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Who's the Boss? The Impact of Digitally Mediated Employment on Labour Markets and the Nature of Work

Andrew Wolf

- The rise of platform-based employment generates important labour and employment issues that cities and urban planners must consider. Allowing companies to enter cities without regulation and to classify their workers as independent contractors further privatizes essential services such as transportation.
- While the size of platform employment remains small, its impacts can be large and concentrated in cities: taxi-app companies represent 30 per cent of New York City's traffic and employs 84,000 drivers. Additionally, benefits and costs of the platform are being felt disparately, reproducing historical inequalities of race, gender, and class on these platforms.
- Platform economy companies in service industries are using innovative technologies and "algorithmic management" to transform the labour process, or the organization of work, from a world of managers and workers to one of algorithms and workers. Algorithmic management is combined with "gamification," which makes work additive, and ideological appeals to workers' notions of freedom to make them consent to the employment arrangement. Nevertheless, platform workers around the world are increasingly speaking up and forming labour unions.

INTRODUCTION

The rise of the gig economy in the last decade has caused a flurry of public interest and debate over what it means for the future of work. The gig economy is a subset of the larger platform economy in which employment in traditional service industries has become digitally mediated by the introduction of an electronic marketplace. A central feature of the gig economy is that companies operating in it claim they have no employees and that those who use their app to work are not company employees but are instead independent contractors (Dubal 2017). Disavowal of an employment relationship not only challenges urban labour markets but also questions our urban regulatory regimes. The fact that our cities allow these gig companies to define their own employment relationships and declare which legal regulations apply to them represents an ideological shift in the responsibility that cities have historically taken to maintain their urban infrastructure – physical and social. This further privatizes a city's socio-political economy. This chapter explores this debate in the context of the wider urban sphere.

To this end, this chapter evaluates the labour and employment issues raised by the gig economy for urban centres in the Global North and tracks how cities have responded. First, the size and scope of the gig economy is evaluated in relation to the global growth in precarious and informal work. Second, the impacts of the gig economy are evaluated to investigate how the historical inequalities of race, gender, and class are being reproduced on these platforms. Third, the labour market and the legal implications of gig companies that attempt to shed employment responsibility are explored. Fourth, this chapter investigates how gig employment is changing the nature of work, evaluating how the replacement of supervisors with algorithms affects workers and labour. Fifth, the response of urban, state, and provincial governments in the United States and Canada to the illegal entry of transportation network companies (TNCs) like Uber and Lyft is evaluated. Finally, this chapter discusses how workers and labour unions have responded to the entry of gig companies into their industries. Overall, this chapter finds that the entry of the gig economy to the urban sphere as well as the municipal response to it is chaotic and uneven. Yet the challenges raised by gig companies for workers and the urban infrastructure remain, leaving cities increasingly compelled to address them.

SIZE AND SCOPE OF THE GIG ECONOMY

The gig economy has been growing rapidly since its advent. The number of Uber drivers in the United States doubled every six months from 2012 to 2015, at a pace that if it were to continue would mean every American worker would have become an Uber driver within five years (Hall and Krueger 2017). While this growth has been massive, calculating just how large the gig economy is has proven particularly difficult. Survey data have often suffered from respondents failing to report gig work or failing to understand gig-related questions. In a prominent example of this problem, the US Department of Labor's attempt to survey digital platforms returned a large number of false positives, forcing the government to manually remove these cases from their results (BLS 2017). Similarly, studies using administrative data from gig companies to measure the scope of the gig economy tend to under-count the number of hours worked, because employees often work on several platforms at the same time. Conversely, when these data are aggregated across companies, this same phenomenon counts workers too many times, making it difficult to understand exactly how many workers there are.

Despite these limitations, evaluating efforts to account for the size of the gig economy does provide us with useful insights. A US Bureau of Labor Statistics study of electronically mediated work (table 3.1) found that gig work accounted for about 1 per cent of the US workforce and 1.6 per cent of part-time workers. The data also highlight disparities in access to gig employment. White employees are more likely to work higher-paying online gig jobs, compared to Black workers, who are far more likely to work in-person gig jobs. Interestingly, gig workers are also more highly educated than the overall workforce.

To evaluate the gig economy and larger platform economy from the perspective of those generating personal income, the JPMorgan Chase Institute (Farrell et al. 2018) took a sample of 39 million US Chase checking accounts in the twenty-three states Chase operates commercial banks, and tracked payments families received from 128 online platforms. They found 2.3 million account holders participated in the online platform economy from October 2012 to March 2018. The study looked at labour platforms (split into transportation and all other work apps) and capital platforms (split into selling and leasing). Over the course of study, the proportion of the sample generating any

Table 3.1
US Department of Labor survey of electronically mediated employment in the US, May 2017.

Characteristic	Total employed	Electronically mediated workers*			Electronic % of total employed		
		Total	In person	Online	Total	In person	Online
Total, 16 years and over (in thousands)	153,331	1,609	990	701	1.0	0.6	0.5
% Men	53.2	54.1	53.9	52.7	1.1	0.7	0.5
% Women	46.8	45.9	46.1	47.3	1.0	0.6	0.5
Age %							
16–24	12.4	10.3	7.4	15.6	0.9	0.4	0.6
25–54	64.4	71.2	72.6	69.5	1.2	0.7	0.5
55 and over	23.1	18.4	20.1	14.9	0.8	0.6	0.3
*Race***							
White	78.7	74.6	69.9	84.0	1.0	0.6	0.5
Black or African American	12.1	17.1	23.0	6.9	1.5	1.2	0.3
Asian	5.9	5.8	4.6	7.0	1.0	0.5	0.5
Hispanic or Latino ethnicity	16.6	16.4	18.5	13.4	1.0	0.7	0.4
Full-time (35+ hours) and part-time status							
Full-time workers	81.7	72.4	69.4	78.1	0.9	0.5	0.4
Part-time workers	18.3	27.6	30.6	21.9	1.6	1.1	0.5
Educational attainment							
Less than a high school diploma	7.1	4.5	5.7	2.0	0.7	0.6	0.1
High school graduates, no college	25.0	19.7	25.1	9.8	0.8	0.7	0.2
Some college or associate degree	26.9	26.0	28.9	21.3	1.0	0.7	0.3
Bachelor's degree only	25.1	27.9	21.4	38.7	1.2	0.6	0.7
Advanced degree	15.8	22.0	18.9	28.3	1.5	0.8	0.8

* Electronically meditated work might not add up to 100% because some workers worked in person and online.
** Race does not add up to 100% because Hispanic or Latino could be in any race group, nor do BLS figures include all races.

income from platforms rose from 0.3 per cent in October 2012 to 1.6 per cent in March 2018. As of March 2018, 4.5 per cent of the sample had earned income from a platform in the previous year.

While the gig economy represents only a small proportion of the US workforce, its geographic distribution is not uniform. Labour service gig companies such as Uber are highly concentrated in major metro areas. In 2014, just twenty market areas contained 85 per cent of Uber's drivers (Hall and Krueger 2017). Similarly, JPMorgan Chase found uneven concentration of gig employment (figure 3.1). They found the gig economy represents almost 3 per cent of Nevada and San Francisco's workforces. In Chase's sample, four states and eight cities (including three in California) had over 2 per cent of gig employment, or double the national average.

A report by McKinsey & Company (Manyika et al. 2016) situates the gig economy within the broader context of independent contractor work globally. Looking at the United States and five EU countries (France, the United Kingdom, Germany, Sweden, and Spain), they found that of these six countries in 2015 there were 162 million independent contractor workers, of which 15 per cent, or 24 million, were digital platform workers. More importantly, they found that those whose income was generated from selling goods or leasing assets were more likely to use digital platforms than those who provided labour, indicating the growth potential for labour service gig-jobs.

