rely on, or reproduce social orderings that are unjust.

One potential positive of a post-work future is that automation can relieve individuals from undertaking the burdens associated with certain kinds of work – burdens which currently fall disproportionately more on some groups in society over others. For example, what is currently considered dangerous and 'dirty' work is often the easiest to automate. Fishing, mining, working on oil rigs, and construction are just a few examples of jobs in which workers are regularly injured and/or killed. Garbage collection, sewage treatment, and some medical professions like personal support workers are examples of 'dirty' jobs in which workers are exposed to unpleasant smells, sights, or others' bodily fluids and functions. These are obvious burdens to the work process, burdens which are not merely the absence of the goods outlined earlier. If these dangerous and dirty jobs are automated, not only would it be a good thing that people no longer needed to perform dangerous or dirty work, but also, due to the demographics of who tends currently to be subject to the burdens affiliated with these roles, this would have positive effects on redressing an

⁵³ Daniels, "Invisible Work".

⁵⁴ Robinson, *Black Marxism, Revised and Updated*; Bright et al., "On the Stability of Racial Capitalism".

existing inequality. In the United States for example, Black and Hispanic workers are much more likely to work in high-risk occupations than are white workers. The unfortunate consequence of this is that Black and Hispanic workers are 39% and 27% more likely, respectively, to be injured at work than a white worker. ⁵⁵ By reducing racial disparities like this one, in this regard the post-work future would undoubtedly be a good thing from the standpoint of racial equality.

However, as we alluded to earlier in this paper, we think it is a mistake to regard the post-work future as a world where all work will be eliminated, and we argue that there is one class of work that will inevitably remain - affective care work (such as childcare, elder care and the like). This means questions about this work's fair distribution will very much still be live in a post-work future. By affective care work, we are utilizing the distinction between 'functional' and 'affective' care. 56 Functional care refers primarily to meeting people's physical needs—cleaning, feeding, moving people, for example. Affective care refers to meeting people's emotional needs lending a sympathetic ear, helping them with problems, loving them.⁵⁷ Robots are likely, in the future, to be able to perform most forms of functional care. After all, we already have things like self-emptying robot vacuums and mops, dishwashers, and self-cleaning ovens, so it is no stretch to imagine machines taking over the tasks such as diaper changes and meal preparation for children, and there being self-driving cars ushering them off to their myriad of extracurricular activities. When it comes to affective care work however, the potential of technological displacement is far less certain. This is because essential components of good affective care include conscious attentiveness, deep empathy and respect, and reciprocity⁵⁸ and there still appears to be a significant gap when it comes to the ability of machines to replicate emotional states such as these (in contrast to their ability to replicate physical and mental tasks). As AI philosopher Robert Sparrow has put it, "robots cannot provide genuine care because they cannot experience the emotions that are integral to the provision of such care"59.

⁵⁵ Seabury, Terp and Boden, "Racial and Ethnic Differences in the Frequency of Workplace Injuries and Prevalence of Work-Related Disability".

⁵⁶ Coghlan, "Robots and the Possibility of Humanistic Care".

⁵⁷While there is some overlap, affective care is not the same as emotional labour as the latter refers to the specific way certain jobs require employees to manage and regulate their expressions and personae in customer interactions and encapsulates a broader set of work than 'care work' (think flight attendants, hotel concierges, and so on. See Hochschild, *The Managed Heart*. Given the emotional states at issue in some types of emotional labour are less demanding than those in affective care work (the hotel company only wants you to feel welcomed, not understood), the prospects of robots providing it is more plausible. Hence, we are not arguing that all forms of emotional labour cannot be automated, only that affective care work cannot be automated (without losing part of what makes it a social contribution).

 $^{^{58}}$ E.g., see Tronto, Moral Boundaries.

⁵⁹ Sparrow, "Robots in aged care," 449. See also Vallor, "Carebots and Caregivers"; Sharkey and Sharkey,

Take for instance the work of raising a child. For this to effectively meet the child's needs (but also the needs of others given the role of child rearing in social reproduction), it needs to rely on loving them, spending time with them, and caring *about* them, not just taking care *of* them (their physical needs). Or if we turn to elder care, this is about much more than merely feeding, dressing, and cleaning those who are no longer independent, but about listening to individuals' stories, chatting with them, keeping them company, and letting them know that someone cares about them and empathizes with them as they age. In both these cases, what proper care requires is the affective attention that reflects that those cared for are owed respect, consideration, and dignity, and which shows that they are valued as ends in themselves.

