

# Data Imperialism: disrupting secondary data in platform economies through participatory regulation

Mark Findlay<sup>1</sup> and Josephine Seah<sup>2</sup>

Centre for AI and Data Governance, School of Law, Singapore Management University<sup>3</sup>

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*platforms represent a distinct type of governance mechanism, different from markets, hierarchies, or networks, and therefore pose a unique set of problems for regulators, workers, and their competitors in the conventional economy. Reflecting the instability of the platform structure, struggles over regulatory regimes are dynamic and difficult to predict, but they are sure to gain in prominence as the platform economy grows.*<sup>4</sup>

## Abstract

In contemporary service-delivery markets, an often-undisclosed relationship between data and profit stimulates the commodification of employment data. Analysing how such data is used reveals patterns of monetization through a host of different market purposes – from potentially useful (predicting traffic conditions) to individually worrying (predictive personalisation). Data production and commercialisation imperatives drive digital platforms to extract secondary data while maintaining an information access imbalance between those with big data and data analytics capabilities, and the uninformed data product. This article speculates about regulatory options available for workers on these platform economies. To date, much focus has been dedicated to the possibilities of data regulation and reformulating labour law to address the challenges posed by the gig economy and platform capitalism. We chart an alternative path towards grassroots empowerment of participatory self-regulation, guaranteed through data discovery, AI-assisted information looping and vulnerable stakeholder emancipation. We argue that the essential condition of this self-regulatory frame for its social and market sustainability requires *informed engagement* by currently disempowered market players, with the consequence of market power dispersal in favour of a more balanced regulatory field. A unique feature of our proposed regulatory framework is the use of AI-assisted information looping to disrupt the current information imperialism of platform operations and their data customers, revealing the forces at work which now undermine worker dignity, and retard work life quality through surveillance.

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<sup>1</sup> Professor, Director – Centre for AI and Data Governance, School of Law, Singapore Management University  
markfindlay@smu.edu.sg

<sup>2</sup> Research Associate – Centre for AI and Data Governance, School of Law, Singapore Management University  
markfindlay@smu.edu.sg

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<sup>4</sup> Vallas S. & Schor J. (2020) 'What do Platforms Do? Understanding the Gig Economy', *Annu. Rev. Sociol.* 46: 16.1–16.22

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## Preface<sup>5</sup>

The research for this paper commenced before the onset of the COVID-19 panic. As such it was not informed by the more recent arguments that, particularly in the food delivery and logistics activities, 'gig workers' have transited from a preferred option to arguably an essential service.<sup>6</sup> Whether or not that assertion is agreed, there is little doubt that in times of social distancing and restrictions over movement delivery services, particularly in heavily urbanised environments have grown in utility.

Platform providers have responded to this commercial opportunity in a variety of market-driven ways. In many jurisdictions they have argued special exemption status so the restrictions on other commercial service providers in terms of business activity and worker application have been waived.<sup>7</sup> The tendency to exploit an already vulnerable work-force in situations of higher demand have been responded to by limited organised worker resistance.<sup>8</sup> During this pandemic, workers from Amazon, Instacart, Target and other delivery-dependent retailers have coordinated to organise protests. These protests have not impactful in themselves, but they are significant because they represent organised and inclusive action between workers at different companies, gaining support from political leaders, and drawing media attention during a time when the importance of delivery workers is apparent and salient to the dependent consumer public. The main demands of the workers were for the provision of personal protection equipment (PPEs), sick leave, and revisions of pay.<sup>9</sup> Summarising the 'Fairwork Foundation Report' into gig work during COVID-19, open-Democracy found a series of problems associated with the response of platform providers to the demands of workers:

- Platforms have under-delivered on their promised response
- Platforms responses serve shareholders before workers
- Platforms have loaded risks and responsibilities onto governments
- Platforms do not make guarantees in their response. e.g. they say "you can apply for..." instead of "you will receive..."; "we are working on providing..." instead of "we will provide..."
- Other background issues like gender and migration are amplified

From a productivity and market benefit dimension, protests did not slow businesses, and relatively few employees participated. However, the hope of the protest organisers was that the resultant publicity would widely emphasise that in workers' right are as much a fundamental economic and social issue as unemployment benefits and company bailouts.<sup>10</sup> the current conditions may "wake up" the general public to long-standing labour issues.

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<sup>5</sup> This section was based on notes provided by Loke Jia Yuan.

<sup>6</sup> Martyn, P. (2020, May 24). *Covid-19 and its impact on the gig economy*.

<https://www.rte.ie/news/business/2020/0522/1140094-covid-19-and-its-impact-on-the-gig-economy/>

<sup>7</sup> Pardes, A. (2020, April 9). This Pandemic Is a 'Fork in the Road' for Gig Worker Benefits. *Wired*.

<https://www.wired.com/story/gig-worker-benefits-covid-19-pandemic/>

<sup>8</sup> Ghaffary, S. (2020, May 1). *The May Day strike from Amazon, Instacart, and Target workers didn't stop business. It was still a success*. *Vox*. <https://www.vox.com/recode/2020/5/1/21244151/may-day-strike-amazon-instacart-target-success-turnout-fedex-protest-essential-workers-chris-smalls>

<sup>9</sup> These demands were echoed as legitimate issues of contestation in <https://fair.work/wp-content/uploads/sites/97/2020/04/COVID19-Report-Final.pdf>

<sup>10</sup> Athreya, B. (2020, May 8). *The Ride Gets Rougher: Gig Workers Organize Through a Pandemic*. Inequality.Org. <https://inequality.org/research/gig-workers-organize-through-pandemic/>

The Fairwork report identified 5 areas of contestation between workers and the platform providers which any revaluation of labour under COVID-19 conditions further highlighted:

- Pay - by far the most important issue for workers related to fair rates of pay. The report observed that only 5 out of 120 platforms have direct policies to increase pay for workers during the pandemic.
- Conditions (safety prevention) - hygiene and contactless delivery were the most widespread policies in place, with more than 50% of platforms indicating they were providing PPEs (disinfectant or masks) to workers, but workers responded that they often fail to receive this equipment.
- Conditions (illness) - about 50% of platforms were providing payment for workers who are ill. But workers reported it was hard to access payments, and payments being less than local minimum wage requirements.
- Contracts - most platforms continue to classify workers as independent contractors and as such do not offer standard contract of employment arrangements.
- Management - a few companies were guaranteeing no loss of bonus or incentive levels despite temporary deactivation of workers in contexts where work levels diminished. Some platform providers were issuing statements against clients who discriminate against workers in the pandemic environment.
- Representation – the report found no evidence of platforms engaging with worker associations, despite a number of groups setting out demands or organising strikes.

The COVID-19 pandemic has amplified inequality among platform workers despite the latter performing essential social and commercial services. Citizens working for the platforms that offer care work, domestic work, and beauty services are mainly women. These women are often unable to work because platforms have suspended services, because they are required to stay at home and care for their families, or because they must bring their children to work despite contagion risks.

Many gig workers are also migrant workers, and so have less or no access to government benefits available to citizen workers in similar occupations. In the U.S. experience this vulnerability is exacerbated when migrants are undocumented. Such vulnerable workers feel pressured to keep working, even when they are ill, and are less likely to seek medical help if illness sets in.

This picture of the impact of the pandemic on gig workers is not about labour revaluing and empowerment but the magnification, for many of existing structural vulnerabilities. As such, whether the pandemic and its social ramifications has provided a window for worker empowerment or is simply another context for exploitation remains to be seen.<sup>11</sup> The paper that follows argues labour revaluation without representative participation in crucial information emancipation will not be enough to ensure a sustained and resilient improvement in work life quality for this labour force.

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<sup>11</sup> Chaibi, L. (2020, March 30). *[Opinion] Pandemic is time to recognise gig workers' rights*. EUobserver. <https://euobserver.com/opinion/147902>

## Introduction – New Wine in Old Barrels?

AI and disruptive economies of themselves are not at the heart of the regulatory challenge addressed within. When exploring regulatory possibilities for vulnerable workers in platform economies the argument is not an exercise in defending old, dysfunctional, outmoded or discredited labour market regulatory paradigms such as collective bargaining, or rights protections through organized labour.<sup>12</sup> Market externalities which stimulate the advance of AI into conventional employment relations (such as platform interfaces), often denying their existence, exacerbate the impact of entrepreneurial disruption in conventional employer/employee provinces, causing labour markets to stress and transform as the demand for labour being the essential means of production diminishes.<sup>13</sup> In addition, the position of labour within particular markets is responding to wider social and economic transformations that as much depend on new arrangements for accessing property and valuing property commodification,<sup>14</sup> as they do on the advance of AI, or the failure of conventional regulatory regimes to control the adverse social consequences of disruptive employment practices.<sup>15</sup>

The regulatory theorising to follow contains the commitment that for human workers, regulation should enable social good, along with and perhaps above, market sustainability. This broad aspiration recognizes the position taken by many who argue for the introduction of AI into the workplace primarily on profit and efficiency terms. This lobby usually rejects regulatory interference in favour of some compromised belief in the neutrality of market forces. The intellectual poverty and the market duplicity of this position in platform economy oligopolies<sup>16</sup> is recognized and will be countered by two arguments that move beyond humanist considerations:

- As with the essential revaluation of platform-facilitated delivery and logistics services during the social distancing and movement restrictions of COVID-19 reveals, depressed labour pricing and disempowered labour participation is not simply a factor of internal market forces; and
- Human provision remain the bulk of platform service delivery and to ignore work-life quality in regulatory agendas is a short-sited appreciation of market priorities.

AI impacts on labour markets by augmenting and/or substituting human capital in both mundane and specialist sites for decision-making.<sup>17</sup> In most labour markets the drivers for

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<sup>12</sup> In making this point we are not denying the importance of reflection on the history of labour market protections which is replete with instances of power displacement through worker empowerment. Rather, we are indicating that in a new climate of labour market arrangements retaining previous regulatory models may be problematic as the assumptions on which they were based never truly prevailed or have profoundly shifted as a consequence of neoliberal economic ordering.

<sup>13</sup> Dyer-Witthford, N., & Kjosen, A. M. (2019). *Inhuman Power*. London: Pluto Press.

<sup>14</sup> Findlay, M. (2017). *Law's Regulatory Relevance?: Property, Power and Market Economies*. Edward Elgar Publishing.

<sup>15</sup> Disruptive, or gig, or peer-to-peer economies have a variety of understandings. In our work we will limit their interpretation to forces at work on labour markets which undermine and deny conventional employer/employee arrangements and do so by residing behind the veil of digital interfaces.

<sup>16</sup> Pasquale, F. A. (2018). Tech platforms and the knowledge problem. *American Affairs, Summer*.

<sup>17</sup> Frey, C. B. (2019). *The Technology Trap: Capital, Labor, and Power in the Age of Automation*. Princeton University Press. See also: Teigland, Robin and van der Zande, Jochem and Teigland, Karoline and Siri, Sharyar,

the introduction of AI are profit options via a reduced reliance on wage labour, and increased efficiency through mechanical predictability and reproductivity. AI technologies for managing and applying data in labour markets, outside facilitating market sustainability,<sup>18</sup> present risks for workers at the intersection of human agency and AI. These risks are context-specific as well as generic and require critical theorizing in locations such as platform interfaces if potential benefits for the place of labour markets within the social<sup>19</sup> are not to be outweighed by structural disadvantages to crucial market players and exacerbating market power asymmetries, misunderstood as these are, through a prophylactic discourse which obscures and misrepresents risk.