In Canada, the gig economy remains a comparatively small but growing segment of the workforce. Statistics Canada (2017) found that 9.5 per cent of people eighteen and over living in Canada participated in the platform economy (including peer-to-peer services like Uber and private accommodation services, such as Airbnb), as users or as workers, between November 2015 and October 2016. A study of the Greater Toronto Area found that 9 per cent of residents were working on gig platforms, and 38 per cent had worked on gig platforms. Of those working gig-economy jobs, 90 per cent had attended college or university, and 48 per cent had been working these jobs for over a year (Block and Hennessy 2017). The growth of gig work in Canada follows trends in the growth of precarious work in the country. The number of workers in the Toronto Census Municipal Area who described their jobs as "temporary" grew over 40 per cent, from 8.9 per cent in 1997 to 12.6 per cent in 2011 (PEPSO 2013). Overall, 2.18 million Canadians were categorized as temporary workers in September 2017, and one-quarter surveyed reported working part-time or contract work because they could not find permanent full-time work (Statistics Canada 2017).

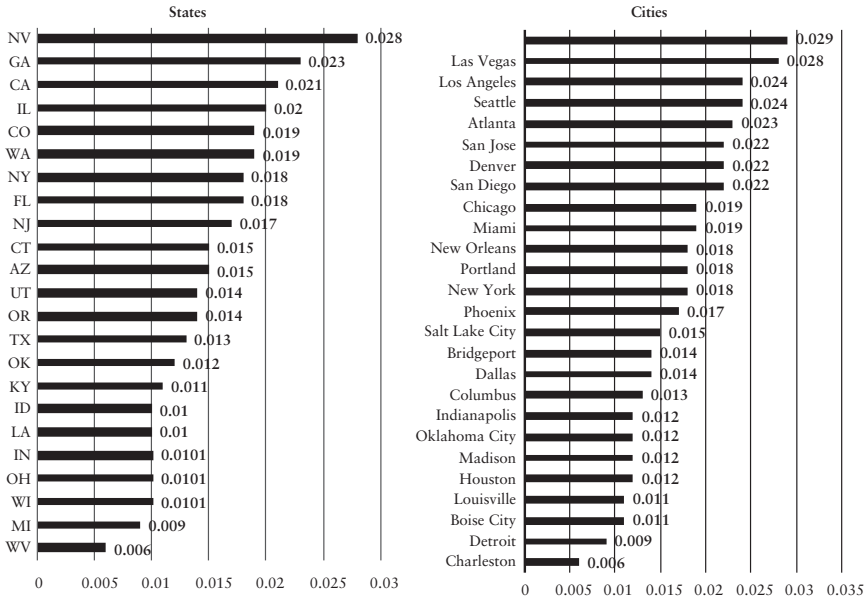


Figure 3.1 Percentage of Chase customers generating income from platforms (October 2017).

Within the world of the gig economy, Uber and ride-sharing loom large. It is estimated that two-thirds of platform-based labour market activity occurs on Uber, founded in 2009 (Harris and Krueger 2015). In Rosenblat's (2018) reporting of Uber's internal statistics, through mid-2017 Uber operated in 630 cities worldwide and provided 5 billion rides. By 2018 Uber had 3 million active drivers globally. Of these, Uber had 900,000 drivers in the United States and 50,000 in Canada (Rosenblat 2018). Their closest competitor, Lyft, had 700,000 active drivers in the United States. While these employment figures are large, most drivers do not rely on gig employment full-time. In 2015 Hall and Krueger, analyzing internal Uber data, found that 52 per cent of drivers worked full time at another job, and 32 per cent indicated they were working for Uber while looking for another job. Much evidence finds gig work is often used to smooth fluctuation in individual employment and earnings (e.g., Farrell et al. 2018). Similarly, Rosenblat (2018) found 78 per cent of Lyft drivers worked one to fifteen hours a week in 2015, and 60 per cent of Uber drivers work fewer than ten hours a week. Despite these findings, Rosenblat argues these results

ignore the fact that most drivers work for more than one app. In fact, a 2016 investigation by the mayor of New York City found that 75 per cent of app drivers worked full-time but over multiple apps. These factors – temporary, part-time, and supplemental – make shaping policy on gig employment particularly difficult.

Beyond counting the reach of the gig economy, scholars have had trouble defining it. The gig economy grew out of the sharing economy movement, which served a particularly important function in helping individuals weather the Great Recession in 2008 (Schor 2020; Bajwa et al. 2018). The sharing economy promoted a more open-source and egalitarian version of mutual aid, through platforms such as Craigslist and couch surfing, and later found itself professionalized and commodified by the gig economy. The gig economy can be categorized into two forms: "crowd-work" and "work-on-demand via apps" (De Stefano 2016). The archetypical crowd-work platform is Amazon's Mechanical Turk, which allows people to hire workers to provide a variety of tasks that computers cannot reliably perform, including entering data and filling out social science surveys. Work-on-demand apps claim to simply create an electronic market. They are managed by firms that also provide quality standards, minimal monitoring, and selection screenings such as background checks (Aloisi 2016). The archetypical and largest work-on-demand app is Uber.

Adopting the continuum approach offered by Ticona et al. (2018) is useful to understanding the differences in degree of workers control in gig work, as summarized in figure 3.2. They advocate viewing platform work as a continuum composed of three main categories: marketplace platforms, on-demand platforms, and hybrids composing the middle. Unlike approaches that define gig work on the basis of whether it is performed in person or not – the crowd-work vs. on-demand distinction (e.g., Heeks 2017), the approach of Ticona et al. is based on the nature of worker autonomy, not the nature of the work itself. As shown in figure 3.2, both online crowd-work and in-person on-demand work can fall on both sides of Ticona et al.'s worker autonomy continuum. Market platforms generate digitally mediated employment that is primarily affecting the hiring process, by helping to match workers and clients. These market platforms aim to reduce overall transaction costs by providing service seekers and workers with information about each other that is sorted and ranked. These platforms, such as Care.com, are typically based on subscriptions, not percentage fees, and as such provide workers with greater autonomy.

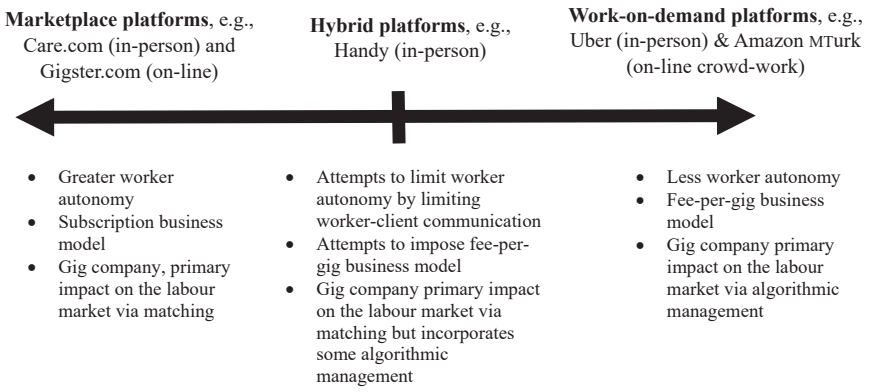


Figure 3.2 Continuum of gig-work platform types by worker autonomy.

In contrast, on-demand platforms indirectly manage the entire labour process. These platforms, such as Uber, typically make their profit through fees applied to each "gig" that workers perform. Beyond the hiring process – in which Uber recruits drivers, typically through advertisements, and provides minimal screening through a company background check – Uber also monitors and directs all actions of its workers through "algorithmic management" (Lee et al. 2015; Rosenblat and Stark 2016). In the middle are hybrids, which incorporate features of both. For example, Handy, an app that provides on-demand cleaning services, functions largely as a marketplace but operates on a fee structure and prevents workers and clients from communicating outside the constraints of the app. As Ticona and her co-authors explain, marketplace and on-demand platforms shift risk and rewards for workers in different ways. Marketplace platforms create an incentive for self-branding, rewarding those who are digitally fluent. On-demand platforms tend to outsource costs directly onto workers, rewarding workers who have the most financial independence and thus the least financial dependency on the apps.

WHO BENEFITS FROM THE GIG ECONOMY?

