

Good morning,

Thank you everyone for being here today to discuss such an important topic.

My name is Lindsey Cameron and am assistant professor of management at Wharton School at the University of Pennsylvania.¹ I have published award-winning research on the gig economy at numerous academic journals as well as popular press articles in Fast Company and Kiplinger's. Before I entered academia, I spent a dozen years in the US intelligence community, primarily serving in the Middle East and North Africa. I received my PhD in management from the University of Michigan and have engineering degrees from Harvard University and George Washington University.

My research is around work and working in non-traditional employment relationships and for the past three years I've been studying the ride hailing industry. Specifically, I've worked as a ride-hailing driver, interviewed nearly 100 drivers in 22 cities and followed them for five years -- and that's just in the US, I've also studied drivers in six other countries. I've taken hundreds of rides, conducted focus groups with customers, and spent time in guilds, web forums, and message boards. In addition to ride-hailing, I've also studied work on many other platforms -- including Instacart, TaskRabbit, DoorDash, and AmazonFlex. Before sharing some specifics about my research I'd like to zoom out and provide an overview of this type of work and what it may specifically mean to some of the different groups here in the room.

Defining Gig Work

Alternative work arrangements is the broad umbrella term for all types of non-standard work -- basically anything that doesn't get a W2. It includes part-time, contracting, subcontracting, temp, and on-demand or gig work. The most widely accepted estimate is from Katz and Krueger -- economists at Harvard and Princeton -- whom's research suggests that roughly 13% of the US workforce are in these alternative work arrangements.² That is a 30% increase from about a decade ago. Why do companies use these independent contractor work arrangements? Money is a major factor. Employers save about 30% of labor costs plus - because they do not hire anyone permanently - they have the flexibility to "right-size" their workforce to meet their needs. And, I want to note that there is a popular notion that workers want schedule flexibility, and that might be true, these changes in the composition of the workforce aren't because workers want them -- it's because the organization wants to save money.

Out of the 13% of the workforce that are in independent contractor work arrangements only 1% are working gig jobs with most of them being ride hailing drivers. However, this industry effects much larger than 1% of the population. A recent study from Pew Research states that 97% of Americans have heard of ride hailing and an entire quarter of the population uses a ride-hailing platform every month.³ That's a lot of people. Ridehailing first launched in 2009 there are more than a million ride-hailing drivers in the US.⁴

¹ <http://www.lindseycameron.com/>

² <https://www.nber.org/papers/w25425.pdf>

³ <https://policyadvice.net/insurance/insights/ride-sharing-industry-statistics/>

⁴ <https://www.cnet.com/tech/mobile/uber-has-long-plotted-its-national-push-over-gig-worker-status/>

And the legal decisions that are made about gig companies change the landscape for both new and existing businesses.

What Control Looks Like in Gig Work

What makes gig work unique is that it relies on algorithms to hire, evaluate, reward and discipline drivers -- in essence, turning algorithms into managers that control workers. Algorithmic control is more “comprehensive, instantaneous, interactive, and opaque” and allows for finer-grained control over the execution of work.⁵

In my research I identify five ways algorithms control the work process: 1) matching drivers to riders; 2) instructing them how to work (e.g., giving directions); 3) setting prices dynamically ; 4) offering incentives meant to nudge certain behavior (e.g., “Do 50 rides in the next 5 days for an extra \$50.”); and 5) evaluating performance via customer ratings.⁶ Sensors in the phone track drivers’ accelerations and deceleration rates and their location, sometimes even when logged off the app. Photo verification ensures compliance with company guidelines, such as making sure the person registered with the platform is the one driving and that drivers wear masks. While these guidelines are reasonable and promote safe practices, as I’m sure that many of you are familiar with, these systems are inherently racially biased -- algorithms have a harder time detecting the features of darker-skinner people than those with lighter complexions or individuals who are wearing headpieces, such as a hijab, gele, or turban.⁷ What this means practically may have a harder time maintaining access to the app and, consequently, earning money because the system has a harder time recognizing their facial features.

Control does not always mean a direct cause and effect - i.e., a driver does X and then Y happens. Even in situations where control is not actually exercised—i.e., there is only the threat of a penalty if workers do not behave accordingly—there is still control because workers align their behaviors to the management system. This is more clearly seen through the five-star rating system. Due to the independent contractor work arrangement, workers aren’t employees with managers; instead, control is “laundered” through customers who evaluate workers’ behaviors and drivers must maintain a non-specified average to

⁵ Kellogg, K. C., Valentine, M. A., & Christin, A. (2020). Algorithms at work: The new contested terrain of control. *Academy of Management Annals*, 14(1), 366-410.

⁶ Cameron, L. (2020). *The rise of algorithmic work: Implications for organizational control and worker autonomy* (Doctoral dissertation).

⁷ Watkins, E. A. (2020, October). Took a pic and got declined, vexed and perplexed: facial recognition in algorithmic management. In *Conference Companion Publication of the 2020 on Computer Supported Cooperative Work and Social Computing* (pp. 177-182); <https://onlinelibrary.wiley.com/doi/abs/10.1002/poi3.153>; <https://www.nber.org/papers/w22776.pdf>

maintain access to the platform.⁸ ⁹Research shows women and people of color tend to get lower ratings from customers than men or white individuals.¹⁰ What this means practically, is that drivers who are women or people of color may have a harder time being assigned more lucrative rides and at a higher risk of deactivation because of their ratings.