In the context of platform facilitation, the labour market has developed in two ways. The first was an organic consequence of computerization in traditional economies where organisations digitized their transactions and interactions with other market players. This phenomenon is not the interest of our analysis. Rather it is with the second:

...and potentially more consequential path of growth began outside the traditional economy, as companies that have been born digital use the internet to usurp existing markets or create entirely new ones. Examples here involve e-commerce platforms, which have captured a growing share of the revenues once controlled by brick-and-mortar retail outlets; capital platforms or lodging, goods, and even machinery; service labor platforms for rides, household help, and caring labor; and video streaming and content platforms, which compete with broadcast, cable, and other media companies. The platform economy also encompasses social media firms such as Facebook and Instagram, which subsist on revenue from advertising and the sale of data, and internet service platforms such as Amazon Web Services, which provide the infrastructure on which other companies and platforms depend. As such, the platform economy represents an important and strategically consequential branch of global capitalism, not least because of the Schumpeterian creative destruction—or disruption, in the contemporary parlance—it has imposed across much of the economic landscape.<sup>20</sup>

To additionally focus the regulatory attention of this analysis we reflect on what has come to be known as entrepreneurial disruption, or less generously ‘predatory capitalism’.<sup>21</sup> Such economic conditions feed on the vulnerabilities of many in its labour demographic, disrupting conventional employer/employee arrangements, disengaging traditional worker protections, destabilising bargaining power in any market/collective sense, and re-orienting

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The Substitution of Labor: From Technological Feasibility to Other Factors Influencing Job Automation (January 1, 2018). Available at SSRN: <https://ssrn.com/abstract=3140364>;

<sup>18</sup> Market sustainability in the context of this paper is grounded in the observation that oligopolistic markets which operate on heavy stakeholder power disparities and exploit key vulnerable market players will only continue to operate if the constituents of exploitation such as de-valued labour and regulatory distancing remain. As the COVID-19 crisis as shown with the new social valuing of some platform labour, externalities will impact on discriminatory sustainability.

<sup>19</sup> Polanyi, K (1944/1957). *The Great Transformation*. Beacon Press, Boston, MA.

<sup>20</sup> Vallass & Schor (2020); pp.16.2-16.3.

<sup>21</sup> Zandoni, P., Vallas, S., & Kovalainen, A. (2019). Chapter 6 Labor Market Inclusion Through Predatory Capitalism? The “Sharing Economy,” Diversity, and the Crisis of Social Reproduction in the Belgian Coordinated Market Economy. In *Research in the Sociology of Work* (Vol. 33, pp. 145–164).

even flexi-work<sup>22</sup> into employment environments devoid of predictability and certainty. The new worker world is one re-imagined by a sanitised language of ‘independent contracting’, ‘freelancing’ and ‘gigging’ as some supplementary labour pass-time.<sup>23</sup> The tendency of such discourse to further erode the dignity of the oppressed,<sup>24</sup> take our thinking to its eventual concentration.

Information deficits prevail across platform economies, and important data subjects such as drivers and customers are excluded from accessing the data they produce, or even the knowledge of what and when they are producing. A lucrative market in the monetising of secondary data, primarily the product of surveillance is also debarred from worker/customer benefit.<sup>25</sup> In these circumstances, information (or its containment) presents two regulatory challenges. The first relates to general information closure. If workers do not have access to basic data which would indicate objective measures of labour value then they are in no position to construct informed representations on wages, conditions and work-life quality measures. Disempowerment in this form is exaggerated when the alternative performance measures such as customer satisfaction ratings are managed from the employer’s perspective.<sup>26</sup> The second relates automatically produced personal data (some that is monetised) over which the data subject has no control. Both information-centred challenges:

- Share a common characteristic being that the data/information deficit disempowers vulnerable workers in crucial market interactions and
- Each are available for AI-assisted information technologies<sup>27</sup> to create data loops<sup>28</sup> that have potential to remedy information deficits and rebalance power asymmetries.

To explain why information is vital for empowerment in these labour market contexts, the analysis relies on operationalising a decision-making model of AI/ human agency interface. Accepting the need for regulation benefiting disrupted workers in addition to advancing market profitability, self-regulation will be critically analysed, and the conditions for its effective applications in advancing social good explored with particular reference to worker repositioning in a more sustainable market for their labour. Governing the proposed regulatory approach is a determination to avoid self-regulatory outcomes that do little more

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<sup>22</sup> Kumar, T., & Jena, L. K. (2020). Capital vs. Digital Labor in the Post-industrial Information Age: A Marxist Analysis. *Emerging Economy Studies*, 6(1), 50–60.

<sup>23</sup> Kuhn, K. M. (2016). The rise of the “gig economy” and implications for understanding work and workers. *Industrial and Organizational Psychology*, 9(1), 157-162.

<sup>24</sup> Prassl, J. (2018). *Humans As a Service : The Promise and Perils of Work in the Gig Economy*. Oxford: Oxford University Press USA – OSO; Kergel, D., & Hepp, R. (2020). Start Ups, Social Networking and Self-Tracking—The Neoliberal Freedom of the Entrepreneurial Self in the Digital Age. In *Precarious Places* (pp. 139-147). Springer VS, Wiesbaden;

<sup>25</sup> Zuboff, S. (2019). *The age of surveillance capitalism: The fight for a human future at the new frontier of power*. Profile Books.

<sup>26</sup> Sarah O’Connor. (2018). Let gig workers control their data too. *FT.Com*, Retrieved from <https://www.ft.com/content/a72f7e56-3724-11e8-8b98-2f31af407cc8>

<sup>27</sup> By AI-assisted information technologies, we refer to the gamut of increasingly quotidian “weak” AI: algorithmic processes that run in the background of technologies that we increasingly take for granted: social media news feeds, search engines, smartphones, and applications.

<sup>28</sup> That is, sharing aggregated user data with platform users themselves.

than reflect the power imbalances of the conventional labour market exacerbated by the introduction of AI and big data.

Putting faith in a derivative of market-centred self-regulation to address information deficits and power asymmetries invites critical reflection on the somewhat-concealed neoliberal assumption concerning the market as a sufficient regulatory paradigm. Conventional market thinking (which this analysis rejects) is that collective bargaining and private law contracting protections are incubated in pure competitive conditions. In practice market regulatory potency is blunted by structural power asymmetries in the existing labour market arrangements meaning 'bargaining power' from the worker perspective is apocryphal. That said, informed participation as the essential conditions for sustainable self-regulation are designed to counter conventional regulatory capture, powerful to powerless,<sup>29</sup> and obviate any reliance on illusive market competition which the regulatory model cannot totally ensure. These conditions underpin the confidence in *inclusive participatory self-regulation*.<sup>30</sup>

Introducing AI to further disrupt and disempower a 'bargaining' model is not going to be overcome through internal or external regulation alone. If AI for profit exacerbates power asymmetries, the more apparent unfairness of these asymmetries is a consequence of discourses that only monetarise the value of labour as a commodity within the production model, ignoring themes of social good such as job security. The normative commitment of the paper is to promote a worker-favouring regulatory purpose, not alien to market profit, but more comfortable with market sustainability.

### Regulation as Market Stimulus?

Self-regulation<sup>31</sup> is selected as a regulatory style because it offers possibilities for worker inclusion, and if practiced beyond material/profit self-interest motivations primarily, can operate in a transparent and accountable atmosphere where informed participation is

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<sup>29</sup> Short, J. L. (2013). Self-Regulation in the Regulatory Void: "Blue Moon" or "Bad Moon"? *The ANNALS of the American Academy of Political and Social Science*, 649(1), 22–34. <https://doi.org/10.1177/0002716213485531>

<sup>30</sup> Much of the literature on inclusive self-regulation comes from the education sector and focuses on the classroom context with diverse student demographics. Rothstein, M., McLarnon, M., & King, G. (2016). The Role of Self-Regulation in Workplace Resiliency. *Industrial and Organizational Psychology*, 9(2), 416-421.

doi:10.1017/iop.2016.32 put an interesting analysis together connecting self-regulation in the workplace to issues of resiliency. There is much more discussion of participatory self-regulation in the workplace, but it has a heavy focus on tripartism and ideas of stakeholder engagement in the more conventional state/employer/worker paradigm, see Estlund, C. (2005). Rebuilding the Law of the Workplace in an Era of Self-Regulation. *Colum. L. Rev.*, 105, 319-404. This paper is proposing something different – self-regulation wherein market players are included and participate in an empowered environment of information access. Self-regulation empowerment programmes again are not uncommon in a class-room setting, see Cleary, T. J., & Zimmerman, B. J. (2004). Self-regulation empowerment program: A school-based program to enhance self-regulated and self-motivated cycles of student learning. *Psychology in the Schools*, 41(5), 537-550.

[https://knilt.arcc.albany.edu/images/7/74/Cleary\\_and\\_zimmerman.pdf](https://knilt.arcc.albany.edu/images/7/74/Cleary_and_zimmerman.pdf). Empowerment is essential for inclusive participatory self-regulation. It is a novel approach in workplace engagement. The UN's Food and Agriculture Organisation has done some interesting work on self-regulation, information access and gender empowerment which resonates with our model's intentions, see Isenberg, S. (2019). *Investing in information and communication technologies to reach gender equality and empower rural women*. Rome, FAO.

<sup>31</sup> By self-regulation we do not mean ungoverned market arrangements. Instead we prefer a form of 'governed self-regulation' where market players may be required to respond to external constitutional norms and modes of behaviour, and the regulatory practice must be participatory, transparent and accountable. See more: Black, J., & Baldwin, R. (2010). Really responsive risk-based regulation. *Law & policy*, 32(2), 181-213.



empowering.<sup>32</sup> John Braithwaite's work on enforced self-regulation<sup>33</sup>, from which we have drawn inspiration offers a balance between internally moderated and settled compliance measures, an information pathway for highlighting intentional and recurrent non-compliance, and external oversight for correction, repositioning and if necessary, penalty. Added to Braithwaite's model is our condition of automatic information sharing to lessen the internal power asymmetries that he recognizes in market settings where power is a consequence of organizational hierarchies. In addition, the proposed model harnesses technology which in its current form is responsible for information deficit to provide a facility for information access and inclusion. It is assumed that AI-assisted decision-making and data-driven technologies<sup>34</sup> can support and enliven self-regulatory actors or forces by ensuring wider information sharing in a climate of openness and inclusion through information access and clearer explanations of how algorithms impact employment decisions.<sup>35</sup>

In making this assertion, it is not enough to hold that more information means more inclusion, more market power and more empowered regulatory influence. It is recognized that along with information enrichment there is a need for enabling external market modifications that make more likely the involvement of better informed labour-force stakeholders to understand and participation in the decision processes and outcomes which are assisted by AI.<sup>36</sup> Through the inclusion in decision-making of a wider audience of interest, the regulatory project will be targeted on satisfying a greater range of legitimate regulatory interests.<sup>37</sup> Injecting AI-assisted information technologies into the regulatory frame as mutualised capacities for open-access information, but with the specific intentions of revealing and making accountable AI-assisted employment decision-making and data collection, will meet some of the criticisms about capture and power imbalance that reverberate through the self-regulation literature.<sup>38</sup> In this way, AI is a regulatory medium and a regulatory focus.

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<sup>32</sup> These aspirations are often advanced as regulatory outcomes in themselves. The strategy advanced here takes a sanguine market view of their achievement as not measures of regulatory success but facilitator for inclusion, and thereby success.

<sup>33</sup> Braithwaite, J. (1982). Enforced self-regulation: A new strategy for corporate crime control. *Michigan law review*, 80(7), 1466-1507.

<sup>34</sup> By AI-assisted decision-making and data-driven technologies, we refer to the gamut of increasingly quotidian "weak" AI: algorithmic processes that run in the background of technologies that we increasingly take for granted: social media news feeds, search engines, smartphones, and applications.