The difference between marketplace and on-demand platforms outlines the disparate impact that different forms of digital work have on workers. Those who benefit the most from the gig economy also benefit from the traditional economy: those who have greater assets

and higher levels of education, are male, and are white. In making this claim, it is important to consider that the gig economy is not just about "Uberization." Beyond Uber there are marketplace platforms as well as capital platforms for selling goods and leasing assets such as houses or cars. Capital platforms unsurprisingly result in the highest compensation.

The compensation gap between capital and labour platforms has only become more pronounced over time. JPMorgan Chase's study (Farrell et al. 2018) of checking account holders' platform-based income showed that from 2013 to 2017 those whose income came from transportation gig jobs saw their average monthly earnings decrease 53 per cent, while asset-leasing earners (such as those using Airbnb) saw their earnings increase 69 per cent (table 3.2). This disparity exists even though the transaction volume was far greater for labour platforms. This furthers economic inequality, because transportation gig jobs are more accessible to those with lower incomes, while asset leasing benefits richer individuals, who can afford to own the capital. Additionally, the study found that those working on labour platforms were far more likely to be financially dependent on these apps, with 43.8 per cent of drivers making 90 per cent of their earnings from gig work, compared to only 33.5 per cent of leasers making 90 per cent of their earnings from their gig work. Furthermore, their findings show transportation gig workers were more likely to work more months of the year for gig companies. In short, individuals with less capital and more marginal standing were in the worst position to take advantage of the gig economy. In fact, marginal workers often needed to make up this capital difference to even access gig jobs. For example, a BMO study (2018) of Canadian gig workers found that younger workers were far more likely to take on debt to work gig jobs, likely in order to gain assets such as a nice enough car to meet Uber's or Lyft's minimal requirements (table 3.3).

Even within labour-based platforms, traditional inequalities are reproduced. Two of the largest and most politically active labour platforms are Uber and Handy. Thy represent the dominant employers in two industries – driving and housekeeping – which have been historically excluded from US labour law. These industries – housekeeping in particular – were excluded in the 1930s when Southern Democrats agreed to pass President Roosevelt's New Deal employment regulations. They demanded that traditionally Black industries be

Table 3.3
BMO survey of Canadian gig workers' motivations and issues, 2018 (%).

	Boomers	*Gen-Xers*	*Millennials*	*All respondents*
Reason working gig jobs				
Making extra money on the side	35	44	53	49
Only way to make an income	35	27	28	27
Earning while seeking a better job	23	20	30	27
Issues				
No benefits	87	72	67	69
Insufficient income	57	36	43	41
Accumulating debt	7	34	29	29

excluded from the new protections (Katznelson 2013; Perea 2011). As a result, workers in these industries were classified as independent contractors and did not receive fundamental worker rights, such as collective bargaining and unemployment insurance. The fact that gig-employment models have been concentrated in industries that have historically marginalized workers of colour exacerbates these historical inequalities and limits the ability of minorities to fully benefit from the rise of Silicon Valley.

The damage to these historical marginalized groups is not always obvious. Moving traditionally marginalized jobs to a digitally mediated context can have unforeseen impacts. For example, the advent of marketplace platforms apps such as Care.com take traditionally minority and immigrant occupations – in this case, home care – and arbitrarily imposes a digital barrier of entry that has no impact on a worker's actual ability to perform the work (Ticona et al. 2018). This rewards workers who have more digital fluency and puts those who do not at a disadvantage (Papacharissi and Easton 2013). In the home-care industry, this often means younger and whiter workers receive the highest-paying gigs. In the United States the majority of domestic workers are women of colour, but 64 per cent of white women hold the higher-paying nanny jobs (Ticona et al. 2018). This problem will only grow as domestic work becomes increasingly platform based. Amazon recently launched its home-cleaning company Amazon Homes Services, and the retail giant IKEA recently acquired TaskRabbit. These mergers are forming in care industries, which are projected to be among the fastest-growing industries in the United States.

Beyond historical inequalities, the gig economy has disparate impacts on workers, depending on employment status and age. Evaluating the employment status of gig drivers, Rosenblat (2018) notes that there are three kinds of Uber drivers: hobbyists, part-timers, and full-timers. Given the huge turnover at companies like Uber, which was found to have a 50 per cent turnover rate after a year and 66 per cent after two years (Hall and Krueger 2017), the company is extremely dependent on a constant churn of hobbyists and part-timers to fill its ranks. The transportation platforms make it extremely easy for those in school and/or between jobs to fill this role. A BMO study (2018) of Canadian gig workers found this phenomenon may also be attributed to generational differences (table 3.3). Millennials are more likely to work gig jobs as side jobs or to earn extra money, while boomers are more likely to turn to gig jobs out of necessity or desperation. With decreases in the manufacturing sector in the United States and Canada, the gig economy provides an easy entry into the service economy. Similarly, gig-dependent boomers are more likely to take issue with the gig economy's lack of traditional benefits or income level after experiencing the traditional economy's unionized workforce. Meanwhile, Gen-Xers and Millennials are more likely to need to accumulate debt, such as purchasing a car, to access gig jobs. These issues demonstrate that the benefits and costs of the gig economy are not felt uniformly and often tend to reproduce traditional economy inequalities.

LABOUR MARKET IMPACTS AND LEGAL ISSUES

The gig economy is a technological twist on decades-long trends in employment relations in the Global North that have resulted from the transition from a production economy to a service economy. In this sense one can see the gig economy as a continuation of the elimination of social protections at work through employment casualization, informalization, deskilling, and de-unionization. The gig economy is unique in how thoroughly firms utilize new technologies to reshape labour markets and the boundaries of the firm, which allow them to subvert the regulatory state. It is an extreme example and logical conclusion of what David Weil (2014) calls the fissured workplace. Weil uses the metaphor of fissuring rock to describe the dominant trends in US employment. When a tiny crack forms in a rock, that crack becomes a growing fissure that eventually completely undermines the

stability of the surrounding bedrock. Weil argues that a similar process has happened to employment standards in America since the 1970s. The key to fissuring employment standards is the introduction of new technologies that have enabled employers to engage in greater outsourcing and subcontracting to avoid direct responsibility for employment law. The gig economy takes this a step further by attempting to eliminate employment altogether and subcontracting to each individual worker.

In the early twentieth century, for businesses to grow their profits, they had to grow in size. The key question for a firm was how big to grow and which tasks to rely on the marketplace to provide. For example, when making cars, Ford had to decide if it should produce all the parts itself or buy them from a supplier. While neo-classical economics seemed to indicate a company should aim to rely on the marketplace as much as possible, Williamson (1981), working in the tradition of Coase, argued that bureaucracy sometimes represented a cheaper alternative to relying on constant market transactions, because transactions themselves have costs. This bureaucratic logic dominated corporate strategies in the Global North in the postwar years until the financial crisis of 1975.

Following this crisis, Weil shows that in the 1980s and 1990s this trend reversed, as companies – facing increased quarterly profit demands from Wall Street – began to shed business activities and focus on their "core competencies" at the behest of Wall Street. Core competency became defined as brand development and managerial services. All other employment related to production or service provision was outsourced. Employment, which tends to be the largest cost for firms, became a particularly important target of shedding. As Weil argues, this resulted in companies recasting wage decisions as contracting decisions. In the old internal labour market environment (Doeringer and Piore 1971), the choice of market or bureaucracy was based on transaction costs. Now, because of technology, the decision between market and bureaucracy is driven by concerns of brand management and quality. For workers, this has resulted in a separation of employment from the locus of company value creation, rendering their power diminished (Weil 2014, 14).

The gig economy is an extreme form of economical fissuring. The core competency of gig companies is programming a digital platform. Aside from employing programmers at their headquarters, gig

companies argue they have no other employees. By utilizing smart phone technologies they can contract out customer services to each individual driver. Meanwhile they can maintain the brand and provide quality control without managerial control by outsourcing employee coercion and management to algorithms and customers.

Companies have broken their social contract in large part because governments have let them do so. While firms and capital investors drive this extreme fissuring in the gig economy, it is predicated on government failure to enforce labour laws and pass new reforms, leaving workers and their advocates to turn to the courts in desperation. The bulk of the legal debate around these companies is about the status of their employees. Workers have filed lawsuits in the United States, Canada, and the United Kingdom claiming they have been "misclassified" as independent contractors and should instead be considered employees by the law.

