

# Managed by AI, not replaced

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The normative concerns which define the discussion around *labour justice* in the context of *automation* focus on the possibility of so-called low-skilled jobs being “automated away.” Core examples often cited to make this argument are familiar to us: think of factory workers replaced by robots, or delivery/taxi drivers replaced by self-driving cars, or food deliverers replaced by delivery drones, etc, with almost exclusively *low-skilled* jobs at *high-risk of automation*. In 2025, many such proclamations by techno-enthusiasts or warnings by techno-pessimists throughout the 2010s have not come to fruition, and do not seem to me like they will soon. Yet, we keep letting those examples and non-existent technologies shape our discussions. In this essay, I would like to show that normative concerns of *labour injustice* focusing on the challenges of a post-work world are incomplete in their assessment of the problem at-hand considering the way AI systems are transforming work in our society in 2025.

This essay first contextualises our Western understanding of Work as conforming to a singular-reality perspective through the framework outlined by Law it then decomposes the notion of Work in society as defined by the opportunities for (social) *contribution and cooperation* (Celentano, 2019, 2023) offered to workers. Finally, I argue that considering the current state AI technology impacting contemporary workplaces, a more prescient *labour injustice* requires attention: not that low-skilled workers will be replaced, but that they will be managed by algorithmic systems in a continued trend of stripping worker autonomy through “Scientific management” practices (Birnbaum & Somers, 2022). This essay will not address strategies to overcome algorithmic management but rather will focus on framing it as the core, underlying labour injustice concern to attend to.

## Work as nature

Law (2015) explores a way of thinking about the contingent, intersecting existence of *multiple realities* being enacted simultaneously around the world, and calls this the Fractiverse. He introduces this notion to juxtapose the dominant perspectives of Western technology and science, which largely function under the assumption of the existence of a *singular reality*. This perspective, he argues, is deeply embedded within our culture to the extent that we fail to truly accept other (people’s) realities and that even the “liberal and respectful” among us are happy to “let others have their own beliefs” while still implicitly dismissing the possibility of multiple co-existing realities. Law draws our attention to a dichotomy that arises within our current singular-reality view, consisting of “Nature” on the one hand, and “Culture” on the other, where the “natural” is viewed as being driven by *impersonal, objective, and general forces*.

I want to argue, then, that the dominant understanding of Work in Western technoscience relegates it to a *naturalised* form where it is subject to being driven by external, and impersonal forces. Work is therefore perceived in-terms of an *exact expected enactment* (using prescribed techniques, processes, and goals) which can be operationalised through efficiency metrics, productivity targets, and algorithmic organisation—all of which benefit from the use of labour-surveillance. Any deviation from the prescribed methodology on part of the human labourer (e.g., through personal preferences, shortcuts, personal rhythms, and so on) is seen as an

inefficiency/deviation which needs to be corrected. Briefly, that is to say the (manager's) singular reality of work is strictly imposed, squashing all other enactable realities of work.

While staying within the *nature/culture* dichotomy—which is still subject to Law's critiques of the single-reality model—a *denaturalised* work would be characterised by factors which are not only subjective to each individual labourer, but are inherently complex, social, and contextual. This could stand in opposition to a natural work which is seen as a means to efficiently use human resources to extract value from other resources.

## Work as contribution

To understand how naturalised work is truly impacted by the developments of AI- and other digital technologies, I would like to first define *Work*. Borrowing from Celentano (2019), work can be understood as way individuals participate in *social cooperation* and *contribute* to the collective functioning of- and value-creation in society. This definition allows us to centre the human labourer and their role in the system rather than viewing work as an abstract journey to self-realisation or automation. This reframing is crucial to understand work through the lenses of “contributive inequality” and “contributive agency.”