<sup>35</sup> Later we discuss the mechanics of information looping, the possible resistance to it from platform providers, and the inducements for eventual compliance and participation. Although it also may be a necessary eventual precondition for a more balanced information playing field we do not envisage formal algorithm explainability or auditing in this model.

<sup>36</sup> There is not the time to detail the nature of AI information systems which we see as appropriate beyond building into surveillance technologies information loop capacities specifically framed for aggregated data access by workers and in some cases, customers.

<sup>37</sup> In keeping with the 'social-good' regulatory motivation, vulnerable market participants are the subjects of inclusion and participation. It is assumed that powerful market players such as platform providers, already well serviced with employment data, will not require the model's assistance to participate.

<sup>38</sup> See work by Short (2013); Haines, F. (2011). *The paradox of regulation: What regulation can achieve and what it cannot*. Edward Elgar Publishing..

There are dangers that the common absence of accountability and participatory democracy in some forms of self-regulation<sup>39</sup>, and market power imbalance in labour valuing, will minimize the regulatory force and protective functions for labour at risk. Hence, our intension to include facilities for greater data access and inclusivity to counteract the negative influence of market power asymmetries.<sup>40</sup> In addition, through enforced self-regulation, there will be facilities for exposing non-compliance and seeking the assistance of an external regulatory presence.

Relying on such a model removes the need to debate on whether it is realistic to audit algorithms on which platform commerce is reliant, as the regulatory purpose is turned towards the decisions they facilitate, and their information processing, rather than the science behind the technology. In addition, by requiring the inclusion in algorithm design, facilities for information looping, the operations will be more open to market players and the maths behind the technology which previously helped to disempower worker participation, will now disrupt that data exclusivity and move from regulatory challenge to regulatory solution.

#### The *precariat* – focus for regulatory empowerment

As discussed in more detail when exploring visibilities, gig work – with its pervasive atmospheres of labour exploitation, starkly sets the scene for identifying and answering larger regulatory questions regarding the ‘future of work’ in platform settings, and the extent to which disempowered employment market players can be offered a more meaningful employment engagement through real regulatory participation. More importantly, gig workers straddle a compounded precarity of both unconventional labour standards while not having a stake in the capturing and usage of the digitalization of their experiences.<sup>41</sup> In the platform ecosystem, consumers of communication become data, and that data is a force both for empowering the powerful (platform providers) and disempowering the weak (subjects of data surveillance). Through mass digitised surveillance, worker engagement is both mitigated as privacy dissolves (when consent to this intrusion is an irrevocable condition for access to work) and personal data monetising encapsulates Proudhon’s observation that *property is theft*<sup>42</sup>.

The explosion of platform-centred worker engagement suggests that a combination of management/service delivery automation and better but segmented information and communication technology systems will exacerbate the “fissured workplace”<sup>43</sup>. In ‘The Fissured Workplace’, David Weil traces new labour anxieties down to the changing nature of work and its organization.<sup>44</sup> In a similar vein, Guy Standing notes the global rise of *the*

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<sup>39</sup> Gunningham, N., & Rees, J. (1997). Industry self-regulation: an institutional perspective. *Law & Policy*, 19(4), 363-414..

<sup>40</sup> These market power asymmetries have led to the disputation referred to in the preface. They also are at the heart of wider regulatory challenges in ensuring better work-life quality for gig workers, not the concern of this paper.

<sup>41</sup> An important consequence of more open data access in the regulatory frame is the inclusion of secondary data monetizing as an up until now, largely concealed feature of work-life quality.

<sup>42</sup> The application of Proudhon’s aphorism against the commodification of digitised property is discussed in Findlay M. (2017)

<sup>43</sup> Weil, D. (2014). *The Fissured Workplace*. Harvard University Press.

<sup>44</sup> Weil (2014)

*precariat*, workers who share economic and social insecurities as a function of international movements of capital away from conventional means of production to data environments.<sup>45</sup> More recently, the literature around precarity and gig work has started to locate on the figure of the platform worker finding – typically fragmented – work through platform applications. Platform work is a form of labour that ‘gives organisations or individuals access via online platforms to large number of workers willing to carry out paid tasks’<sup>46</sup>.

Concurrent economic growth slowdown, COVID-19 pandemic shutdowns and a technological leap in artificial intelligence (AI) has prompted much anxiety about the future of work.<sup>47</sup> Negative social predictions regarding the short and medium-term job security consequences from the injection of AI technologies into employment markets fuel speculation around labour substitution, and structural unemployment. Particularly so in less skilled sectors, a polarization of neoliberal resistance to the role of any universal basic income has morphed into horse-trading the restructuring of the discussion so that UBI if conceded should replace existing forms of welfare provision.<sup>48</sup> Such anticipated impacts recognize an overall deterioration of job opportunities and what remains becoming more dependent on market mobility and re-skilling. Overall these developments for a human labour force desperate to market its labour at more than subsistence valuing exacerbate a growing inequality between permanent and freelance work.<sup>49</sup> Although our regulatory model is not all encompassing of these structural inequalities, and labour-force uncertainties, they provide an inescapable market climate within which the precariate is further disempowered through dispossession of their personal data.

Futurist considerations about the chances of post-capitalism and trans-human worlds contemplate the demise of wage labour and new collective economies prioritizing sustainability above wealth creation and growth<sup>50</sup>. The intersection of AI, labour market risk and uncertainties regarding the essence of human agency manifests in labour transition narratives that vary industry to industry (manufacturing, healthcare, finance), negatively influencing work lives in highly differentiated ways. Empirical evaluations of these context-specific encounters between technologized capital and transitional means of production suggest specific criteria of vulnerability (such as task substitution).<sup>51</sup>

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<sup>45</sup> Standing, G. (2014). *A precariat charter: From denizens to citizens*. A&C Black.

<sup>46</sup> Valenduc, G., & Vendramin, P. (2016). *Work in the digital economy: sorting the old from the new* (Vol. 3). Brussels: European trade union institute. p.38.

<sup>47</sup> Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. WW Norton & Company; Ford, M. (2015). *Rise of the Robots: Technology and the Threat of a Jobless Future*. Basic Books.; Yang, A. (2018). *The war on normal people: The truth about America's disappearing jobs and why universal basic income is our future*. Hachette UK.

<sup>48</sup> Frey, C. B., & Osborne, M. A. (2017). The future of employment: How susceptible are jobs to computerisation? *Technological Forecasting and Social Change*, 114, 254–280. <https://doi.org/10.1016/j.techfore.2016.08.019>

<sup>49</sup> Buyst, E., Goos, M., & Salomons, A. (2018). Job polarization: An historical perspective. *Oxford Review of Economic Policy*, 34(3), 461–474. <https://doi.org/10.1093/oxrep/gry003>

<sup>50</sup> Mason, P. (2017). *Postcapitalism: A Guide to Our Future* (Reprint edition). Farrar, Straus and Giroux; Srnicek, N., & Williams, A. (2015). *Inventing the Future: Postcapitalism and a World Without Work*. Verso Books.

<sup>51</sup> Frey (2019)

The relationship between labour and capital has never been more open to question due to the nature of *datafication*<sup>52</sup>. Despite the phenomenon being taken for granted in recent years, implications for labour are gaining traction amidst a wide if sporadic spectrum of worker pushbacks against tech companies<sup>53</sup>. Much of this resistance is against surveillance technologies and employer intrusion. Little translates into any detailed discussion of worker empowerment through access to secondary data automatically produced through surveillance.

Having canvassed the nature of the labour context within which the regulatory model will be located, its focused aspirations and the crucial role projected for AI-assisted information technologies to disrupt information asymmetries and market power imbalance, a central question follows:

How can and will inclusive self-regulation aid the rebalancing of workers' power in vulnerable market settings?

- On the strength of recognizing market inadequacy for equitable employment arrangements, regulators need to ask, can a self-regulation approach which better includes worker participation and worker's interests have a positive effect in apportioning responsibility for worker repositioning and compensation?<sup>54</sup> The other side of that concern is, what risks exist in a self-regulation model for further disadvantaging worker interests regulation is captured for the benefit of market profit rather than social good?
- Through exploring the market, organizational, social, and normative conditions when AI-assisted information technology is advanced in a self-regulatory framework how may – by employing the inclusive possibilities that data-driven technologies present to us – regulation itself act as a disruptor?

In confronting these questions and adapting their answers into specific regulatory solutions the remainder of the paper will be organized as follows: part one lays the groundwork for thinking about self-regulation in the gig economy by reviewing the challenges that workers are facing in accessing data and benefiting from its application in their work-life experience. While some of these themes have been touched on above, they require more specific contextualisation around information disempowerment and information emancipation. Part two delves into a broader realm of disempowerment – data politics – highlighting an emerging ecosystem of surveillance and transits in informational power. Recognising the gig/platform economy situated within this wider political economy offers analytical possibilities around *dual-valued production* that has thus far been insufficiently addressed in emerging regulatory options. We understand “dual-valued production” as a way of encapsulating the underlying business models of platform companies which primarily capture and repurpose user data for service provision and multiple forms of value creation. With the growth of platforms, there has been a steady emergence of ‘two-sided markets’.

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<sup>52</sup> Mayer-Schönberger, V., & Cukier, K. (2013). *Big data: A revolution that will transform how we live, work, and think*. Houghton Mifflin Harcourt.

<sup>53</sup> Smith, E. (2018). The techlash against Amazon, Facebook and Google—and what they can do. *The Economist*, 20.

<sup>54</sup> Later the work will elaborate on a dimension of corporate social responsibility which requires recognition of the cost of repositioning from windfall profits as they arise through labour downsizing.

The first caters to consumers who benefit from free or low-cost services, while the second comprises of and caters to those involved in the provision of these services.<sup>55</sup> Part three briefly summarizes emerging regulatory options – from algorithmic regulation, digital cooperatives, and down to the tightening of data protection regimes – and discusses their key limitations. Part four identifies worker revolts that have been occurring recently, and floats the idea of incorporating forms of AI-assisted information looping as a potential means of addressing the untenable labour relations manifesting in gig work, as a way forward for the sustainability of an AI-augmented labour future in platform economies.

### Visibilities and invisibilities – Blinkering the Regulator

This paper seeks to bring data politics into the discussion around platform work and the future of work, in order to draw on insights around changing power relations and forms of value. Ruppert et al. conceptualise data politics as “concerned with not only political struggles around data collection and its deployments, but how data is generative of new forms of power relations and politics at different and inter-connected scales”<sup>56</sup>. In contemporary service-delivery markets, an often-undisclosed relationship between data and profit stimulates the commodification of employment and surveillance data<sup>57</sup>. In reading data politics into the wider literature on the changing nature of work, we seek to chart an alternative course of action for workers in the platform economy, when they are offered inclusion and participation in data production, digitising and commercialisation..

As gig labour is a global phenomenon, different socio-demographic contexts for both conventional and disruptive labour regulation and their associated market pressures speak to the varied histories of labour politics in different regions around the world. With platform providers generally refusing to recognize themselves as employers, and workers who no longer identify with the term ‘employee’ but as ‘freelancer’ or ‘independent contractor’, and who accept the socialization of risk that comes with the gig economy, discussions about the conditions of self-regulation for social good cannot be limited by older situations of labour politics.

From their initial conceptions, platform work was imagined and sold as a pathway towards greater individual freedom and autonomy. Workers, it was said, would have the autonomy to choose when, where, and how they wanted to work. In doing so, the platforms would expand labour opportunities to areas and communities where such openings were previously limited<sup>58</sup>. Accepting at best this does not represent gig workers whose options are platform labour or nothing, the argument that these systems are merely ‘digital

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<sup>55</sup> Rochet, J. C., & Tirole, J. (2003). Platform competition in two-sided markets. *Journal of the european economic association*, 1(4), 990-1029. See also, Trabucchi, D., Buganza, T., & Pellizzoni, E. (2017). Give Away Your Digital Services. *Research-Technology Management*, 60(2), 43–52.