In the United States three significant cases filed against Uber could determine the employment status of gig workers. The earliest class action case, O'Connor v. Uber, was filed in 2013 in Federal District Court of Northern California. Another was filed in New York Federal Court in 2016, New York Taxi Workers Alliance v. Uber. Finally, Meyer v. Kalanick is an anti-trust action filed against Uber's co-founder Travis Kalanick by a rider claiming the app amounts to a price-fixing conspiracy. The case argues that Uber's algorithm coordinates a uniform price among supposedly independent contractors, which could be considered price-fixing. Ultimately, the standing of the plaintiffs in all three cases was undermined by the recent US Supreme Court ruling in Epic Systems Corp. v. Lewis, which bolstered the supremacy of corporate arbitration agreements in preventing class action lawsuits. Ironically, these gig companies might regret the decision to force arbitration. The gig food-delivery company DoorDash was forced by a US District Court to comply with its own mandatory arbitration clause after the company tried to settle its claims all at once after facing a $12 million arbitration bill (Cheng 2020).

As the Supreme Court ruling in Epic Systems seems to have stalled federal response on the employment status question, there has been movement at the state level. In New York the Unemployment Insurance Appeal Board ruled that three Uber drivers and others who are "similarly situated" are employees according to the state's unemployment insurance law and are therefore entitled to unemployment benefits.

Ultimately, in early 2019 Uber withdrew its appeal and accepted the decision (Flamm 2019). This represented the first time Uber and Lyft agreed to consider their drivers employees under any US law.

The case with greatest impact on the employment status of US gig workers came in the California Supreme Court ruling in Dynamex Operations West, Inc. v. Superior Court of Los Angeles. The decision ruled that workers at Dynamex a courier company had been misclassified as independent contractor under California state law. In the decision the court laid out its "ABC test" for determining independent contractor status as: "(A) that the worker is free from the control and direction of the hirer in connection with the performance of the work, both under the contract for the performance of such work and in fact; (B) that the worker performs work that is outside the usual course of the hiring entity's business; and (C) that the worker is customarily engaged in an independently established trade, occupation, or business of the same nature as the work performed for the hiring entity." This decision sets an extremely high bar for corporations to overcome to prove they only employ intendent contractors. As a result of this decision as well as two large strikes by Uber and Lyft drivers in Los Angeles, there was a flurry of activity at the state legislature. The State of California passed the "AB 5" bill in 2019. which codifies the ABC test into law, making gig workers employees under state law. In response Uber, Lyft, DoorDash, and other gig companies spent $189 million funding Prop 22, a ballot initiative to overturn this law in the November 2020 election. Ultimately, this effort, which became the most expensive ballot measure in state history, was successful in getting voters the repeal the law. The labour movement, which opposed this initiative, argued that the companies' campaign was misleading, citing a study that found that 40 per cent of voters who voted in favour of the company proposition thought they were voting to support a living wage for gig-workers (Siddiqui and Tiku 2020). Seemingly confirming the fears of Prop 22's opponents, the supermarket giant Albertson announced in early 2021 that they would eliminate hundreds of their in-house union food-delivery workers and replace them with gig workers, who would be considered independent contractors (Hiltzik 2021). Other states are currently considering laws similar to AB 5 or Prop 22- in the coming year, assuring this debate will not be settled soon.

In Canada, the courts have similarly run into issues of how to address contractor status in light of Uber's arbitration agreement. In

an early 2019 ruling on the largest gig-economy employment status case in Canada, the Ontario Court of Appeals invalidated a lower court decision in *Heller v. Uber Technologies Inc.* (2019). The court ruled that Uber's arbitration clause is unenforceable because it illegally sets aside provisions of the 2000 Ontario Employment Standards Act. If the court had upheld the lower court's 2018 ruling, it would have meant employees in Canada had to take their claims to arbitration in Amsterdam before the International Chamber of Commerce. Since the court ruled that Uber's arbitration agreement violated labour law, but Heller had not alleged violations of this labour law, this ruling does not ultimately determine drivers' employment status under Ontario law. Instead the ruling establishes only the illegality of Uber's arbitration agreement (McKenzie 2019). While the ruling does not ultimately determine the employment status of gig employees, in certainly opens the door to future litigation and sets a favourable precedent for gig workers in the province. In January 2020, the United Food and Commercial Workers Canada (UFCW Canada) filled complaint in both Vancouver and Toronto with the respective Labour Boards requesting Uber drivers be classified as employees. The Toronto petition also included an application for unionization (UFCW Canada 2020; Eagland 2020). Likely helping this case was a ruling in February 2020 from the Ontario Labour Relations Board that ruled that Foodora food-delivery workers were "dependent contractors" and therefore entitled to union rights. Foodora workers had formed Foodsters United and were organizing with the Canadian Union of Postal Workers in the Toronto area (Darrah 2020). Months after the ruling, the company filed for bankruptcy and left Canada. The relative success of workers' legal claims in Canada compared to the United States suggests Canada is unlikely to follow the Prop 22 route.

Gig workers' claims to employment status and employment protections made serious legal inroads in the United Kingdom. In 2018, a UK court ruled that a gig worker was not an "employee" but rather fell into a middle ground status of "worker" under the law in the Pimlico Plumbers Ltd and Another v Smith (2018) decision. In this case a Kent plumber argued he was entitled to employment protections such as holiday pay and disability accommodations for which he was denied. He had attempted to work less in order to recover from a heart attack he had suffered. Similarly, in December 2018 a majority of the UK Court of Appeal ruled in *Uber* BV v. Aslam that Uber should treat its drivers as workers, not independent contractors. Uber was granted

permission to lodge an appeal with the Supreme Court. The case was brought by the Independent Workers Union of Great Britain on behalf of drivers Farrar and Aslam, who were founders of the union. At the time of writing, the Supreme Court had heard the case in the summer of 2020 but had yet to issue a ruling. While the employment status of gig workers in the United Kingdom is far from settled, these cases set an early indication that the courts are inclined to extend employment protections to gig-workers.

While cases determining the employment status of workers continue to weave their way through the courts some, legal scholars and legislators have instead advocated for a middle ground. In Europe, Todolí Signes (2017) argues the online platform "profession" is fundamentally different enough to require a "special labour law" that would provide a middle path between employee and independent contractor. Similarly, in the United States, Harris and Kreuger (2015) claim gig workers also need a hybrid status, called "independent workers," which would provide them some employment protections such as collective bargaining rights but not the minimum wage, given the contract nature of the work. Advocates of these approaches are attempting to find a middle ground that acknowledges the temporary nature of the work without eliminating gig workers from the social contract.

This legal middle ground already exists in some parts of the world. In Canada, certain jurisdictions already have the status of "dependent contractor," which could, in theory, provide alternative protections such as collective bargaining. No court has ruled gig workers are covered by these statutes. There has been a push in the United Kingdom to create a "dependent contractor" status following the recommendations made by the Taylor Review convened by the government to evaluate gig work. Many have argued the UK Supreme Court's Pimlico ruling was influenced by the findings of the Taylor Review. A potential problem with this middle ground approach is that it still provides incentives to corporations to design work so that all work is middle-ground work and therefore would still undermine traditional employment protections.

Beyond the misclassification issue, Uber and other gig companies have faced lawsuits for violating union rights, operating illegal equipment leasing programs, underpaying, and violating gender and racial discrimination laws. In a recent example, Italian courts ruled that the very design of Deliveroo's algorithms was "discriminatory" and violated labour rights (Lomas 2021). All of these issues stem from a business

model based on an extremely fissured workplace. While firms and investors on Wall Street prefer this employment model, it will be up to governments, regulators, and society if they will allow it to continue. If gig companies are permitted to shed all responsibility for employment, this trend will reverberate throughout the traditional economy as well. Employment fissuring is not unique to the gig economy.