Consequences of Gig Work for Customers, Workers, and Community

- 1) As I've already mentioned, one of the things that makes this work unique is that it relies on algorithms to coordinate the work - i.e., algorithmic management. So, yes, there is freedom in that workers do have some schedule flexibility and because of the algorithms their choices are circumscribed. There is only a limited amount of freedom inside the algorithmic structure. It's similar to being told to go anywhere you'd like to go as long as you stay inside this room.
- 2) Now, I'll share some of the research about the benefits and drawbacks of gig work for customers, workers, and society more generally.
 - a) Customers report having an easier time finding a ride hailing car than a taxi. I've spoken to city council members who lobbied to bring these companies to their cities because taxis weren't adequately serving residents and visitors. And while finding a ride is never easy if you live in predominantly minority or lower SES neighborhoods, because these areas don't attract as many vehicles, research at the University of Washington concludes it is easier for marginalized people, such as those who live in low SES neighborhoods, to find a ride through an app than a taxi.¹¹
 - b) At the more micro-level there are many benefits from driving. In my data, drivers mention that this work has helped them 'become a person' as they're able to open a checking account and apply for credit cards for the first time.¹² I've found that ride hailing can increase drivers' personal and professional network to help them access resources such as home repair services, clients for other business projects, or other types of work.¹³ Most importantly, because of the low barrier to entry and scheduling flexibility, these companies provide an opportunity for drivers to earn who may not be able (or even

⁸ Cameron, L. (2020). *The rise of algorithmic work: Implications for organizational control and worker autonomy* (Doctoral dissertation).

⁹ Maffie, M. D. (2020). The perils of laundering control through customers: A study of control and resistance in the ride-hail industry. *ILR Review*, 0019793920972679.

¹⁰ Calo, R., & Rosenblat, A. (2017). The taking economy: Uber, information, and power. *Colum. L. Rev.*, 117, 1623.

¹¹ <https://www.nber.org/papers/w22776.pdf>

¹² Cameron, L. "'Making Out' While Driving: The Relational and Efficiency Game in the Gig Economy." Forthcoming. *Organization Science*

¹³ Kamaswaren, V., Cameron, L., Dillahunt, T. (2018) Support for Social and Cultural Capital Development in Real-time Ridesharing Services. Computer-Human Interactions. CHI 2018: ACM Conference on Human Factors in Computing Systems.

want to) secure traditional employment. Several drivers I interviewed were able to supplement other earnings or flex their schedule around health issues or child/elder care.

- c) Lastly these companies or, more precisely, drivers save lives. One person every hour dies from a drunk driving-related accident -- that is two people in the course of this meeting.¹⁴ Research from Providence College, West Carolina University, Temple University and the Perelman School of Medicine at Penn, all find that incidents of DUI's drop when a ride hailing company enters a city.¹⁵ In Philadelphia, the number of drunk driving arrests has dropped by 14%.¹⁶

3) Even with all these benefits working for a ride hailing company does present challenges.

- a) One of the largest issues is around worker misclassification. Here the challenge is that the business model isn't compatible with minimum wage yet workers do not have the same independence that most entrepreneurs do such as setting their own rates or building a client list.
- b) Uptakes in ridehailing is also linked to increased road congestion.¹⁷ Obviously, congestion causes problems for other cars on the road, pedestrians, cyclists and the environment - especially as many customers report choosing a ride hailing vehicle over public transport. In a suburb of Toronto, the city decided to offer subsidies for ridehailing instead of developing a public transit system which led to increased congestion, spiraling costs, and ride caps for the customers who need it most.¹⁸
- c) Algorithms are the glue that makes this industry work and the limited transparency about what the algorithms are actually doing has implications for drivers and riders. Research from NYU and the think tank, Data and Society, argue that the information asymmetry allows the platforms to control workers and benefit the platform.¹⁹ Drivers can be unfairly penalized and deactivated. In my work, drivers report being blocked based on unsubstantiated customer complaints, such as a customer saying a car smells like marijuana or the driver is drunk, and having no means to appeal the decision.

¹⁴ <https://www.bactrack.com/blogs/expert-center/35040645-dui-statistics>

¹⁵ <https://media.providence.edu/press-release/pc-study-ride-sharing-saves-lives/>;
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2783797;
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2557612;
<https://www.pennmedicine.org/news/news-releases/2017/october/impacts-of-ride-hailing-on-crashes-differ-from-city-to-city>

¹⁶ <https://www.inquirer.com/philly/business/transportation/dui-drunk-driving-decrease-philadelphia-uber-lyft-rideshare-20180821.html-2>

¹⁷ https://www.anderson.ucla.edu/faculty_pages/keith.chen/papers/SurgeAndFlexibleWork_WorkingPaper.pdf;
https://www.nytimes.com/2011/05/04/technology/04ride.html?_r=0

¹⁸ <https://www.citylab.com/transportation/2019/04/innisfil-transit-ride-hailing-bus-public-transportation-uber/588154/>

¹⁹ <https://ijoc.org/index.php/ijoc/article/viewFile/4892/1739>

- d) Most recently we've seen the largest of these companies go public. There is a lack of clarity of what these companies should be valued at, but one thing we've seen is a steep decline in driver pay in the months leading up to these IPOs.²⁰ These rate cuts have a direct effect on drivers' livelihood, especially given they are not typically eligible for unemployment benefits. Correspondingly, there have been a number of boycotts such as in New York City, Los Angeles, and the Bay Area.

I know others in the room will discuss some of the policy implications of this and I look forward to the dialogue. Thank you again for your time and joining the conversation.

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²⁰<https://www.cnbc.com/2019/04/15/valuation-expert-says-uber-is-worth-a-little-more-than-half-the-100b-it-s-seeking.html>