<sup>56</sup> Ruppert, E., Isin, E., & Bigo, D. (2017). Data politics. *Big Data & Society*, 4(2), 205395171771774. P.2. See also, Beraldo, D., & Milan, S. (2019). From data politics to the contentious politics of data. *Big Data & Society*, 6(2), 2053951719885967

<sup>57</sup> van Doorn, N. (2019, July 9). On Data Assets and Meta-platforms. *Platform Labor*. <https://platformlabor.net/blog/on-data-assets-and-meta-platforms>; See also Sadowski, J. (2019). When data is capital: Datafication, accumulation, and extraction. *Big Data & Society*, 6(1), 205395171882054. <https://doi.org/10.1177/2053951718820549>

<sup>58</sup> Valenduc and Vendramin (2016)

interfaces' or 'frictionless marketplaces'<sup>59</sup> denies the employment relationship between the platform and its workers and ignores/hides/evades labour laws where they exist and have purchase. In addition, platform operators are crafting and relying on new discourses of engagement and disengagement (talking of independent contracting and new connections between provider and customer) designed to obscure the absence of a conventional obligations and responsibilities of employer and employee interdependence. Consistent with this *sleight of hand* rhetoric is the euphemistically labelled 'flexible scheduling'. Such positive spin on disempowering piecework controlled largely at the platform's convenience purports misleadingly more individualist control over a worker's own schedules, times, and resources, in place of full-time engagement. Expanding on the personal premise of individual choice, society as a whole is said to benefit through the sharing of unused resources and what is represented as collaborative consumption.

More recently, critical analyses have sought to lift this mask<sup>60</sup>. The reality of gig workers employment lifestyles reaches a more sanguine consensus of low wages, poor conditions, and unpredictable income streams<sup>61</sup>. In addition to discriminatory labour terms, there are the invasions of worker space in the name of surveillance which further challenge worker dignity and the reality of free choice. While there are genuine productivity and customer satisfaction motivations for some transparency surveillance, even the best intentioned comes at a cost for privacy and worker dignity. More sophisticated surveillance work tracking – both physical and electronic – and the concealing of information thus collected through unaccountable and non-transparent algorithmic management are increasing across working environments, and particularly for gig workers, are becoming the norm in their work life experience. According to one report, 22% of platform providers<sup>62</sup> around the world are collecting data on their employee's movements, 17% monitor computer use, and 16% monitor their staff's calendars<sup>63</sup>. Amazon fulfilment centers monitor and track their employees for performance standards<sup>64</sup> while Walmart patented technology that would let them listen in on customers' conversations with their employees. Cogito is an AI-company whose goal is to 'make workers more effective by giving them real-time feedback'. Under efficiency justifications the software listens in to conversations at calls centres and tallies

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<sup>59</sup> "Digital platforms like Uber and Airbnb harness the power of the internet to offer a frictionless marketplace that powerfully matches supply and demand so as to make whole new sets of assets available to customers", Radjou, N. (2016, February 17). Tackling Big Global Challenges with Low-Cost Innovation. *Harvard Business Review*. <https://hbr.org/2016/02/tackling-big-global-challenges-with-low-cost-innovation>

<sup>60</sup> Wood, A. J., Graham, M., Lehdonvirta, V., & Hjorth, I. (2019). Networked but Commodified: The (Dis)Embeddedness of Digital Labour in the Gig Economy. *Sociology*, 53(5), 931–950.

<https://doi.org/10.1177/0038038519828906>; Prassl, J. (2018). *Humans as a service: The promise and perils of work in the gig economy*. Oxford University Press.

<sup>61</sup> Srnicek, N. (2017). *Platform capitalism*. John Wiley & Sons. See also Rubery, J., Grimshaw, D., Keizer, A., & Johnson, M. (2018). Challenges and contradictions in the 'normalising' of precarious work. *Work, Employment and Society*, 32(3), 509-527; Tassinari, A., & Maccarrone, V. (2019). Riders on the Storm: Workplace Solidarity among Gig Economy Couriers in Italy and the UK: *Work, Employment and Society*. <https://doi.org/10.1177/0950017019862954>

<sup>62</sup> This term covers enterprises which, through employment and service provision platforms, make money by connecting customers to a largely uncontracted and under-regulated labour-force, for significant agency profit.

<sup>63</sup> Woollacott, E. (2019, May 14). AI in the workplace: Is it good or bad for productivity? *Raconteur*.

<https://www.raconteur.net/technology/ai-workplace-surveillance>

<sup>64</sup> Woollacott (2019)

scores onto a dashboard that can then be viewed by supervisors<sup>65</sup>. Percolata uses sensors in stores to calculate a productivity score for workers. Earlier this year, it was revealed that DoorDash was surveilling gratuity payments and using tips to substitute for workers' base wages<sup>66</sup>.

Worker surveillance is not a new phenomenon: earlier motivations for worker surveillance related to delegating supervision responsibility and decentralising accountability frames that are still familiar today. Researchers previously made the argument just-in-time (JIT) and Total Quality Control (TQC) systems, rather than delegating responsibility to workers in teams of support as well as supervision, represented enhanced managerial control through improved surveillance technologies, and governed over workers' life experience<sup>67</sup>. They argued that

the development and continued refinement of electronic surveillance systems using computer-based technology can provide the means by which management *can achieve the benefits that derive from the delegation of responsibility to teams while retaining authority and disciplinary control* through ownership of the superstructure of surveillance and the information it collects, retains, and disseminates.<sup>68</sup>

Others similarly observe,

the tendency towards decentralization expresses itself, not in the autonomy of individuals, but in the increasing arrangement of social life by centralized systems... [since] an IT infrastructure can help overcome spatial constraints on organisations, such that it becomes possible to orchestrate widely disseminated sites of production *as if they are centralized – flexibility is gained without loss of control*"<sup>69</sup>.

Nonetheless, what is new about surveillance in the platform/gig setting is an employment terrain where worker engagement is heavily organised through algorithmic management and communicated across high tech information platforms. The platform and the surveillance are interconnected techno-systems. The extent and intrusion of such surveillance is profound, and the platform technology syncs it into the work-life quality of gig workers. Better seen as a dynamic to disempower worker engagement through privacy intrusion, the capture of personal data and its unauthorised commodification through algorithmic observation aligns with earlier trends of control as discipline in the workplace.<sup>70</sup>

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<sup>65</sup> Roose, K. (2019, June 23). A Machine May Not Take Your Job, but One Could Become Your Boss. *The New York Times*. <https://www.nytimes.com/2019/06/23/technology/artificial-intelligence-ai-workplace.html>

<sup>66</sup> Roose, K. (2019, February 6). After Uproar, Instacart Backs Off Controversial Tipping Policy. *The New York Times*. <https://www.nytimes.com/2019/02/06/technology/instacart-doordash-tipping-deliveries.html>

<sup>67</sup> Sewell, G., & Wilkinson, B. (1992). 'Someone to Watch Over Me': Surveillance, Discipline and the Just-in-Time Labour Process. *Sociology*, 26(2), 271–289. <https://doi.org/10.1177/0038038592026002009>

<sup>68</sup> Sewell and Wilkinson (1992); p.283, emphasis added.

<sup>69</sup> Webster, F., & Robins, K. (1993). "I'LL BE WATCHING YOU": COMMENT ON SEWELL AND WILKINSON. *Sociology*, 27(2), 243–252. JSTOR; p.247.

<sup>70</sup> The literature on the relationship between surveillance and disempowerment is well established and the workplace as a space for discipline and disempowerment is well recognised. See Foucault M. (1991) *Discipline and Punish: the birth of the prison* London: Penguin Books. Interestingly, a better translation from the French is 'Surveillance' and punish.

In its current incarnation, and of additional and certainly not lesser importance, surveillance produces commodifiable data generating prescient concerns about data control, access, possession, portability and integrity. The algorithmic management of surveillance data about peoples' work-lives and working patterns also provokes issues of transparency, explainability and accountability that are at the heart of principled-based AI governance strategies.

Is it possible to flip intrusive surveillance mechanisms used to monitor worker amenability onto shared information repositories which equally make platform operators and corporate managers accountable for the types of behaviors that they reward and punish?

Paradoxically, from a regulatory angle, the outcomes of algorithmic governance can be required to make visible, the motivations and actions of the surveiller and the surveilled. Whether this is through algorithmic justice conventions or more specific feed-back looping that informs all stakeholders about the production of personal data and logs use, surveillance technology has a capacity, appropriately directed, to disrupt this one-way data streaming.

These intrusive technologies are also rendering visible the sociality upon which much labour-force bonding is premised. Consider the network effects of data-driven technologies monitoring worker movement, organization, work-place interactions and relationships designed to minimize opportunities for mundane worker resistance and solidarity. As social media can more organically foment dissent, so too ecosystem surveillance can intrude into personalized employment relationships in ways not previously visible or possible at today's scales of speech and reach<sup>71</sup>? Such surveillance has the opposite effect to social-media engagement when it comes to mundane worker resistance. Wood and his colleagues remind us that labour in the gig economy

...[remains] embedded within worker's interpersonal networks, [but] at the same time being dis-embedded from cultural and legal norms that would limit its commodification.<sup>72</sup>

Inclusive, participant self-regulation that draws on open access to surveillance would slow down the dis-embedding process. In addition to disempowerment through surveillance, there is disempowerment through reclassifying labour. The platform arrangement for service delivery erodes the distinction between what labour is financially compensated and what is deemed a necessary and gratis precursor to platform participation. In their research on Uber, scholars found that workers tend to "engage in an enormous amount of unpaid work first to ensure that Uber has calculated their pay correctly, a particularly onerous task given the opaqueness of algorithms involved in what is otherwise described as a "flexible" or dynamic price structure."<sup>73</sup> The challenge for workers and regulators posed in navigating such actuarial obscurity is revealed in work on AirBnb, where researchers observe that

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<sup>71</sup> Brown, E. (2019, October 11). Here's why more US employees self-censor social media posts. *ZDNet*. <https://www.zdnet.com/article/heres-why-more-us-employees-self-censor-social-media-posts/>

<sup>72</sup> Wood et al. (2019)

<sup>73</sup> Collier, R. B., Dubal, V., & Carter, C. (2017). *The Regulation of Labor Platforms: The Politics of the Uber Economy*. 42, p.6.



...hosts have no choice but be placed in the algorithmic environment... they must first *make sense* of what is algorithmically driven, such as “smart-price”, review ratings, and “Superhost” status. This sense-making process is not straightforward. Due to *algorithm ambiguity*, Airbnb hosts often are confused about “what is actually behind” algorithmic management outcomes.<sup>74</sup>

Elsewhere, Gandini has highlighted how many gig platforms embed forms of individual/personal investment at the heart of the labour process as a result of performance evaluation such as role feedback, ranking, and rating systems designed to calibrate social interaction between workers and consumers/clients<sup>75</sup>. Gig work’s reliance on rating systems is more than a necessary evil as part of a decentred performance system where consumer satisfaction is a crucial market variable. Rating the worth of labour on how it is received by a more empowered market player leads to an intensification of worker estrangement by tying their value to an ‘economy of feeling’ which might or might not be concerned with productivity.