IMPLICATIONS FOR THE NATURE OF WORK

Beyond the impact of the legal and economic issues of the gig economy upon workers, gig companies also threaten traditional companies in the industries they are moving into. For example, transportation systems in New York City, and the taxi industry specifically, have been greatly harmed by the growing presence of Uber cars on the road, as evidenced by suicides among taxi drivers who found their earnings diminished by the surge of Ubers in the market (Fitzsimmons 2018). The massive influx of Uber drivers in urban markets created what Marx called a reserve army of labour ([1867] 1906). Hall and Kreuger's (2017) evaluation of Uber's data found that 11 per cent of drivers drop out after the first month, half by the first year, and two-thirds after two years. As Rosenblat (2018) noted, this likely happens because Uber depends on a constant churn of hobbyist, part-time, and temporary workers who drive down the standards of full-timers and traditional cab drivers.

Gig companies have also radically changed the nature of work by eliminating interpersonal contact between employee and employer. This is particularly noticeable in gig companies' use of algorithms that replace traditional managerial roles. As Weil argues, technological innovations allow this fissuring. In the case of gig companies, advances in smartphone and GPS technologies have allowed them to take fissuring to an extreme and outsource all employment to each individual worker. Having no employees gives way to a series of problems for gig companies: they must provide customers with a uniform product in an appropriate quantity. To maintain their legal claims that drivers are independent contractors rather than employees, gig companies cannot directly dictate when, where, or how workers work. Instead, they must send indirect cues through algorithmic management (Lee et al. 2015; Rosenblat and Stark 2016). Far from being truly independent, gig workers find their actions monitored through their cell phones. Uber tracks how fast drivers drive, how hard they brake, and whether

or not they are taking the most efficient route. While they do not tell drivers to follow explicit protocols, workers are given metrics they must meet in order to continue to work for the company. Further, Uber relies on psychological manipulation to maintain supply and compliance (Scheiber 2017). Uber's access to vast amounts of data, such as workers' log-off times, enables them to send push notifications with enticing psychological signals about surging demand that encourage drivers to keep working.

Uber is particularly adept at employing algorithmic management to direct its workers. For Uber drivers, the app works much like a slot machine. While it does vary with geography and time, for the most part, gig acceptance on the Uber app is blind, meaning drivers are told only that a ride is available for them to claim. They are given no information about the length of the ride, where the ride will take them, or how much they will make. Drivers have only fifteen seconds to take the ride with hopes it will be profitable (Rosenblat 2018). Furthermore, Uber employs dynamic pricing, which depends on market conditions. Therefore, pay for the same route or ride can vary greatly, depending on the pricing algorithm. In this way, like playing a slot machine, sometimes drivers hit the jackpot, but more often they make minimum. It is a classic example of "gamification" of work (Walz and Deterding 2015), but the game is more like gambling and less like Tetris. Uber combines dynamic pricing and blind acceptance with strict requirements on the number of rides drivers can cancel (5 per cent) and the number they must accept (80–90 per cent, depending on the market) to continue to use the app (Rosenblat 2018). Additionally, gamification principles, such as weekly metric-based incentive bonus and surge pricing, keep drivers constantly hunting or "playing" for the highest-paying rides.

Beyond algorithmic management, gig companies also attempt to obscure their control over their workers by suggesting that they are providing a path to independent entrepreneurship. They employ popular rhetorical notions such as tech futurism, freedom, and entrepreneurship to claim their workers are not coerced (Griffith 2015; Irani 2015). The use of algorithms, given their inherent uncertainty and authority, helps gig companies project an air of neutrality over the systems, despite the fact that algorithms and the rules are ultimately written by management (Gillespie 2014). In fact, the algorithms provide a constricted "choice architecture" (Sunstein 2014), which guides workers to make the "choice" the company would have asked them

to make if employing direct management. Similarly, gig companies' use of in-app ratings systems further outsources management to passengers. Uber drivers can be kicked off the app if they do not maintain a certain rating. Since passengers determine this rating, drivers must modify their behaviour to provide a standardized service (Bruder 2015). The company sends drivers algorithmically generated performance summaries and suggestions about how to standardize their behaviour to equal the performance of higher-rated drivers. This rating system amplifies the amount of "emotional labour" (Hochschild 1983) drivers must perform, in which they suppress their emotions to placate customers' demands, to a greater degree than in traditional service occupations.

The gig economy has implications for worker power, which typically takes two forms: structural and associational (Wright 2000). This power is not exogenously given but interacts with how employers structure work and employment tasks – what sociologists call the structure of the labour process. Employers can attempt to manipulate workers' structural power by making their task less integral to the success of the firm. Historically, this has been accomplished through capital investment but, as the gig employers highlight, this can be accomplished through regulatory and legal apparatuses as well. Employers can also attempt to manipulate workers' associational power through either atomization or consent (Burawoy 1979). Gig employers rely heavily on both forms of consent by situating each employee as an independent entrepreneurial contractor and by manipulating this atomization through ideological appeals to it.

For Marx ([1894] 1993) the labour process in capitalist production was characterized by the use of coercion to secure surplus value (or uncompensated work time) from the capitalist's employees. Burawoy (1979) turned the labour process argument on its head, noting that workers often seem more than happy to participate in their own exploitation. For Burawoy, the labour process is defined by both coercion and consent. When asked where their employer's profit comes from, most workers in his study failed to identify their own labour power as the source and instead claimed, "Profit is some form of earned reward for past sacrifices or for the risk of capital investment. Others argued that profit is generated in the market" (1979, 29). For Burawoy, a worker's surplus value is not just secured but is also obscured. He notes workers often participate in their own exploitation by turning work into a game to reduce the monotony of their industrial

tasks, pushing themselves to work harder and provide their employer with more surplus value.

It appears that gig companies utilize new technologies in an attempt to construct the labour process through consent alone. For Marx, coercion was constructed on the shop floor and resulted in the formation of class consciousness. In the gig economy there is no employer and employee interaction at all, a source of constant frustration for gig workers facing payment problems. Coercion is informal, purely algorithmic, and psychological. Gig companies are in fact legally prevented from making demands like a standard employer if they want to maintain the illusion that they are purely technology companies (Rosenblat and Stark 2016; Dubal et al. 2018). Coercion is further outsourced to customers, who maintain the company's brand and quality by rating drivers. In constructing consent, employers offer ideological appeals to workers, suggesting that they are not workers but in fact mini-capitalists. Additionally, almost as if they read Burawoy as an employment guide, employers often design the app like a game, employing the principles of a slot machine to hook workers into working longer and harder (Rosenblat and Stark 2016). In the gig economy, capitalists erase the worker and extract surplus value by recasting profit as a service fee for the use of the app.

It is easy to find evidence that the ideological appeals of these companies is being internalized by workers and thereby securing their consent. For example, Hall and Kreuger (2017) found Uber drivers had deeply bought into the entrepreneurship narrative: 87 per cent of drivers surveyed cited joining Uber "to be my own boss and set my own schedule." The gamification design of the Uber app further shows how these apps gain workers' consent to work harder for these companies. Malin and Chandler (2016) interviewed one driver, Cheryl, who said, "I would kind of play this game with myself, where once I took a passenger and dropped him off I would just keep my app on and kind of head back home. And then if I got something, or if it looked like there was a surge somewhere I'd head over there, but mostly I would just kind of make my way around and if I had stuff to do then I had stuff to do, if I came home, then I came home." When Cheryl was ready to head home and end her shift she could not help playing the "game" of continuing to work. The addictive nature of working for Uber made Cheryl fully complicit in her own exploitation without ever actually interacting with a boss or human representative from her employer.