Therefore, while robots might be able to meet the physical needs affiliated with the functional tasks commonly constitutive of care work, given the lack of human intersubjectivity they will be unable to meet the emotional needs affiliated with affective care. This means if robots fully replaced human care workers, then this would significantly reduce the extent the activity is a social contribution. Given what we argued earlier about this being what makes something work in the first place (Section II), such a result would not be *displacing* human work with machine work, it would be *removing* the work altogether, given the needs of others are no longer being met.⁶⁰

Furthermore, it is important to consider that functional care and affective care, particularly of children and the elderly, cannot be easily separated, meaning that even if we had robots capable of performing functional care, we could not allow them to do so without sacrificing a significant amount of affective care. To see why this is so, let's return to the examples from the previous paragraph. When a parent takes care of a young baby, the vast majority of day-to-day care is functional—changing diapers, bathing them, and breast or bottle feeding them. However, when a parent does these tasks, they also engage with the baby. They talk to her, have skin-to-skin contact with her, make eye contact, etc. When a parent drives their child to baseball practice, they are not just providing transportation, but they are also talking with their child, engaging with them, showing them that they care, and bonding. Changing diapers and driving children provide both functional and affective care for the child because they benefit her physically *and emotionally* and further the bond between parent and child. Studies show that children's time spent with their parents

[&]quot;The Rights and Wrongs of Robot Care"; Stokes and Palmer, "Artificial Intelligence and Robotics in Nursing"; Coghlan, "Robots and the Possibility of Humanistic Care". Cf. DeFalco, "Towards a Theory of Posthuman Care".

⁶⁰ None of this is meant to deny that there could be a place for machines in the effective provision of affective care, just that there could never be a total displacement of human labour without a cost to social contribution.

positively correlates with better educational outcomes, less contact with the criminal justice system, less substance abuse, and higher self-esteem. A robot completing then even functional care or supervision of children, let alone emotional tasks (affective care), would not be meeting needs as effectively as it would be unlikely to have the same outcomes for the child, parent, or child-parent bond. The upshot then is that even if the vast majority of functional care were automated (the technological possibility of which is plausible), there would still be a set of emotional needs that only affective care undertaken by humans could meet. The post-work future then is not one where all human labour has been replaced.

What are the implications of all this for concerns of productive justice? Although we have been careful to refer to care workers with the neutral 'they,' this work currently primarily falls to women. The vast majority of unpaid care work is currently undertaken by women, and most *paid* care workers are women, in particular, immigrant women and women of colour. The initial question to ask then is what effect the radical transformation of labour brought about by the technological assumption might have on this gendered (and racialized) division of labour.

One might be optimistic and think that the post-work world is likely to remove gender inequality in virtue of relieving women of many burdens of care. This might occur through two mechanisms. First, at the moment, when men are offered paid parental leave, they take it. Perhaps this suggests that men, when given the opportunity to care (for children in this case), choose to do so, and in the post-work future, when much more of their time is freed up, men will choose to engage in much more care. Second, since affective care work is likely to be the only remaining opportunity for obtaining the benefit of social contribution through work, it is possible that men will develop more of an interest in performing it. We, however, are more pessimistic. While we don't want to deny that the changes brought about by the technological assumption might result in some improvement to the current unequal distribution of care, we think it very unlikely such mechanisms will make concerns with the distribution of care in the post-work world irrelevant.

Regarding first the claim—that men, once they have the time to do so, will choose to spend their time caring—unfortunately, studies do not bear this out. It is true that,

⁶¹ Wikle and Cullen, "The Developmental Course of Parental Time Investments in Children".

⁶² Lum, Sladek and Ying, "Ontario Personal Support Workers in Home and Community Care".

⁶³ Due to space constraints, in what follows we have chosen to focus on the gendered aspect of the unequal division of care work. The way racial oppression manifests in care work is, of course, complex (e.g., see Bhandary, "Caring for Whom? Racial Practices of Care and Liberal Constructivism"). But given one significant reason racial minorities and migrant workers are more likely to undertake care work is because of a lack of meaningful economic alternatives, then a universal basic income in the post-work future will likely go some way towards the reduction of that inequality, and perhaps be more effective than in relation to the gendered division of care insofar as the latter is tied to economic inequality to a lesser degree.

when paid parental leave is offered (or sometimes mandated), men take it up. However, rather than spending the leave time caring for their babies, they tend to use it to upskill, take on extra work for additional income, explore new business ideas, and/or look for new career opportunities. ⁶⁴ Furthermore, studies have shown that when women are the sole income-earners and the men are stay-at-home fathers, men still do less childcare (19 hours per week) than their working female partners (21 hours per week). ⁶⁵ So even when men are relieved of their paid work, they still do not do as much care as their (paid) working female partners. This strongly suggests that lack of time is not the impediment to men's participation in care work, and we think makes it reasonable to expect that any additional time afforded by the postwork future is unlikely to significantly change, on its own, the gendered division of care.