*Contributive inequality* (Celentano, 2019) is a hierarchical distinction between the contributively advantaged and disadvantaged. The former of whom are typically those we consider “high-skilled” or “professionals” and whose jobs are often characterised as being ‘rewarding, challenging, creative, innovative,’ and any tasks they may have which fall outside of this umbrella are easily outsourced—to another person or machine. The jobs of the advantaged are also highly conducive to opportunities of self-development, -expression, and -determination, affording them significant autonomy and decision-making authority in their enactment of work. When their work is outsourced, this often results in the worker attaining greater autonomy and wealth for becoming more efficient at overseeing value-extraction. On the other side of the hierarchy would be the *contributively disadvantaged*, the so-called “non-professionals” whose work does not afford them the same opportunities for self-development, -expression, or -determination. They are instead the ones typically taking the ‘unrewarding, dull, uncreative’ jobs, having little say over the contributive role they play in the value-creation process.

*Contributive agency* (Celentano, 2023) can then be understood as that agentic capacity for self-determination a worker has over the “content, form, and terms of their contribution.” The degree to which any given labourer can exercise this agency is not an absolute characteristic, but by Celentano's argument is an “organisationally mediated capacity.” Therefore, this capacity is defined as existing over 4 key-dimensions, each of which can be realised on a spectrum rather than as an all-or-nothing achievement. The relevant dimensions for my argument include: the relational (allowing workers to connect with one-another and meaningfully cooperate), and the participatory (where workers have an active role in shaping work-rules and decision-making processes).

Within our normative understanding of work as natural, this contributive hierarchy is taken as a given and the active efforts made to better enact work (i.e., to improve efficiency, productivity, and labour output from the workers) has resulted in a growing trend of Algorithmic Management

(AM) techniques being adopted in workplaces to make autonomous managerial decisions, and I posit that these techniques have a constraining effect on the agentic capacities afforded to the contributively disadvantaged.

## A deeper injustice

Normative concerns of labour injustice in the age of AI have focused on the fact that the contributively disadvantaged will lose access to work opportunities and suffer economically as a result. The “low-skilled” nature of their job has been taken, in a technologically deterministic sense, to imply that the jobs will be automated. The primary remedy for this state of affairs is to implement a Universal Basic Income of sorts, however this approach perpetuates the existence of a contributive hierarchy and reduces work to a matter of income (naturalisation), removing it from its broader social context (as an opportunity for workers to contribute to their communities).

This, I argue, is an incomplete assessment of the scope of labour justice concerns—it only acknowledges the contributive hierarchy and therefore cannot meaningfully ameliorate the challenges faced by workers. A more thorough understanding must account for the manner in which the contributive agency afforded to labourers informs their position in the hierarchy (and perhaps the existence of such a hierarchy in the first place).

To better understand the challenges faced by labourers, one must move on from discussions of delivery drones, self-driving taxis, and factory robots, because the jobs these idealised technologies claim to replace are not going to disappear anytime soon. The techno-optimist sales pitches throughout the 2010s fundamentally misunderstood the human complexities of the activities undertaken within our societies. However, this does not mean that no advances were made in AI technologies aimed at workplace improvements in the last decade, rather just that the developments have been less ‘science fiction’ in nature. Take for example Amazon’s SCOT (Supply Chain Optimisation Technologies) system, designed to be the “nervous system” of the Amazon store, and being responsible for orchestrating the company’s entire supply-chain (Graham et al., 2024, pp. 113-138). SCOT is described as an “extraction machine” which “centralises knowledge and decision-making,” and operates “quietly in the background” to “optimise critical functions,” and that it makes use of extensive data-driven optimisation and productivity monitoring processes to achieve this goal.

## Algorithmic boss

Using data and surveillance to optimise labour output is not a new phenomenon and has at least a century-long history in Taylorism, which emerged in the late 19<sup>th</sup> and early 20<sup>th</sup> century aiming to improve economic efficiency and labour productivity in factories through “scientifically” identifying optimal workflows and enforcing them through managerial control (Birnbaum & Somers, 2022). SCOT, representing these Taylorist principles, can have extensive control over workers, for example it can assign tasks to workers based on the muscle groups involved in completing said task and build a shift rotation to maximise productive output, set a baseline rate for how fast tasks should be completed by a given worker, constantly observe them, and even make decisions about firing workers who fail to meet their set targets (Graham et al., 2024).