The undeniable invasion of platform ‘entrepreneurial disruption’<sup>76</sup> and re-messaging into worker engagement, disputes counterclaims of freedom and flexibility when choice to participate is fundamentally conditional through obligation that,

exercises a great degree of control over many aspects of the gig, particularly over issues of pace of work (e.g., who gets a request and how long one has to respond), the option of the rating system, driver deactivation, and dynamic pricing.<sup>77</sup>

Not to be factored out of the regulatory equation, the commercial profit reality driving the desire for intrusion is that;

...platform owners, who are dependent on the trust of user communities, exploit the aggregated attention and input of the networks in different ways, even as they enable it. Such platforms are dangerous as trustees of any common value that might be created, due to their speculative nature and the opaque architecture of their platforms<sup>78</sup>.

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<sup>74</sup> Cheng, M., & Foley, C. (2019). Algorithmic management: The case of Airbnb. *International Journal of Hospitality Management*, 83, 33–36, p.34.

<sup>75</sup> Gandini, A. (2019). Labour process theory and the gig economy. *Human Relations*, 72(6), 1039–1056. <https://doi.org/10.1177/0018726718790002>

<sup>76</sup> ‘Disruption’ as it is used by promoters of gig economies is positively represented as attacking conventional market inefficiencies and opening up new opportunities for growth through shaking of conventional regulatory obligation. If, however it is seen as the disruption of work-life quality factors in such comprehensive and insidious ways then the negativity of its dimensions are more apparent. In the information looping we advocate for AI-assisted information technology, disruption of [platform data exclusivity and worker disempowerment offers a way back towards concerns for work-life quality above economic profitability.

<sup>77</sup> Gandini (2019), p.14.

<sup>78</sup> Pazaitis, A., Kostakis, V., & Bauwens, M. (2017). Digital economy and the rise of open cooperativism: The case of the Enspiral Network. *Transfer: European Review of Labour and Research*, 23(2), 177–192. <https://doi.org/10.1177/1024258916683865>, p.179.

In terms of actual worker engagement, the rise in 'flexible labour' has led to diminishing labour power in particularly vulnerable market arrangements. Looking at trends in gig work negotiation space, scholars have noted that;

Labour platforms should be seen as a recent step in a type of sectoral or firm restructuring that involves a longer trend of growing dualization of the labour market: the growth of various forms of "alternative," contingent, or contract workers, who do not have the rights or social protections of "employees," as per employment and labour law<sup>79</sup>.

In extreme cases, life can be turned into work without the workers themselves becoming aware of it: the 'users' of Facebook, for example, inadvertently produce the platform's most important resource, the data they leave behind as indelible traces of their increasingly virtual lifestyles, while tens of thousands of would-be 'influencers' spend their days concocting images and videos endorsing products in the hope of eventually being paid for it by manufacturers.

Such an atmosphere of inverted labour/employer/customer arrangements promotes instability and exploitation. Absent of social insurance and any welfare-consciousness, central elements of work-life quality referred to in the preface are argued away with a discourse of self-selection and streamlining;

Traditional analytic categories such as wage labour or the labour market reach the limits of their usefulness here. In the giant decentralised service factory, you no longer sign an employment contract but are given a socially networked opportunity to do work – this work can include what we produce for Apple, Google, Facebook, Tinder and the like. We believe ourselves to be 'using' them when in fact we are being used. Is there a role in this world for labour law, for social protection, collective protest – in other words, for politics? Can we hope for the return of independent craftspeople, ready to organise in modern guilds and resurrected trade unions, or of the gang system of the docks or the aircraft industry as it still existed half a century ago in Britain and, to a lesser extent, the United States? Or could civil law take the place of labour law in regulating the new factories? If our societies still see it as their task to civilise the world of organised production, they'd better get on with it.<sup>80</sup>

Against a stark picture of transition, Streek asks the right regulatory questions. However, as for using civil law to replace public law as a regulatory answer, he misses the point that law is part of neoliberal collusion and therefore has to be part of any transition to a new employment sociality<sup>81</sup>. Information access can be mandated through law as can regulatory participation and new privacy protections against rampant surveillance can be legislated. However, once this external frame in place, forces of inclusive self-regulation must be relied

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<sup>79</sup> Collier et al. (2017), p.3.

<sup>80</sup> Streek, W. (2019, February 7). Through Unending Halls [Review of *Behemoth: A History of the Factory and the Making of the Modern World*]. *London Review of Books*, 41(03). <https://lrb.co.uk/the-paper/v41/n03/wolfgang-streek/through-unending-halls>

<sup>81</sup> Findlay (2017)

upon if the market is to be utilized as a regulatory field and not act as an agent of subversion as is the case currently. Market externalities such as public law, or internalities such as private cannot achieve power dispersal without additional regulatory influence away from private property and towards social good.

The commodification of labour in a market model driven by profit for the owner of the means of production and by under-valued wages for the worker, is presently inevitable in neoliberal labour markets, if unlikely to last into the medium-term future as currently configured<sup>82</sup>. During this phase of transition in labour markets and the re-imagining of property relations associated with capital and production, the introduction of big data and AI into the human/machine interface has capacities either to exacerbate or resolve power imbalances inherent in recent commodification models depending on the nature and inclusive reach of regulatory control. As such, the regulator needs to swing back the power shift within conventional market models using regulatory technologies designed in other eras of labour arrangements, or look at new regulatory relationships and styles which, rather than being determined by advancing market profitability and minimizing labour involvement, works on information transparency and inclusive access to offer new solidarities.

Ideally, if the shift to modern AI-assisted occupation environments leads to new solidarities forming across vulnerable market participants, then through stimulating visibility of sociality regulatory forums or social media communities can lead to more equitable solidarities where mundane dissent builds normative pressure on these platform providers to recognise the hypocrisy of denying employment arrangements, while demanding the power to intrude into worker behaviours and their personal data as if such obligatory relationships are in place.

As noted already, workers have conceded much market power in climates of labour-force instability and bargained down value. As these vulnerabilities can be extended and deepened with the introduction of AI-displacement, regulation strategies are required to be developed for a new employment sociality, one not based on empowering dissent alone but on re-balancing the positions of market players around new notions of market value, not determined by depressed bargaining power but through improved access to regulatory representation. These aspirations are neither utopian nor simply humanitarian. Instead, they recognise the harsh reality that if the labour-force, through AI augmentation, is to transit into other sustainable occupational environments beyond wage labour<sup>83</sup> and do so with as little disorder as can be expected, then the objects of transition must have more say in its processes and outcomes.

### Evaluating the regulation of labour engagement in the digital economy

The increased prevalence of digitally enabled, gig-based work is actively fragmenting labour standards and disintegrating traditional jobs into short term tasks with no employment safety nets... such an archaic model of work is neither innovative nor is

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<sup>82</sup> Moriarty, P., & Honnery, D. (2018). Three futures: Nightmare, diversion, vision. *World Futures*, 74(2), 51-67.

<sup>83</sup> Benanav, A. (2019). AUTOMATION AND THE FUTURE OF WORK-II. *New Left Review*, (119), 117-146.

it removing traditional barriers to efficiency. Rather, the model seeks to reintroduce competitive Taylorism in a laissez-faire environment, disrupting over 150 years of agitation by workers and unions who struggled to eradicate this form of labour exploitation and replace it with civilized employment relationships.<sup>84</sup>

Despite the currently inhospitable work-life environment for many in the gig economy, as yet the literature that has sought better prospects for workers has rarely interrogated how new forms of *data relations* and digitalization mediates the organization of power in labour markets. Before any interrogation of regulatory need and how it is best met, it is essential to address crucial issues of context.

Presently with the broad acceptance of the digitalization of life, data and politics are becoming increasingly intertwined. The dual structures of data infrastructures and pathways of data access now mean that big data is employed largely for commercial profit. Shoshana Zuboff argues that this profit motivation has led to a new form of capitalism – where big technology platforms extract of ‘surplus data’ in the form of behavioural data and trade on their proprietary analytical (predictive) value<sup>85</sup>. The platform, as such, sucks up profit while the user/service provider simply generates data. Responding to this argument, Couldry and Mejias have argued that rather than marking a new stage of capitalism, data relations run parallel with labour relations in a market for data that can never be beyond the machine<sup>86</sup>. The once-observed dominant role of labour as the means of production in more conventional capitalist iterations, is now replaced by data commodification through surreptitious surveillance technologies as a primary market driver. What happens to worker engagement as labour value retreats in the face of encompassing data commodification?

Unlike Couldry and Mejias’s envisaging of data colonialism mirroring the function of historical colonialism, the eventuality of cheap data above cheap labour not as a unidirectional flow of rationalities but rather as a parasitic dynamic where data feeds from labour, is outpacing the profit of labour in the market. For this to occur, data commodification needs the datafication of human experience<sup>87</sup> to become a market commodity. Data extraction necessitates the mining of human experience, and in turn rationalizing it into data messages, abstract from human life becoming something which is exchangeable<sup>88</sup>. The digitalization and datafication of assets, as such, is contributing to a significant transformation in value creation that marks the platform labour-capital relationship.

Out from these observations there are disempowering market influences operating in tandem. The first is surveillance capitalism, extracting data from life experience and commodifying it for market exchange. The second draws from Benanav’s observations of a

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<sup>84</sup> Stewart, A., & Stanford, J. (2017). Regulating work in the gig economy: What are the options? *The Economic and Labour Relations Review*, 28(3), 420–437. <https://doi.org/10.1177/1035304617722461>

<sup>85</sup> Zuboff, S. (2019). *The age of surveillance capitalism: The fight for a human future at the new frontier of power* (First edition). PublicAffairs.

<sup>86</sup> Couldry, N., & Mejias, U. A. (2019). *The costs of connection: How data is colonizing human life and appropriating it for capitalism*. Stanford University Press.

<sup>87</sup> Mayer-Schönberger and Cukier. (2013).

<sup>88</sup> Couldry and Mejias. (2019)

deepening economic stagnation that manifests as mass underemployment.<sup>89</sup> The combined effect of these regressive forces sees the extraction of data for profit exacerbating that underemployment – both by decreasing labour’s share of income by concentrating returns to those at the top of platform management *and* by the furthering the capacity for breaking jobs into segmented tasks and thus *adding* to what Graham and Anwar have identified as the planetary labour market.<sup>90</sup> This notion places tasks as sub-labour forms which are disaggregated while still connected to more consolidated labour objectives. Disaggregation in this way further fractures sustainable wage labour.

In his article, Amir Anwar argued:

The contemporary gig economy represents the latest manifestation of the restructuring of capitalism...advancements made in digital technologies have generated new divisions of labour, defined as the specialisation or separation of tasks between different types of workers...on platforms, commodification of labour power is made possible as thousands of workers complete globally for digital tasks...for Marx, alienation of workers is at the heart of capitalist production... Alienation is even more present in the way the global gig economy is organised and controlled. Job descriptions on platforms are often vague and unspecified, the client is looking for workers with the lower rates rather than a certain skill set. Workers do not know who their client is. The fact that workers are competing for short-term gigs like these means that they have less incentive to know what they are creating, for who and to what purposes. Thus, the more work they do, the more alienated they become...<sup>91</sup>.

The nature of data market relationships within digital employment arrangements highlights information deficits, surreptitious data acquisitions, and irresponsible data commodification that have become institutional features of employment arrangements. Data commodification includes monetary value that might be created secondary to work being done – either emerging from surveillance technologies at places of employment, or through the collection and selling of client/service-provider data through third-party brokers. Just by one’s interaction with – or perhaps proximity to – digital platforms, data is produced and potentially commodified. Van Doorn has pointed out that through their production of raw data, gig workers engage in ‘dual value production’ in the following manner,

...besides extracting rent *from* each transaction they orchestrate, platforms can also extract data *about* these transactions, which means that gig workers can likewise be understood to provide an ‘informational service’ to platforms... [as such] the monetary value produced by the service provided is augmented by the use and speculative value of data produced before, during, and after service provision.<sup>92</sup>

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<sup>89</sup> Benanav, A. (2019). AUTOMATION AND THE FUTURE OF WORK-I. *New Left Review*, (119), 5-38.