Let's now consider the possibility that men will be more likely to take up care work because it offers the last remaining option to obtain the benefits associated with social contribution. First of all, we have already raised doubts about the importance of social contribution in the post-work future (Section IV) and argued that it is certainly possible that the bases of persons' self-respect, or their 'essence' as humans, could be found in realms of life outside of work. Applied to the point here, while men may no longer be able to base their self-worth on being a breadwinner, perhaps they will be able base it on how, just to take one example, they perform in the games they now play with their friends. But even if social contribution continues to remain a benefit, we don't think this is enough to warrant thinking that inequalities in who does the care work will be overcome. This is because there is no reason to think the benefits of social contribution will necessarily be taken as special or more weighty than other benefits. 'Sure,' our imaginary individual might think, 'I might get some benefit from undertaking my fair share of affective care work, but think of all the more freedom I will have to do what I want if I leave this socially necessary labour to others.' Again, we don't want to suggest the change in social circumstances brought about by the post-work future will result in no progress towards gender equality. But given how deeply gendered norms regarding care work have been entrenched in social institutions historically and in the present, should we really expect the increase in free time brought about by technological development to be enough on its own to overcome this?

The takeaway is this: as we have described it, the post-work world will be one in which almost all work, save some care work, is automated. And given we have raised some doubts about the ability of this post-work world to overcome, by itself, norms

⁶⁴ Tharp and Parks-Stamm, "Gender Differences in the Intended Use of Parental Leave".

 $^{^{65}}$ In dual income earning families, women do 23 hours of childcare per week compared to 12 hours for men. Baxter, "Stay-at-home-dads (Facts Sheet).

about gender roles and the division of affective care, this amounts to a world in which women will disproportionately work (at care) whilst men will disproportionately enjoy post-work leisurely lives. This would be unjust. And this is so even if through this unequal division of the remaining labour women will have on average greater access to the benefits affiliated with social contribution, given these benefits only result from socially-imposed norms and expectations.⁶⁶

This suggests that an essential consideration to ensure a post-work world is consistent with productive justice will be positive efforts to bring about the egalitarian division of affective care work. One way to bring this about could be mandatory participation in affective care, along the lines of Elizabeth Brake's Care Corps or Cécile Fabre's civilian service. With systems such as these, each individual would be required to do their fair share of socially necessary care work (depending on one's personal circumstances and the community's needs, this might be within the family or for strangers). This would then ensure that the non-automated care work that people need for their lives to go well is done equitably. If, after each person performs their fair share of care work, some choose to perform more (perhaps in line with women's 'natural' desire to care), that would be supererogatory and not a problem from the standpoint of gender equality.

If we are wrong about men's preferences on average in the post-work future and men and women are equally likely to want to do the care work that remains, then this policy would not be coercive or freedom-limiting at all. However, if there were divergent preferences, then it would involve a degree of coercion, and resultantly could seemingly be regarded as inconsistent with other values often thought constitutive of justice in production (like free choice of occupation). But the response here is to fall back on the fact that such coercion is only necessary because certain people have unreasonable preferences—viz., the preference men have to freeride on the care work performed by others in order to carry out their own lives however they see

⁶⁶An anonymous reviewer puts the following objection to us: the very fact that care work is distributed in a gendered way does not mean that it is necessarily unjust. Even in a society devoid of gender discrimination and social norms concerning different kinds of work, it's possible that women might still be more drawn to care work than men. Even if that is true (though we doubt this), the care work involved is a form of socially necessary labour so is still heteronomous to some extent, at least compared to leisurely pursuits. Therefore, even though there can be positive goods associated with it, the necessity of the work and heteronomy suggests that it is still unjust have one class of people disproportionately undertaking the work for the benefit of the other, especially when the latter do no work at all and can do as they please. The latter would essentially be freeriding on the work done by the former.

⁶⁷ Brake, "Fair Care: Elder Care and Distributive Justice"; Fabre, *Whose Body Is it Anyway?*.

One concern with this approach might be that people needing care may end up cared for by people who are not very good at or interested in caring for others. This is a legitimate concern that merits further consideration, particularly with respect to how it should be balanced against the unjustness of the gendered division of labour.

fit. Not only would this policy have the result of an equitable division of the care work that remains in society, but it might also contribute to undermining existing gendered norms surrounding care work in the first place. Children would be guaranteed to grow up being cared for by both men and women, girls and boys would be taught to care in school and in the home and would grow up with the expectation that they will do so in equal amounts in adulthood. These social factors, alongside the explicit state-sanctioned message that care work is performed by women *and men*, would likely, over time, significantly reduce the need for coercion in the first place.

6. Conclusion

The aim of this paper has been to begin to normatively assess the value of a 'postwork future' and outline what considerations of justice arise from the technological displacement of work. We have argued that the post-work future should not be rejected simply because it would result in the loss of the benefits of work because most of those benefits are only contingent on work and can be realised in other ways, given the significant increase in discretionary time that will characterise the postwork world. We also argued that although the benefit of social contribution could not be realised outside of work, there are reasons to be skeptical that it would continue to be a meaningful benefit at all in a world of automation. Although the loss of benefits of work are not reasons to prevent the technological assumption from materialising, it is also important to consider how different social groups are situated to the institution of work differently. What we have focused on, is that given affecttive care work is likely to resist automation, and because the technological changes bringing about a post-work future are unlikely to undermine gendered norms and expectations about this work, then when we are thinking about the design of institutions in the post-work world, concerns of productive justice and gender equality are inseparable.

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