Under naturalised work, these developments follow logically as capital-owners strive to maximise the productive output from their human labourers as well as the overall value extracted from all available resources. The development and deployment of such systems serves to actively add more constraints to the degree of contributive agency a worker is afforded, and these further cement their position on the lower rung of Celentano's contributive hierarchy.

I would like to note that the impact on workers is not equally shared across the globe and can be further problematised through considering geographic divisions along the Global North and South. In their book, Graham et al. (2024, pp. 113-138) follow a British Amazon warehouse worker who spends nearly his entire workday in isolation from other workers, taking instructions from SCOT (delivered through human managers) and has his work heavily controlled, leaving him nearly no exercisable agency in his enactment of his work. On the other hand, however, we can consider similarly controlling strategies being used in the Global South for a more perverse aim. I would like to take the example of Business Process Outsourcing (BPO) firm Sama (Muldoon et al., 2023) where data workers are subjected algorithmic management, with the aim to optimise their labour output to provide the data necessary to build, operate, and maintain AI systems like SCOT. Neither Sama workers nor Amazon warehouse workers are at immediate risk of replacement by AI, however they are dehumanised and orchestrated by AI systems as if a cog in a machine.

## Conclusion

To meaningfully address concerns of labour injustice in the age of AI, our discussions need to move beyond technological determinism and instead contend with the reality of AI systems transforming the way work is done and experienced in society. Work will persist, however the core challenge for us is to ensure it is conducted humanely and that our normative discussions consider the inherent social aspects of work and workers.

## Bibliography

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## AI usage disclaimer

For this essay, I made minimal use of AI-aids. Here are the two cases where I made use of it:

1. I used Google's NotebookLM to read John Law's text to help answer a question for me about the way I wanted to frame my thesis statement on his framework. Here is the singular interaction I had:

Me:

I want to tie the idea of a one-world view to the way workers are treated in increasingly automated work environments: think of amazon warehouse workers who are increasingly monitored by cameras and other surveillance technology as if they were machines. This, I want to argue, is fundamentally a view of capital-owners (including labour as a capital resource) as seeing everything as a monetary-value generator, i.e., a flawed one-world view. What are some critiques of my perspective based on Law's text?

Notebook LM:

Your perspective, which links the treatment of Amazon warehouse workers "as if they were machines" to a "flawed one-world view" of capital owners, offers a compelling starting point for analysis through the lens of John Law's work [User Query]. Law's text, however, might offer several critiques of framing it simply as a "flawed" view, instead pushing for a more nuanced understanding of how realities are actively "done" or "enacted".

Here are some critiques of your perspective, based on Law's arguments:

- **The "Flawed" View is an Active "Enactment," Not Just a Misconception:**
  - Law would argue that the capital owners' view of everything, including labour, as a "monetary-value generator" is not merely a conceptual flaw or a mistaken belief, but rather a **powerful "enactment" of a specific reality**. This "one-world" view, which distinguishes between nature and culture, is "indeed an enactment and only partial".
  - For Law, realities "are enacted in practices". Therefore, the treatment of Amazon workers as if they were machines, constantly monitored by surveillance technology, is not just a perception but a **concrete way in which a particular reality of the worker is "done" or "made to be"** in those specific work environments. The Eurobarometer survey case study illustrates how surveys "enact" a specific kind of person (e.g., arithmetically competent, possessing stable attitudes), thereby "making the survey person what she is". Similarly, the Amazon system "enacts" a worker primarily as a predictable, measurable unit for value generation.
- **The Nature/Culture Divide and "Disqualification" of Human Agency:**
  - Your observation that workers are treated "as if they were machines" ties directly into Law's discussion of the **Northern metaphysical settlement, which historically established a rigid division between "nature" and "culture"**. In this settlement, nature is seen as driven by impersonal, objective, and general forces, while the social/cultural is characterised by human (or collective) forms of agency that are intentional and variable.
  - By treating workers like machines, the system attempts to **relegate them to the "nature" side of this division**, where their actions are expected to be governed by

impersonal, quantifiable processes (like algorithms and efficiency metrics) rather than the messy, unpredictable domain of human subjectivity and agency. This practice actively **"disqualifies" the workers' multi-faceted human reality** and privileges a singular, machine-like one. Robert Boyle's establishment of scientific "technologies of truth" historically created this "double division" where "serious reality work" (the "natural" world) excluded the political and social dimensions of human agents.