<sup>90</sup> Graham, M., & Anwar, M. (2019). The global gig economy: Towards a planetary labour market?. *First Monday*, 24(4).

<sup>91</sup> Anwar, A. (2018, August 8). How Marx predicted the worst effects of the gig economy more than 150 years ago—NS Tech. *New Statesman*. <https://tech.newstatesman.com/guest-opinion/karl-marx-gig-economy>

<sup>92</sup> van Doorn (2019)

Inverting worker productivity from labour to data, and revaluing labour value against data marketisation, is the context from which the regulatory effort needs to reposition workers centrally within this new employment dynamic. At the very least, if data – compulsorily extracted and unaccountably commodified – remains out of the reach of work-place bargaining, then any regulatory focus on labour productivity alone will miss touching the reality on new market arrangements. Add to this anonymous human engagement across platform service provision, the human/machine interface (each dehumanising) and the position of workers in any counter regulatory frame becomes an essential consideration in its potential impact in reasserting labour value and worker integrity.

The organization of workers in the digital economy is an important aspect to consider in empowerment projects. As workers on digital platforms become increasingly atomized and geographically dispersed, it is more difficult for them to organise and participate in social dialogue and collective bargaining. Moreover, the concentration of global digital platforms limits workers' bargaining power which is usually temporarily and spatially bound. In this context policymakers need to ensure that the value, in terms of productivity gains that may emerge from digitalization, is distributed in a fair manner between labour and capital, and that workers understand it as an asset of their work-life, or contain it.<sup>93</sup>

Recognising automation, dispersal and disempowerment, regulatory policy makers need to craft styles that integrate currently isolated market players (workers in particular) so that with access to more and better information their participation in the regulatory enterprise may be rewarding, with a consequence of opening up greater appreciations of their labour value and their personal integrity.

Underpinning such regulatory inclusion is the necessity to respond to labour disruptions with a worker-focus for the foundational motivation of market sustainability, often under-emphasised in digital economy contexts. Turning power dispersal intentions into policy outcomes require mindfulness of how digital economies – and platform-based arrangements in particular – value (or devalue) labour and how transiting labour as data to magnified market profit is achieved through concealed data processing. Such valuation might be understood as a two-step market dynamic:

1. The epistemic process of making something – a behaviour – *known* and then only *knowable* for those willing to pay for the privilege;
2. Acting upon that knowledge as a chain of commodification and market wealth creation

Workers in platform arrangements are presently the largely passive objects of what is known and the excluded market players from any further benefit through the commodified valuation of their data<sup>94</sup>. Reflecting on empowered forms of labour engagement in such a market of data exclusivity (such as worker organisations or market cooperatives) and

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<sup>93</sup> UNCTAD. (2019). Digital Economy Report 2019: Value creation and capture—Implications for developing countries.

<sup>94</sup> Srnicek (2017); See also, Kenney, M., & Zysman, J. (2018). *Work and Value Creation in the Platform Economy* (SSRN Scholarly Paper ID 3253673).

adapting their benefits to a platform economy, will require regulation at the point of knowing – and of commercially acting on that knowledge.

Minus the opportunity or likelihood of organised labour counter-movements, if regulation is to rebalance market power in the direction of labour-force, the regulator should recognise and employ the importance of this digital infrastructure as part of the problem and part of the solution. From such thinking, and unique in our argument, is the recognition of turning to AI-assisted information technology towards the regulatory disruption of exclusionist platform power imbalance. As previously suggested, this would represent a positive regulatory development if such incorporation was for the purposes of illuminating the decision-making process that comprise the interface between human agency and AI, as well as their consequences we are trying to regulate.

In parallel with political empowerment through technological augmentation to regulatory purposes, Morozov furthered Mayer-Schönberger and Ramge's identification of 'feedback data'<sup>95</sup> as a future site of empowerment politics by arguing that,

We need to widen the scope of the concept and consider 'feedback infrastructure' itself: the ownership and operation of the means of producing 'feedback data' are at least as important as the question of who owns the data itself. The crucial battles ahead will involve the role of this 'feedback infrastructure' in the reinvention of the political projects of both left and right.<sup>96</sup>

A more productive regulatory discussion, as such, moves away from confronting predatory and exclusive data ownership/control, to being involved in the active shaping of data dissemination. In this discourse, it becomes more convincing to confront push-back against data feedback, rather than challenging or contesting data ownership/control as the single regulatory purpose, and instead to create a worker-focused impetus for data sharing. Ours is not an argument for the removal of barriers currently existing unencumbered flows of data,<sup>97</sup> but to highlight that in data assemblages<sup>98</sup>, there are choices to be made in the conceptualisation of data and its subsequent movement from one set of social actors to another which are implicated in entrenched power distributions. As has been argued by others before, "data capture and its use to meet specific needs or interest are what makes it valuable; not data itself"<sup>99</sup>. We thus shift the grounds for discussion away from boundary formations around data – data as a form of property – to looking at the ways in which data

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<sup>95</sup> Mayer-Schönberger, V., & Ramge, T. (2018). *Reinventing capitalism in the age of big data*. Basic Books.

<sup>96</sup> Morozov, E. (2019). Digital Socialism? The Calculation Debate in the Age of Big Data. *New Left Review*, (116), 33-67.

<sup>97</sup> To do so with masses of personalized or non-aggregated data would open up real privacy and integrity concerns which would undermine the success of efforts for information looping.

<sup>98</sup> Kitchin, R., & Lauriault, T. (2014). *Towards Critical Data Studies: Charting and Unpacking Data Assemblages and Their Work* (SSRN Scholarly Paper ID 2474112). Social Science Research Network. <https://papers.ssrn.com/abstract=2474112>

<sup>99</sup> Lee, A. J., & Cook, P. S. (2019). The myth of the "data-driven" society: Exploring the interactions of data interfaces, circulations, and abstractions. *Sociology Compass*. <https://doi.org/10.1111/soc4.12749>

friction<sup>100</sup> might be enhanced or smoothed out when the processes of labour are increasingly datafied.

An important driver behind re-empowering worker engagement is not humanity alone, but a much harsher recognition that while their labour is further devalued through new and more vicious divisions of labour (as an appendage to an app), the commodification of work-life data about human experience argues for workers' reclaiming an essential position as a means of production. As Stewart and Stanford suggest, the thin aura of innovation surrounding promotional arguments for gig economies<sup>101</sup> can as easily be understood as some ahistorical, anti-regulation reversion. This 'innovation/liberation' discourse that speaks about freeing up under-used resources, and empowering freelanced labour, washes away generations of struggle against exploitation for fairer market conditions covering disempowered stakeholders. As such this battle for legitimate discourse is more than what meaning do you swallow, but who wins and who loses from which side the regulator sits.

### Regulatory Options

This section looks briefly at some regulatory reversions which are appearing in the wake of gig work and its lack of worker protections. In examining the limitations of two regulatory forms when positioned in the less visible profit relationship of commodified data coincidental to work, the analysis intends to support a regulatory alternative designed to address these limitations and re-empower vulnerable market players.

Despite the decline of union membership in Western market economies, and the consequential rise in labour market inequality<sup>102</sup>, in response to transient and unprotected working conditions, many so effected have unsurprisingly turned towards re-invigorating forms of organised, collective bargaining<sup>103</sup>. Stephen Bevan and his colleagues for example, make the argument that these forms of labour marshalling are particularly beneficial for workers marginalised from accessing structural and institutional channels of market power – such as gig workers<sup>104</sup>.

In addition to unionisation, a recent development has also been the digital cooperative movement. Trebor Scholz has previously made the case for platform cooperativism: where

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<sup>100</sup> Bates, J. (2018). The politics of data friction. *Journal of Documentation*, 74(2), 412–429.

<https://doi.org/10.1108/JD-05-2017-0080>

<sup>101</sup> This term is chosen to cover a range of employment engagements, denied (by platform operators) the conventional status of employer/employee relationships, facilitated through computer platform technology, said to more closely connect the customer with the service provider, and supposed to expand opportunities for freelance work.

<sup>102</sup> VanHeuvelen, T. (2018). Moral Economies or Hidden Talents? A Longitudinal Analysis of Union Decline and Wage Inequality, 1973–2015. *Social Forces*, 97(2), 495–530. <https://doi.org/10.1093/sf/soy045>

<sup>103</sup> Trumka, R. (2018, August 28). Can Organized Labor Come Back? *Yale Insights*.

<https://insights.som.yale.edu/insights/can-organized-labor-come-back>; Fisher, E., & Fisher, B. (2019). Shifting Capitalist Critiques: The Discourse about Unionisation in the Hi-Tech Sector. *TripleC: Communication, Capitalism & Critique. Open Access Journal for a Global Sustainable Information Society*, 17(2), 308–326. <https://doi.org/10.31269/triplec.v17i2.1107>; Matthews, D. (2018, April 9). *The emerging plan to save the American labor movement*. Vox. <https://www.vox.com/policy-and-politics/2018/4/9/17205064/union-labor-movement-collective-wage-boards-bargaining>

<sup>104</sup> Bevan, S., Brinkley, I., Cooper, C., & Bajorek, Z. (2018). *21st Century Workforces and Workplaces: The Challenges and Opportunities for Future Work Practices and Labour Markets* (1 edition). Bloomsbury Business.



the governance of internet platforms might be democratised to its users and workers by shifting control and ownership away from managers and shareholders<sup>105</sup>. As an extension to this, Theurl and Meyer have suggested<sup>106</sup> that the current tendency towards data monopolisation exhibited by sharing platforms might be tempered by organising platforms as cooperatives. In recent years several cooperative platforms have launched.<sup>107</sup> Other communal trends are evolving that dovetail with concerns around datatification and more equitable returns on data collection and use. These include concepts like personal data markets, data trusts, forms of collective data ownership, or the creation of a data commons<sup>108</sup>.

Another worker-directed response to the problems of market disempowerment has been to advocate for algorithmic regulation to address large information asymmetries exacerbated by platform infrastructures. Information asymmetries, like those which conventionally exist between producers and consumers in market flows, are now being exacerbated by technology companies and their data practices that mediate market relationships to the disadvantage of vulnerable stakeholders. Cheng and Foley write, for instance, of the use of algorithmic management in Airbnb services, where hosts have little choice or say in the algorithmic environments in which they are situated, and as a result resort to trial and error to make sense of what aspects of the platform are algorithmically driven to their advantage or otherwise. Hosts are thus confused over the “lack of information, clarity, and transparency available to them to navigate Airbnb algorithms”<sup>109</sup>. Ad hoc ‘sense-making’ guess work on stakeholders deprived of essential market knowledge not only between hosts and their guests, but also between the hosts and the platforms, requires a blind-sided “double negotiation” (to and fro with players in the market, and back to automated data management constructed and driven beyond most of the players’ competencies) creating hidden stakeholder anxieties around who or what is orchestrating and ensuring service delivery and adequate compensation<sup>110</sup>.<sup>111</sup> Similarly, Rosenblat’s work on Uber reveals how the platform’s selective sharing and withholding of information from its drivers and users has the effect of extracting higher costs out of its users while drivers were left unable to pursue their own economic and personal interests through informed choices about the

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<sup>105</sup> Scholz, T. (2016, January 12). *PLATFORM COOPERATIVISM*. ROSA LUXEMBURG STIFTUNG NYC. <http://www.rosalux-nyc.org/platform-cooperativism-2/>; Scholz, T., & Schneider, N. (2017). *Ours to Hack and to Own: The Rise of Platform Cooperativism, A New Vision for the Future of Work and a Fairer Internet*.