GOVERNMENT RESPONSE TO GIG EMPLOYMENT

Debate on the impact of the gig economy is often focused on the gig companies and gig workers. Gig companies "disrupt" not only those who use the app but also the economic sectors and the regulatory regimes in which they operate (Dubal et al. 2018). Their actions have spillover effects in the economy, as other sectors attempt to copy their employee-free business model. Furthermore, the companies are attempting to rewrite employment laws around the world. The National Employment Law Project estimates Uber spent $1.4–2.3 million a year, and Lyft spent $336,000–886,000 a year on lobbying in just five states between 2016 and June 2017, and employed 370 lobbyists – more than twice as many as Microsoft and Walmart and over three times as many as Amazon (Borkholder et al. 2018). Gig companies such as Uber use their structural power as large companies in combination with insider and outsider strategies to utilize their instrumental power (Dubal et al. 2018). They have even attempted to neutralize the opponents of labour through partnerships with activist allies such as Mothers against Drunk Driving and the NAACP. Gig companies have used the app itself to mobilize drivers and consumers to engage in "clicktivism" on their behalf. In New York, when users logged on to the Uber app, they were prompted to click and express their displeasure with the mayor for attempting to cap Uber's growth in the city. Uber also used computer programs to manipulate a New York City survey by creating a program to fill in results for drivers in a manner favourable to the company (Isaac 2017). Despite these efforts, the practices of gig companies continue to raise employment, consumer, and public concerns, which governments have increasingly felt compelled to address.

When giving thought to the political economy of a city in relation to gig companies, especially in the transportation sector, it is important to consider the function of gig companies. Malin and Chandler (2016) describe Uber drivers as experiencing splintering precarity, because the benefits and costs of the gig economies' technological innovation depend on legacies of economic and racial inequality. The impact of the gig economy on different groups depends on their status and their exposure to insecurity and instability. As discussed above, those who stand to benefit from the gig economy have greater resources and greater social capital, and are from dominant social, racial, and gender groups. The gig economy provides differential access to the benefits

of the gig economy. Malin and Chandler developed this idea from Graham and Marvin's (2001) notion of splintered urbanism, which noted that the privatization of telecommunications, transportation, and other city services splinter cities along economic, political, and racial lines, generating imbalances in how different groups interact with the urban infrastructure. As such, I argue that we should view the rise of Uber, or care companies such as Care.com or Handy, as a result of government failure to provide public social protection and as a privatization of public services. Uber was born, after all, in San Francisco, a city notorious for poor public transit breadth and a weak taxi infrastructure. In New York City, Uber billed itself to the public as a necessity given the city's failure to invest in its crumbling subway system (Kim 2019).

While cities in North America have largely opted for privately operated taxi systems, they are ultimately public utilities and have historically been regulated as such (Dubal 2017; Mathew 2005). As a public utility, taxi service plays an important function in a city's transportation infrastructure, particularly for those in distant corners of the city, the elderly, and the disabled. Traditionally, in the United States, cities have regulated taxi cabs (Dempsey 1996). The primary concern and justification of city regulation has been safety (both for consumers and drivers), consumer and driver protection, fair industry competition, labour protections for drivers, and public good issues such as congestion and pollution. Over time the regulation and permitting of taxis became a significant source of income for cities. The advent of transportation gig companies, commonly called transportation network companies (TNCs), eliminated some traditional justification for regulation by solving some problems with technology, such as minimizing safety concerns by implementing the rating system and eliminating cash transactions (Lobel 2016). Additionally, most cab companies have been regional TNCs that benefit from the network effect of operating in many cities (Rogers 2015). These technologically driven innovations have generated substantial confusion for regulators and weakened companies' position in maintaining their advantage.

Evaluating the entry of TNCs into major American cities illustrates their impact on regulatory regimes. The TNCs, embracing the Silicon Valley ethos of disruption, entered the taxi cab industry illegally, operating without licences and often in defiance of city regulators. Uber and Lyft covered all costs and expenses associated with fines that drivers received while operating illegally. They hoped, and have been

largely proven correct, that if they could survive long enough, consumers and drivers would begin to depend on them and help fight for their legalization. When US cities have attempted to regulate the TNCs, they have responded by attempting to go to state legislatures and have them pre-empt the city action. As Dubal et al. (2018) noted, there are numerous motivations for a city to regulate TNCs, from safety to congestion control to ensuring competition. They found cities have focused mostly on consumer protection and safety instead of tackling the more contentious labour issues. TNCs have largely accepted these laws, as they increase consumer confidence at little cost.

Further complicating matters, taxi regulations in the United States have varied wildly. Broadly, Tzur (2017) argues for categorizing the pre-TNC regulatory environments into three categories: licence cities, restricted cities, and medallion cities. Licence cities simply required that taxi companies obtain a business licence. Restricted cities limited the number of licences issued in the city. Medallion cities also limited the number of licences available, but allowed licence holders to sell this licence on a secondary market. Tzur (2017) evaluated how forty US cities responded to TNCs illegally entering the market. Thirty-one formally legalized them, six informally let them exist through failure to enforce, and only three issued cease-and-desist orders. It was in medallion cities with concentrated taxi-business interests that TNCs were most thoroughly regulated

Building on Tzur's research, I looked at how all US cities with over 200,000 residents responded to the introduction of TNCs. Of the initial sample of 118 cities spanning thirty-seven states, only eighty of these cities had an opportunity to regulate TNCs, meaning TNCs entered their markets before states had pre-empted local authority to regulate TNCs (Wolf 2021, under review). Table 3.4 presents the findings for the twenty-five largest cities. I present data on how cities responded to the advent of TNCs as well as how the states in which these cities are embedded have responded to TNCs and marketplace platform companies such as Handy and Care.com. This allows us to evaluate municipal response and the issues of state pre-emption and how states chose to address the employment status of gig workers. The state response data were compiled largely from Racabi (2018) and Moran (2017).

Only three of the largest cities in the United States are in states that have taken no action to regulate TNCs. Nearly all states pre-empt local ordinances, although there are sometimes legal carve-outs for individual cities. For example, New York's law excluded the state's largest

Table 3.4
US municipal response to entry of transportation network companies.

City	*State*	*Population (Metropolitan Statistical Area)*	*Pre-Uber environment*	*Regulatory response*	*State TNC law*	*State marketplace platform law*	*State pre-emption*	*State regulatory response*	*State law restricts employment status*
New York	NY	8,622,698	Medallion	Strong	Yes	No	Partial (allows bans in cities of 100K and excludes NYC)	Legalized statewide, local regulation	No
Los Angeles	CA	3,999,759	Medallion	Weak	Yes	No	Yes	Regulated	No
Chicago	IL	2,716,450	Medallion	Strong	Yes	No	Yes	Legalized statewide, regulated	Yes
Houston	TX	2,312,717	Restricted	Strong	Yes	No	Yes and overturned	Regulated	Yes
Philadelphia	PA	1,580,863	Medallion	Strong	Yes	No	Partial (excludes Philadelphia)	Legalized statewide, regulated	No
San Antonio	TX	1,511,946	Restricted	Strong	Yes	No	Yes and overturned	Regulated	Yes
San Diego	CA	1,419,516	Restricted	Weak	Yes	No	Yes	Regulated	No
Dallas	TX	1,341,075	Restricted	Medium	Yes	No	Yes and overturned	Regulated	Yes
San Jose	CA	1,035,317	Restricted	Weak	Yes	No	Yes	Regulated	No
Austin	TX	950,715	Restricted	Strong	Yes	No	Yes and overturned	Regulated	Yes
Jacksonville	FL	892,062	Medallion	Weak	Yes	Yes	Yes and overturned	Regulated	Yes
San Francisco	CA	884,363	Medallion	Medium	Yes	No	Yes	Regulated	No
Columbus	OH	879,170	Restricted	Strong	Yes	No	Yes	Legalized statewide, regulated	Yes

Fort Worth	TX	874,168	Permit	Weak	Yes	No	Yes and overturned	Regulated	Yes
Indianapolis	IN	863,002	Permit	Weak	Yes	Yes	Yes	Legalized statewide, regulated	Yes
Charlotte	NC	859,035	Permit	Weak	Yes	No	Yes	Regulated	Yes
Seattle	WA	724,745	Restricted	Strong	No	No	No	Insurance only	No
Denver	CO	704,621	Restricted	Weak	Yes	No	Yes	Legalized statewide, regulated	Yes
Washington DC	DC	693,972	Permit	Weak	NA	NA	NA	NA	NA
Boston	MA	685,094	Medallion	Strong	Yes	No	Yes	Legalized statewide, regulated	No
El Paso	TX	683,577	Restricted	Weak	Yes	No	Yes and overturned	Regulated	Yes
Detroit	MI	673,104	Permit	Weak	Yes	No	Yes	Regulated	Yes
Nashville	TN	667,560	Restricted	Medium	Yes	Yes	Yes (excludes airports)	Legalized statewide, regulated	Yes
Memphis	TN	652,236	Restricted	Weak	Yes	Yes	Yes (excludes airports)	Legalized statewide, regulated	Yes
Portland	OR	647,805	Restricted	Strong	No	No	No	None	No

Sources: Tzur (2017), Racabi (2018), Moran (2017), NELP (2018), and US Census (2017).