- **"One-World" as a Contingent Achievement, Not a Universal Given:**
  - Law argues that the belief in a single, overarching reality (a "universe") is not a natural state but a **"contingent achievement"**. Even within the "heart of Western technoscience," multiple realities are constantly being dealt with and "patched together".
  - The "monetary-value generator" view, when enforced through automation and surveillance, is a powerful attempt to **impose and maintain a singular reality** within the warehouse environment by partially "repressing difference". It is an effort to make the "one-world" of capital-driven efficiency rule, despite the inherent "ontological multiplicity" of human workers. The coherence of this singular reality is a "contingent business" that requires active work to suppress alternative realities.
- **Critique Itself Can Reinforce One-World Metaphysics:**
  - Law offers a crucial meta-critique: **even efforts to challenge a "one-world metaphysics" can paradoxically reinforce it**. If your argument, in critiquing the "flawed one-world view," implies that workers are *really* something else (e.g., inherently creative, autonomous, non-monetary value-generating beings), it risks falling into the trap of simply asserting a *different singular reality* about what people are "like".
  - Law suggests that such criticism, while well-intentioned, can "embed and enact one-world doctrines" by asserting a different definitive "reality" about people. Instead, Law advocates for recognizing and "wrestling with the implications that worlds in the plural are enacted in different and power-saturated practices". The aim, for Law, is to "find ways of leveraging open Northern multiplicities" rather than replacing one singular truth with another.

In essence, Law's framework suggests that your argument could be strengthened by moving beyond the idea of a "flawed view" to explore how the capital-driven system actively **enacts, sustains, and enforces a specific, singular reality of the worker**, often by suppressing or disqualifying their other, multiple realities through the very practices of automation and surveillance you describe.

2. I made use of ChatGPT to suggest a rewrite for a paragraph which was very wordy, and made use of some of its suggestions:

Me:

I am working on an essay and I have a paragraph that I wrote which I think can be a bit more

concise, can you help me and suggest minimal changes to make it concise and easier to read?

"This essay is structured so as to first contextualise our Western understanding of Work as conforming to a singular-reality perspective through the framework outlined by Law (2015). I follow this by further decomposing the notion of Work in society as defined by the opportunities for (social) contribution and cooperation (Celentano, 2019, 2023) offered to workers. Finally, I would like to make the argument that considering the ways in which current AI technology is impacting contemporary workplaces, a more prescient labour injustice requires attention: not how to keep low-skilled jobs around, but how they will be managed by algorithmic systems in a continued trend of stripping worker autonomy through "Scientific management" practices (Birnbaum & Somers, 2022). This essay will not address strategies to overcome algorithmic management but rather will focus on framing it as the core, underlying labour injustice concern to attend to."

ChatGPT:

Here's a tightened version of your paragraph, with minimal but targeted edits to improve clarity and flow:

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"This essay first contextualises the Western understanding of Work as shaped by a singular-reality perspective, drawing on Law's (2015) framework. It then decomposes Work as a social construct, defined by the opportunities for contribution and cooperation offered to workers (Celentano, 2019, 2023). Finally, I argue that amid the growing influence of AI in workplaces, the more urgent labour injustice is not the preservation of low-skilled jobs, but their management by algorithmic systems—a continuation of autonomy-stripping "Scientific management" practices (Birnbaum & Somers, 2022). This essay does not propose solutions to algorithmic management, but instead frames it as the central labour injustice requiring attention."

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Let me know if you want it made sharper, more formal, or more polemical.