<sup>106</sup> Theurl, T., & Meyer, E. (2019). Cooperatives in the Age of Sharing. In K. Riemer, S. Schellhammer, & M. Meinert (Eds.), *Collaboration in the Digital Age* (pp. 187–205). Springer International Publishing. [https://doi.org/10.1007/978-3-319-94487-6\\_9](https://doi.org/10.1007/978-3-319-94487-6_9)

<sup>107</sup> Stocksy is a royalty-free stock photo and video platform; Resonate is a music streaming co-op; Green Taxi is a worker-owned taxi cooperative; Up & Go is a worker-owned cleaning cooperative.

<sup>108</sup> Arrieta-Ibarra, I., Goff, L., Jiménez-Hernández, D., Lanier, J., & Weyl, E. G. (2018). Should We Treat Data as Labor? Moving beyond “Free.” *AEA Papers and Proceedings*, 108, 38–42. <https://doi.org/10.1257/pandp.20181003>

<sup>109</sup> Cheng and Foley (2019)

<sup>110</sup> Jhaver, S., Karpfen, Y., & Antin, J. (2018). Algorithmic Anxiety and Coping Strategies of Airbnb Hosts. *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*, 421:1–421:12. <https://doi.org/10.1145/3173574.3173995>

<sup>111</sup> In this situation of service delivery the hosts are providing labour in the accommodation arrangement associated with the offering of physical accommodation.

application and value of their labour.<sup>112</sup> In such circumstances the information deficit is negatively effecting decisions about work-life quality, which are often argued as one of the major benefits for moving out of conventional work contracts and into freelancing.

The irony of these fundamental information asymmetries between providers and consumers, being exacerbated by technologies with an increased capacity to data-share, lies in both the narratives of transparency that digital platforms tend expound<sup>113</sup> and the massive amount of data that many digital interfaces (not merely platforms) tend to collect surreptitiously. Recognising the evolving surveillance environment of sensors and data production/proliferation in the smart city, some have argued that regulators can tap into data streams of platform companies to establish trust between platform owners and their users. But trust relies on openness particularly here personal data is concerned. As Codagnone et al. remind us,

A paradox in the digital and Internet economy is that never before has so much data been collected, and never before has it been so difficult to access. The value of this data is likely to be much higher for social and public policy purposes than it is for private purposes of the platform operators.<sup>114</sup>

Other works have recently emerged to address these information asymmetries through regulatory mechanisms that might tap into data-driven technologies as implicit information repositories. Our inclusive participation model rests on capacities to better position vulnerable market players within and not ancillary to market information loops. Wilson and Cali have posited that

by operationalizing data and information that already exists over the Internet, regulators will be able to leverage information produced by the sharing economy firms to ensure that their behaviour in the sharing economy has a level of trust at least equal to that of their incumbent equivalent industries, while improving efficiency, incentivizing behaviour in the market, and saving resources through more targeted enforcement against bad actors... Rather than have essential institutional functions (credentialing, enrolment, authentication, authorization, regulatory oversight, auditing, enforcement, dispute resolution, market making and clearing) by physical and human-dependent processes, it is now possible, indeed, even necessary, to make such processes digital, algorithmic, autonomous, transparent and self-correcting.<sup>115</sup>

Others have suggested that self-regulatory mechanisms like the use of online reputation systems might be a method of accomplishing a more responsive and responsible, if not

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<sup>112</sup> Rosenblat, A. (2018). *Uberland: How Algorithms Are Rewriting the Rules of Work* (First edition). University of California Press.

<sup>113</sup> Rosenblat (2018)

<sup>114</sup> Codagnone, C., Biagi, F., & Abadie, F. (2016). *The Passions and the Interests: Unpacking the "Sharing Economy"* (SSRN Scholarly Paper ID 2793901). Social Science Research Network. <https://papers.ssrn.com/abstract=2793901>

<sup>115</sup> Wilson, B., & Cali, S. (2016). Smarter Cities, Smarter Regulations: A Case for the Algorithmic Regulation of Platform-Based Sharing Economy Firms. *UMKC L. Rev.*, 85, 845.

inclusive regulatory climate and outcomes<sup>116</sup>. Sundararajan also explores digital audits: where tools like *application programming interfaces* (APIs) could be made available for regulators and governments, arguing that data-driven regulation can build credibility for collaborative economy platforms that will in turn promote a more positive regulatory consciousness around their interfaces<sup>117</sup>. Orly Lobel suggests that the potential for, and opening up of large-scale systematic data analysis could be key for regulators in disentangling impediments to equity in market situations designed to exploit power imbalance<sup>118</sup>. By creating the possibility of a two-way interrogation to-and-from these platforms, bringing both the practice of data collection and the construction of information use and dissemination into the frame, regulators can make visible the exact decisions and consequences of algorithmic governance currently obscured by the 'digital interface' rhetoric. The decisions facilitated by the algorithmic interface, rather than any complex configuration of algorithm existence, become the focus of understanding and regulation.

The proposed model to follow does not essentially diminish the importance of organized and collective bargaining nor the positive potentials of algorithmic regulation, but rather that both options nonetheless risk anachronism. A desire to return to the protections of organised labour may insufficiently consider the ways in which the digital economy functions through monopoly-like network effects that create an imperative for mass data production and labour valuation beyond productivity<sup>119</sup>, which was the grist of organised labour activism. Conventional participatory regulation through organised representation fails to confront the inevitability that labour will become commodified and re-valued via an exclusionist information frame working for market power centralisation. Alongside this qualification, algorithmic regulation advances often without a clear normative declaration concerning the purposes and constituencies that benefit from the regulatory enterprise, and as such to attach our determination for a more sustainable market through power dispersal may risk its clarity by muddling with other less altruistic purposes for regulating algorithms. Indeed, an over-reliance on *techno-solutionism* may lead to confusing technological robustness and system accuracy as inherently concomitant with social good for all their users, especially those not familiar with their language and mysteries.

### Inclusive, participatory self-regulation as a way forward?

Moving from information deficits and market power asymmetries which are exacerbated by algorithmic obscurity and platform containment, an important step in activating the regulatory enterprise is to provide access for stakeholders to essential information managed and manipulated by platform providers. As this information revelation evolves, platform stakeholders and key market players involved in the platform's monetising of secondary data can better contribute to inclusive participatory self-regulation, turning secretive and combative data protection posturing into more open data sharing as the precursor to

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<sup>116</sup> Cohen, M., & Sundararajan, A. (2015). Self-Regulation and Innovation in the Peer-to-Peer Sharing Economy. *University of Chicago Law Review Dialogue*, 82, 116; Thierer, A., Koopman, C., Hobson, A., & Kuiper, C. (2015). How the Internet, the Sharing Economy, and Reputational Feedback Mechanisms Solve the Lemons Problem. *University of Miami Law Review*, 70, 830.

<sup>117</sup> Sundararajan, A. (2017) The Collaborative Economy: Socioeconomic, Regulatory and Policy Issues, Directorate General for Internal Policies Policy Department, Economic And Scientific Policy.

<sup>118</sup> Lobel, O. (2016). The Law of the Platform. *Minnesota Law Review*, 101, 87.

<sup>119</sup> Kenney and Zysman (2018).

regulatory responsibility. To achieve this transition, the regulatory project may need to progress along a continuum from command and control to enforced self-regulation as the benefits of the latter become clear to those presently opposing regulatory openness<sup>120</sup>.

It is anticipated that in the first stage of the regulatory model there will be impediments to information openness. These impediments are technical and operational:

- Locating and identifying automatically produced personal data on regulatory recipients (primarily vulnerable workers and their customers),
- Respecting data privacy if the data is not anonymous in its feedback form or not aggregated in bulk
- Introducing AI-assisted technologies to notify regulatory recipients of data production, storage and use
- Creating convenient paths of open access which recognizes commercially sensitive data that may attach to automatically produced personal data
- Ensuring internal privacy protections covering the identity of data subjects
- Educating regulatory recipients in the use and utility of AI-assisted information technologies and their data pathways
- Enabling regulatory recipients with simple tools to analyse the significance of automatically produced personal data.

Arguments about data ownership and who bears the responsibility and cost for establishing this access and information framework will need to be settled at the ‘command and control’ end of the regulatory model (between a relevant state agency and the platform managers/administrators). This will need the processes of arbitration. Experience from the operation of ‘data trusts’<sup>121</sup> no doubt would be helpful in these negotiations.

In present day platform environments, the adoption and construction of information infrastructures such as those identified above concentrate and polarize power in the hands of the platform operators, while regulators and their regulated entities are largely excluded from these information pathways. In the initial stage of the regulatory enterprise the problems facing effective engagement with disempowered market players in participatory self-regulation, locate on the likely ‘capture’ of ill-informed and data-starved stakeholders by more data powerful participants (including external regulators). Capture is not only a consequence of obscuring rather than revealing the nature, purpose, and processes of data, but also will arise if regulatory participants do not understand and share the regulatory purpose of information emancipation. Opening up data access in a manner which encourages shared participation and trusting inclusion requires creating an information infrastructure which flattens structural imbalances by encouraging bottom-up data management models.<sup>122</sup> Obviously this is a more than a market structure issue. As a pre-condition in its development the information access technology and pathways need to

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<sup>120</sup> Findlay, M. (2013). Regulating Regulation—Who Guards the Guardian. In *Contemporary Challenges in Regulating Global Crises* (pp. 227-247). Palgrave Macmillan, London.

<sup>121</sup> Reed, C., & Ng, I. Y. (2019). Data Trusts as an AI Governance Mechanism. Available at SSRN 3334527; see also, Delacroix, S., & Lawrence, N. (2019). Bottom-up data Trusts: disturbing the “one size fits all” approach to data governance. *International Data Privacy Law*, 9(4), 236–252. <https://doi.org/10.1093/idpl/ipz014>

<sup>122</sup> Delacroix and Lawrence (2019)

reflect a more equitable user-driven format.<sup>123</sup> The regulatory model will need to counter the current market reality that algorithmic intervention adds cash in the pockets of the information governors. The counter message against data as an exclusive commodity is more universal and widespread recognition of the need to protect automatically produced personal information from market abuse and data subject discrimination.<sup>124</sup> Once this message has been grounded in the regulatory enterprise, then other key players in market productivity (vulnerable regulatory recipients) need a place in an informed and inclusive decision-making interface, that will be the dispute resolution phase of the regulatory model. Only then will inclusive self-regulation grow to its potential for market power dispersal. So that this process will take root state agencies as licensing authorities, for instance, could impose external conditions on market entry dependent on bottom-up information management and inclusive operational decision-making.

Today, not only are many platform operators denying users a place at the decision-making table, they are excluding users from information as a facility and a function for inclusive self-regulation, and thereby repudiating the need for a table around which to discuss grievances. Above this power-grab is the appetite for surveilling users as valuable data mines. If datafiction is driving such surveillance systems and contributing to information asymmetries, then it needs also to be productive for workers and self-regulatory mechanisms by “feed(ing) such data back to users, enabling them to orient themselves in the world”<sup>125</sup>. Again, this highlights a very legitimate concern for regulation from a labour-force perspective. It is one thing for platform operators to surveil their workforce, justified by regulatory concerns for issues such as customer safety. It is another to use surveilled information in undisclosed commercial purposes which should be open to the subject’s consent or dissent. An important byproduct of the regulatory enterprise will be disseminating the information necessary for an informed debate among regulatory recipients concerning secondary data, its monetizing, and possible negative impacts on work-life quality.

To complement a move away from regulatory elitism and towards participant inclusion through information access, important external players such as government agencies and labour organisations must ensure that labour-force is institutionally included in the regulatory process: both in its crafting and implementation. These are apriori external market requirements if information access is to contribute to regulatory empowerment as we predict.