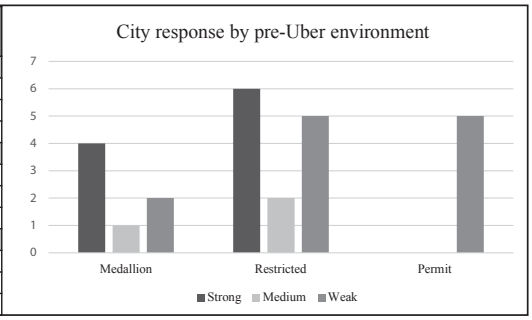
cities from coverage. State laws give cities leeway in enacting some regulations, especially consumer protection regulations. In Texas and Florida, liberal cities have attempted to regulate TNCs, only to have their regulations overturned by their conservative state governments. In all other cases, states passed a law pre-empting a city's ability to pass local laws before any city in the state had enacted municipal regulations of TNCs. Only seven states have passed marketplace platform laws, which have been written by the industry and a conservative legal think tank, the American Legislative Exchange Council. Handy, the home-cleaning gig company, has been particularly involved in such efforts to set their own terms and ensure their employees are considered independent contractors according to state law. In four states, laws were proposed to regulate marketplace platforms in a way that would define employees as independent contractors, but these laws were not passed, in large part because of the efforts of the National Domestic Workers United (NDWU). NDWU is the largest union in the United States that represents domestic workers and is organizing gig workers in domestic service industries. Most, but not all, state TNC laws restrict employment status, ensuring that TNC drivers are considered independent contractors, not employees. Cross tabulations of regulatory response are provided in figure 3.3. Cities with a traditionally more regulated taxi industry were more likely to respond strongly to the advent of TNCs than historically licensed-based cities. The largest cities, which also tended to have the most entrenched interests, were also highly likely to respond with strong regulatory action. Surprisingly, the smallest of these metro areas were also likely to respond with strong regulatory action. Some of cities in the smaller two size groups did still take strong regulatory response. These cities were often liberal bubbles in conservative southern or rural states. The smallest size group present here, which tended to be southern cities or cities in tech-friendly California, were more likely to take weak actions or no action in response to TNCs. Overall, of the twenty-five largest cities in the United States, about half took weak or no action in response to the entry of TNCs to their cities.

In the United States, cities tend to be more liberal than their surrounding rural area. In the case of the gig economy these same cities have largely accepted these companies' demands with barely any contention. It is unclear if US cities will continue this approach to the gig economy. Notably, some cities and states that originally made no

attempt to regulate Uber, such as New York City, Seattle, and California, have since mounted stronger regulatory responses. Seattle, in response to the Teamsters Local 117's organizing of Uber drivers, passed an innovative collective bargaining law for TNC drivers, but it was ultimately held up in court. In August 2018, New York City, under pressure from the New York Taxi Workers Alliance, and in light of a rash of driver suicides, passed sweeping TNC regulation that capped the number of TNC drivers who could be on the road, similar to traditional medallion regulations, and forced TNC companies to ensure their drivers are paid a living wage after expenses. These laws were made permanent in 2019, and NYC added "cruising limits" on TNCs requiring that by August 2020 drivers can be on the app driving or cruising with no passenger only 31 per cent of the time. This rule was implemented after the city determined TNCs now represented 30 per cent of traffic during rush hour, creating a lot of congestion (NYC TLC & DOL 2019). In a radical reversal of direction following two large driver strikes in Los Angeles and the California Supreme Court's landmark Dynamex ruling (discussed above), the state has now codified the ruling in state law and applied it to all gig-economy workers (Said 2019). It remains to be seen if this trend towards regulation will continue or if TNCs will be successful in using state pre-emption to prevent municipal action.

In Canada, Uber has operated far less aggressively than in the United States. Nonetheless TNCs still entered numerous markets illegally. While Uber drivers in Canada had their legal expenses, such as tickets and fines, covered by the company, they also found themselves facing direct pressure from traditional cab drivers while on the road, particularly in Montreal (Rosenblat 2018). Unlike in the United States, Uber attempted to strike agreements with some municipal and provincial governments in Canada. Uber reached an agreement with the province of Quebec on 9 September 2016 legalizing Uber operations in the entire province. The agreement covered public safety, public good, and employment issues. It legalized Uber but forced the company to comply with traditional cab rules, requiring drivers to obtain a cab licence and follow the province's minimum tariff structure. Importantly, the agreement with Quebec included provisions that Uber had fought vigorously in the United States. In Toronto, the city and Uber had been engaged in legal battles until the city council voted on 4 May 2016 to legalize Uber in exchange for Uber following the

Response to pre-Uber environment	Count
Medallion	7
Strong	4
Medium	1
Weak	2
Restricted	13
Strong	6
Medium	2
Weak	5
Permit	5
Strong	0
Medium	0
Weak	5



Response by city size	Count
> 1 Million	9
Strong	5
Medium	1
Weak	3
725K—1M	8
Strong	3
Medium	1
Weak	4
< 725K	8
Strong	2
Medium	1
Weak	5

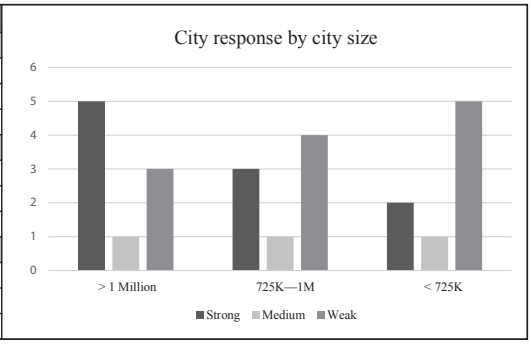


Figure 3.3 Municipal response to transportation network companies by regulatory environment and city population

minimum base fare consistent with what was already enforced on taxis. To ensure fair competition, Toronto also allowed traditional taxis to start implementing surge pricing.

In a particularly open embrace of Uber, the Town of Innisfil, Ontario, outsourced part of its public transit system to Uber under the expectation that it would save the town $8 million a year (Canadian Press 2018). Residents attempting to book trips to "key destinations" within the town are guaranteed a flat fee of three to five dollars. Despite initial enthusiasm, the privatization scheme has run into ballooning costs, forcing the city and Uber to impose monthly ride caps. As one resident lamented, "I would never get on a bus in Toronto and hear the driver say, 'Sorry, but you've hit your cap.' Uber was supposed to be our bus" (Bliss 2019). Uber is now legal in many of the largest municipalities in Ontario, Alberta, and Manitoba. British Columbia was the lone TNC holdout for years faced with taxi industry and labour backlash, but finally TNCs became legal in January 2020. Vancouver had been the largest North American city to not legalize TNCs.

WORKER RESPONSE TO THE GIG ECONOMY

Gig workers are not uniform, and workers' experience with the gig economy tends to be mediated by their economic opportunities and life situation. While it works for some, the costs of the gig economy are concentrated on individuals who are most dependent on these industries, and they have not always endured their plight quietly. Gig workers are a relatively tech-savvy group who often turned to online driver forums on sites such as Reddit and Facebook to find collective solutions and emotional support for the workplace issues they face (Rosenblat 2018; Kessler 2018). These forums have even been used to coordinate protests and circulate petitions, often having an impact on company policies. While these sites have produced some collective responses, they have tended to be small and temporary, as workers have largely failed to move the organizing beyond the online platforms. Although the union in Los Angeles has found innovative ways to use these online platforms (Dolber 2019). Still, workers' geographic isolation from each other has made collective responses to their problems challenging.