Recent instances of participatory regulatory engagement have emerged in employment markets where data is used by individual stakeholders to manipulate or regulate labour market arrangements through AI platforms. Some initiatives apply previously exercised tactics for self-interested market manipulation, such as Uber and Lyft drivers coordinating

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<sup>123</sup> An initial challenge lies in the current market reality that the platform providers claim ownership of the personal data automatically produced through commercial and surveillance technologies and will resist any possibility that its value as a market commodity may be reduced through more open access.

<sup>124</sup> Bakhoun, M., Conde Gallego, B., Mackenrodt, M., & Surblytė-Namavičienė, G. (2018). *Personal Data in Competition, Consumer Protection and Intellectual Property Law: Towards a Holistic Approach?* (Vol. 28). <https://doi.org/10.1007/978-3-662-57646-5>

<sup>125</sup> Kennedy, H., Poell, T., & van Dijck, J. (2015). Data and agency. *Big Data & Society*, 2(2), 2053951715621569. <https://doi.org/10.1177/2053951715621569>

their time on their apps to manually “prompt” surge prices and improve personal returns<sup>126</sup>. Examples of market manipulation for more altruistic or generalized interests would be where Chinese software developers draft licenses that require users of their software to comply with labour laws and ILO standards further along the supply chain. Other applications of data and information as regulatory tools have been more institutionally organised, like

- the German union IG Metall’s creation of Fair Crowd Work, a watchdog body that collects and shares information about the working conditions of different digital platforms through a ratings system;
- using solutions to enhance information sharing (Turkopticon<sup>127</sup> and OUR Walmart<sup>128</sup>) to achieve regulatory changes
- Taiwan’s e-regulation<sup>129</sup>

It is necessary to reiterate here that with information enrichment as essential in regulatory emancipation, there is a need for enabling external market modifications that make more likely the involvement of better informed labour-force stakeholders to understand and participate in the decision processes and outcomes which are assisted by AI. Through the inclusion in decision-making of a wider audience of interest, the regulatory project will be more targeted on satisfying a greater range of legitimate regulatory interests. Customer/consumer awareness campaigns influencing platform reputation are effective here.<sup>130</sup>

## The Model

We identify four major themes in the literature on platform work and the underlying metaphors associated with each. Platforms are seen as entrepreneurial incubators, digital cages, accelerants of precarity, and chameleons adapting to their environments. Each of these devices has limitations, which leads us to introduce an alternative image of platforms: as permissive potentates that externalize responsibility and control over economic transactions while still exercising concentrated power.<sup>131</sup>

Vallas and Schor provide an insightful frame of platform imaginings around which to build an inclusive, representative, self-regulatory model. Starting out, this regulatory enterprise denies the neoliberal assumption that responsible regulation will kill innovation and limit

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<sup>126</sup> Sweeney, S. (2019, May 16). Uber, Lyft drivers manipulate fares at Reagan National causing artificial price surges. *WJLA*. <https://wjla.com/news/local/uber-and-lyft-drivers-fares-at-reagan-national>

<sup>127</sup> Silberman, M. S., & Irani, L. (2016). *Operating an Employer Reputation System: Lessons from Turkopticon, 2008-2015* (SSRN Scholarly Paper ID 2729498). Social Science Research Network. <https://papers.ssrn.com/abstract=2729498>

<sup>128</sup> Caraway, B. (2016). OUR Walmart: A case study of connective action. *Information, Communication & Society*, 19(7), 907–920. <https://doi.org/10.1080/1369118X.2015.1064464>

<sup>129</sup> Horton, C. (2018, August 21). The simple but ingenious system Taiwan uses to crowdsource its laws. *MIT Technology Review*. <https://www.technologyreview.com/s/611816/the-simple-but-ingenious-system-taiwan-uses-to-crowdsource-its-laws/>

<sup>130</sup> Silberman, M. (2015). Operating an employer reputation system: Lessons from Turkopticon, 2008-2015. *Comp. Lab. L. & Pol’y J.*, 37, 505.

<sup>131</sup> Vallas & Schor (2020); p.16.1.

profitable disruption.<sup>132</sup> Platform economies have been on the scene globally for over a decade and as such can be viewed as established, if contestable, employment arrangements. Their profitability is problematic depending on the manner of its measurement but their influence on the future of work far outweighs dollars and cents for shareholders. And their development has proceeded largely without worker-benefitted regulation, and at social great cost.<sup>133</sup> This model proposes a form of regulatory disruption to re-balance some of the market inequities which have concentrated platform power and enabled the datification of work-life largely excluding the interests of vulnerable workers.

Recognising the platform as a digital cage is at the forefront of the regulatory exercise. It is envisaged at the command and control end of the regulatory continuum,<sup>134</sup> a state agency with licensing capacity will institute a platform licensing regime, one major feature being data transparency. This approach could come under the wider umbrella of encouraging organisational compliance with ethical principles for the use of AI and big data.<sup>135</sup> A licensing body would take on the role of the external agency in Braithwaite's enforced self-regulation.<sup>136</sup> Initially the external agency will engage the capacity of data protection authorities, with the co-operation of platform providers, to survey the nature and extent of automatic personal data production on platforms involving workers/customers through transaction and surveillance data. Once this knowledge has been amassed the agency will take advice on possible AI-assisted information technologies that promote access pathways and data looping for the information of regulatory recipients.

As accelerants of precarity, platform providers will be required as part of licensing approval to settle with workers/contractors/franchisers (however these are determined against conventional employment arrangements) routines of compliance with ethical principles, in the form of internal guidelines for the use of automatically produced personal data. These guidelines will be approved by the external agency which will have random audit powers. The guidelines will create specific data subject expectations concerning data access (through privacy-protected data pathways) and mechanisms for data looping which regularly prompt individual regulatory recipients of personal data activity relating to them.<sup>137</sup> The external agency will offer and provide to regulatory recipients, instruction in accessing, using and analysing product from these information pathways.

Platforms as chameleons adapting to their environments can be seen in both positive and negative guises. It is to be expected that in the early stages of the licensing process some platform providers will change their postures, their use of data and even their approaches to the digitised marketing of data through surveillance. It is, therefore, essential that the external agency (assisted through customer awareness campaigns) guides the platform

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<sup>132</sup> Relihan, T. (2018, September 27). Will regulating big tech stifle innovation? *MIT Sloan*.

<https://mitsloan.mit.edu/ideas-made-to-matter/will-regulating-big-tech-stifle-innovation>

<sup>133</sup> Hemphill, T. A. (2019). 'Techlash', responsible innovation, and the self-regulatory organization. *Journal of Responsible Innovation*, 6(2), 240-247.

<sup>134</sup> Findlay (2013).

<sup>135</sup> Kinstler, L. (2020, February 5). Ethicists aim to save tech's soul. Will anyone let them? *Protocol*.

<https://www.protocol.com/ethics-silicon-valley>

<sup>136</sup> Braithwaite (1982).

<sup>137</sup> The individualization of data looping and access pathways should minimize privacy intrusion. If it is necessary to amass trend data the it should be aggregated.

providers to positive representations of their data use, and the development of more sustainable labour market practices, therefore. This repositioning process is complex, and space does not allow its adequate enunciation beyond Braithwaite's recognition that after initial apprehensions, most participants in enforced regulation models see the benefit of voluntary compliance.<sup>138</sup>

An inclusive, participatory self-regulation model is not designed to benefit one class of regulatory recipient to the exclusion or detriment of others. By being mandated to engage in a data-management exercise with bottom-up as well as top-down directions, platform providers will be required to decentralise data power, and become involved in more internalised responsibilities for transactional profit. This shift will be achieved through data transparency, explainability, and accountability for secondary monetising. A reason why platform providers have been able to digitise and then monetise the personal data of their labour force is that it has occurred through stealth and under their blanket control. Information emancipation will mean that the profit without responsibility model will no longer be sustainable.

Finally, as is the case with regulatory models that produce transparency, explainability and transparency, they lead in the short term to disputation between market stakeholders. It is expected that this model will be no different. To meet the mechanics of dispute resolution the additional requirement for licensing will be the establishment of a 'negotiation table' where disputants can mediate disagreement over data use and its consequences. With the back-up of external agency intervention.

The graphical representation of the model (Figure 1) below shows thin lines that are active relationships of market influence. The coloured arrows and their thickness are to suggest degrees of power imbalance to the disadvantage of market stakeholders

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<sup>138</sup> Braithwaite (1982)



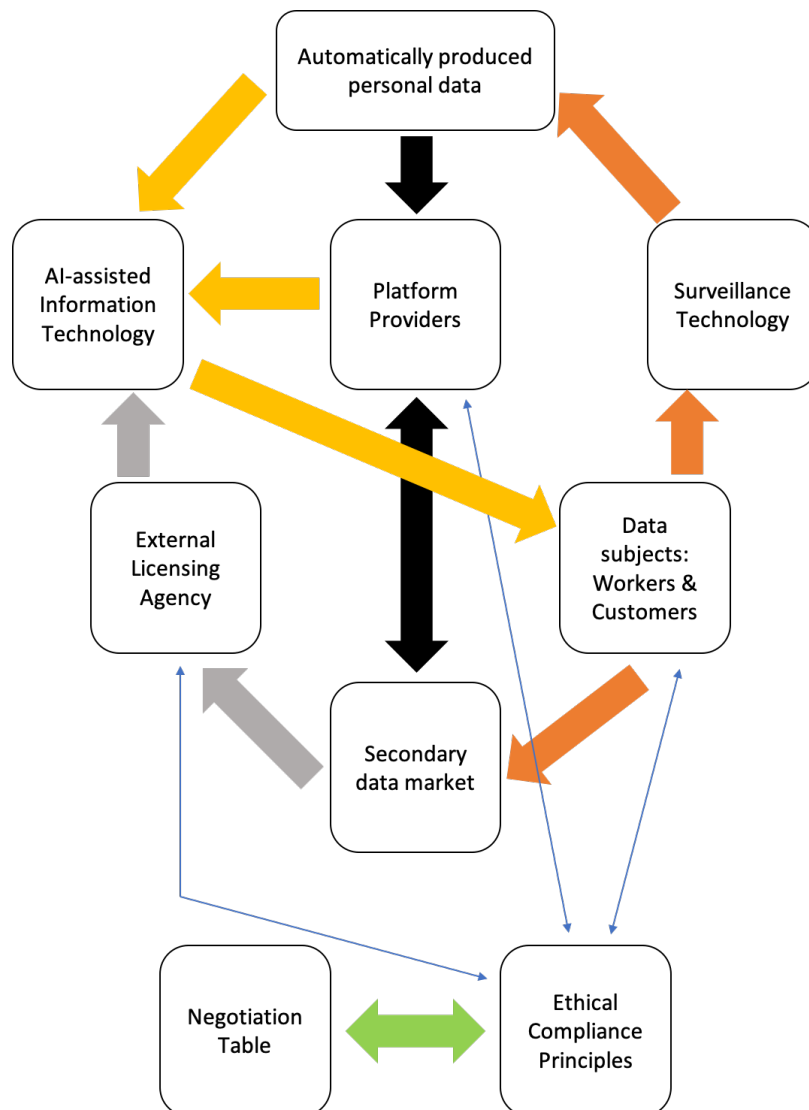


Figure 1 Proposed Regulatory Model

In the regulatory model (Figure 1) above, the colour codes refer to power pathways which suggest degrees of power imbalance to the disadvantage of market stakeholders. Moving information access in different empowering/disempowering forces: Black (most disempowering) – Orange (moderately disempowering) – Grey (moderately empowering) – Yellow (empowering) – Green (most empowering). The thinner, blue arrows represent directions of compliance.