While their isolation makes organizing difficult, it does not make it impossible, and there have been some notable attempts. In Seattle, TNC drivers have been organizing a union with the Teamsters Local 117. The drivers are demanding a say in the companies' rates, as well as medical coverage and retirement benefits. The union pushed city council to pass legislation giving them a right to unionize, the first such law in the country. Also in Seattle, the worker centre Working Washington has been organizing food delivery and grocery-shopper workers at Instacart, UberEats, and DoorDash, where they have won changes to company policies and are pursuing legal reforms in the state and city. The workers centre Working Partnership USA has also begun organizing gig workers in Silicon Valley under the name Gig Workers Rising, inspired by the unionization of cafeteria workers, security guards, and bus drivers at leading Valley firms such as Google and Apple by UNITE HERE, the Service Employees International Union (SEIU), and the Teamsters. Workers centres such as Working Partnership USA and Working Washington are different from traditional unions in that they do not have official legal recognition to represent the workers they fight for. Instead workers voluntarily join these organizations to push for improvements at work without seeking formal recognition. They are particularly prominent in the United

States in industries that are hard to organize, such as immigrant-dominated industries with large numbers of undocumented workers (Fine 2006). Deliveroo and UberEATS couriers as well as Uber drivers have long been organizing and protesting for higher pay and benefits in the United Kingdom under two branches of the Independent Workers of Great Britain. In the United States the National Domestic Workers United has been organizing domestic workers working for marketplace and hybrid apps, such as Care.com and Handy. These efforts helped prevent five states from passing Handy's marketplace platform bill in 2018. These laws would have defined all workers working on apps in the marketplace platform sector of the gig economy as independent contractors, ensuring fundamental benefits would be denied to home-care workers, including cleaners and elder-care workers. In Canada, food-delivery workers for Foodora in the Greater Toronto Area organized the union Foodsters United. Following their legal victory with the OLRB, which ruled the drivers were "dependent workers," the delivery people voted overwhelmingly (88.8 per cent) in favour of the union. This was the first victory of its kind in Canada. Unfortunately, it was a pyrrhic victory, as the vote came months after Foodora had filed for bankruptcy and left Canada. Foodsters United continues to organize delivery workers in the Greater Toronto Area and is looking to form a worker-owned cooperative (Darrah 2020). Uber drivers in Canada have been organizing with the UFCW Canada, and in Toronto the union has filed an application to represent 300 drivers with the Ontario Labour Board (UFCW Canada 2020). The Independent Workers' Union of Great Britain recently organized the first international conference of app-worker unions, forming the International Alliance of App-Based Transport Workers. This new international federation includes drivers from all over the world and aims to coordinate their campaigns against Uber and other app companies (Varghese 2020). The meeting generated core principles, strategies, and a network for future organizing.

Some labour groups have attempted to partner with gig companies to improve conditions, a move often criticized by others in the labour movement as aiding corporate white-washing efforts. Uber hired the Freelancers Union in 2016 to create a portable benefits plan. Portable benefits plans have been explored in US cities as a method to provide benefits that are traditionally tied to employment in the United States – such as health care and pensions – to workers who tend to face short-term employment. Similarly, Uber has attempted to partner with

SEIU, which was already working to design a portable benefit program. A strategy increasingly employed by gig companies is to dress up their independent contractor legislation with popular progressive initiatives to garner votes. For example, the marketplace platform laws pushed by Handy in more progressive states included provisions to begin establishing portable benefits for workers (NELP 2018). Ironically, defining the workers as independent contractors, the bills preclude them from receiving traditional benefits such as social security and unemployment insurance. In New York City, in response to the organizing efforts of the New York Taxi Workers Alliance (NYTWA), Uber reached an agreement with a Machinists Union Local to form the Independent Driver Guild (IDG). The contents of this agreement remain undisclosed but are believed to prevent striking or unionization in exchange for Uber providing the IDG with funding. The IDG's purpose is instead to meet with workers and report problems to the company. The NYTWA maintains that the IDG is an illegal company union prohibited under the National Labor Relations Act, while the IDG maintains it provides a valuable service.

One of the more robust organizing efforts of gig workers has been undertaken by the NYTWA in New York City. An American Federation of Labor and Congress of Industrial Organizations affiliate, it represents 19,000 drivers, half of whom are TNC drivers. The NYTWA is unique because it represents workers who technically do not have collective bargaining rights under the law, unlike most unions in the United States, which operate under a principle of exclusive representation established through elections requiring a showing of majority representation. The NYTWA operates more like unions do in European countries such as France, without the principle of exclusive representation and engaging in tripartite bargaining with the city and the companies. Any driver can become a NYTWA member simply by signing up. The NYTWA is in this sense more like the non-profit worker centres, which have proliferated in marginalized and informal immigrant industries in the United States, where the possibility of unionization is unlikely. Yet NYTWA is adamant it is a union, even if the law will not formally recognize it as such. Since its founding in the late 1990s, the NYTWA has utilized its unique minority unionism approach to become the dominant voice for drivers in the city, launching two successful strikes, which helped establish de facto bargaining through the city's Taxi and Limousine Commission (TLC) (Mathew 2005). By opening its doors to TNC drivers, instead of maintaining its base in

traditional yellow cabs, the NYTWA not only survived the threat of the TNCs, in August 2018 it forced the city to make it subject to the same rules, caps, and wage rates as the TLC requires of other taxi companies. The NYTWA has forced the city to take responsibility for the taxi and TNC industry, and recognizes it as an important component of the city's overall transportation system.

Building on the success of the NYTWA, gig drivers across the United States have begun organizing in other cities as well. A new union based in Los Angeles and inspired by the NYTWA, Rideshare Drivers United (RDU), has grown to represent 4,300 drivers in the last few years. RDU built the union off an innovative "online to off-line" model in which the union recruited drivers in the sprawling city of Los Angeles primarily through online forums and online ads. Importantly, it worked to translate online contacts into off-line traditional labour organizing (Dolber 2019). Rideshare Drivers United has held two high-profile strikes against Lyft and Uber in advance of each company's initial public offering on the New York Stock Exchange. Its second strike ahead of Uber's stock listing turned into a worldwide event (Wolf 2019). The union contends the two strikes have been instrumental in spurring the state legislature to reverse course and begin moving on a bill to define gig-workers as employees' not independent contractors under state law. While the most prominent worker organizing has happened in New York City, Los Angeles, San Francisco, London, and Seattle, there have been worker protests against gig-taxi companies in a majority of major US Cities (Wolf 2021). The workers' victories and government response in New York City and Los Angeles show the way forward in addressing the challenges of gig work.

CONCLUSION

Paradoxically, the rise of gig employment in major Western cities is simultaneously nothing new and a radical change. As another form of informal, casual, and precarious work, gig employment is a continuation of a decades-long trends in the United States and Canada since the 1970s. Yet technological innovations have allowed these companies to upend the labour process and provided an ideological justification to refuse to adhere to urban regulatory regimes. This chapter argues that cities should be particularly attuned to these two innovations. Beyond the legal debate over employment status, cities must

decide how they fit technologically mediated work into the regulatory aims of public safety, consumer protection, economic inequality, and global climate change, amongst others. Employment fissuring is not caused solely by companies that enact it but also by governments that allow it to happen. Cities cannot buy into the myth that algorithms and technology are inherently neutral constructs providing purely altruistic benefits for society. Technology, algorithms, and the gig economy are very much a human and social creation of profit-driven corporations, which are foremost beholden to Wall Street investors and not the urban communities they operate in. Allowing them to operate as they wish – carte blanche – represents a particularly pernicious form of splintered urbanism. Unlike previous urban privatization schemes, the current trend of gig privatization of cities makes it difficult for us even to realize that we are also privatizing our social services.

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