

Research @ Uber

October 2019

Uber

Agenda

01 My team @ Uber

02 Ridesharing <> Public transportation

03 Multimodal platform

04 Areas of interest

Global Policy & Communications

Policy

Communications

Global Policy & Communications

Research

Central Policy

Policy Research

Economists, data scientists and researchers with diverse backgrounds who try to study the impact of Uber's products on cities, riders, drivers and other stakeholders

Policy Research

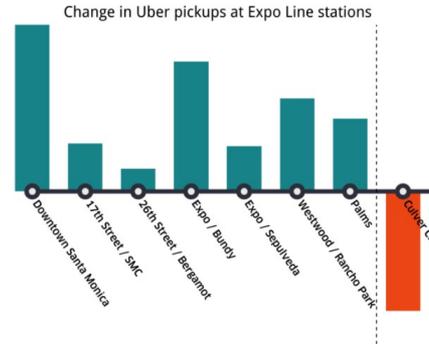
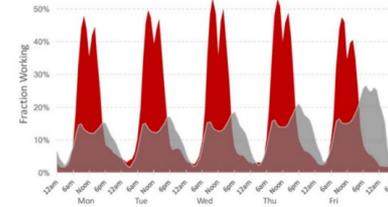
**Policy
Economics**

**Business
Economics**

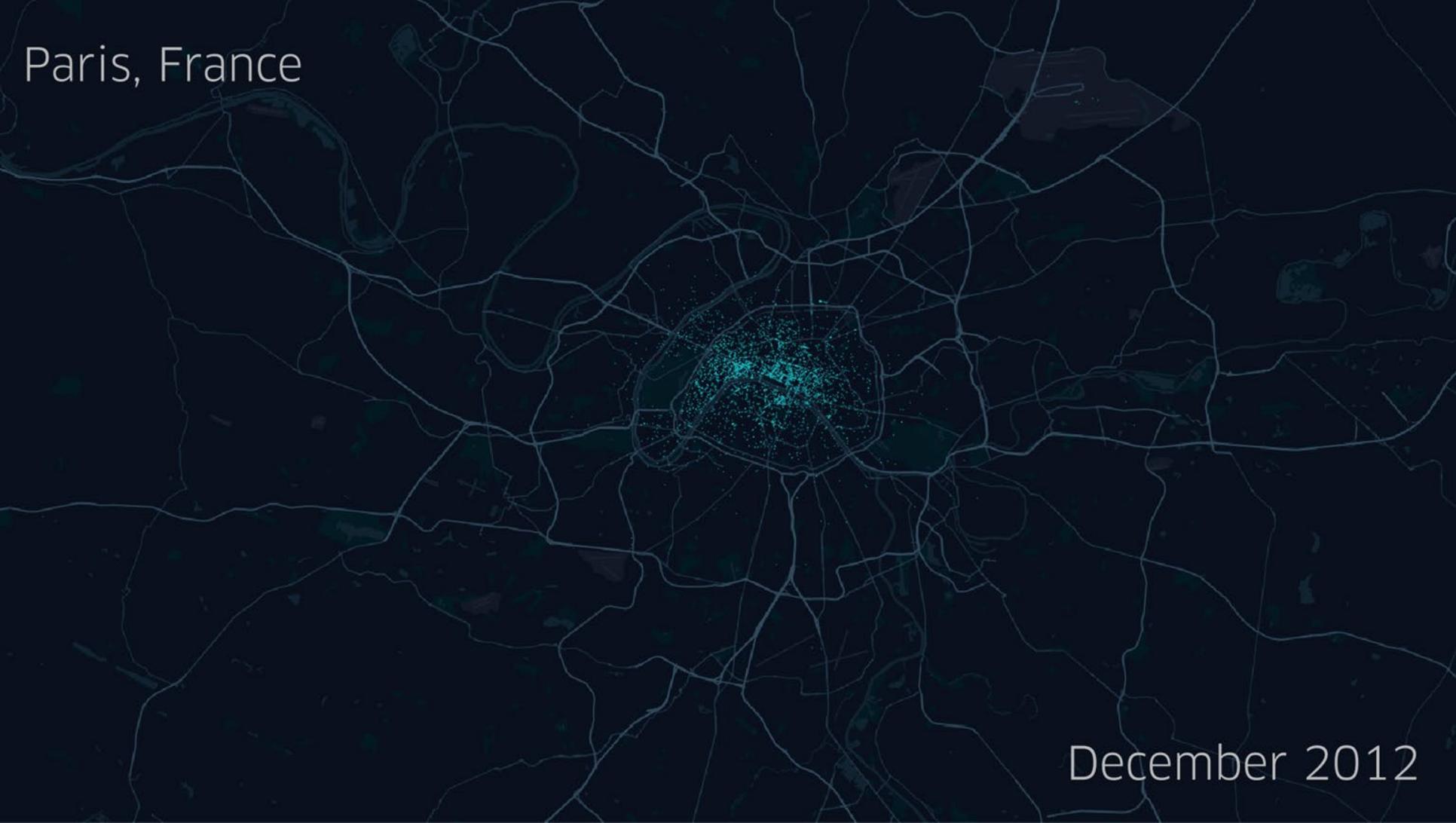
**Mobility
Research**

Mobility Research

- Focus on understanding how ridesharing fits into the wider mobility landscape
 - Impact on cities
 - Impact on riders
 - Interaction with existing public infrastructure/utilities
 - Interaction with built environment
- How:
 - Maps & visualization to establish ground truth
 - Research and data deep dives
 - Third party collaboration
 - With consultants
 - Academics



Paris, France



December 2012

Data deep dive



Taxonomy of Uber journey types that emerged from a visual inspection of 100 rider-days of data in Chicago, along with the percentage of trips that fell in each category.

External collaborations

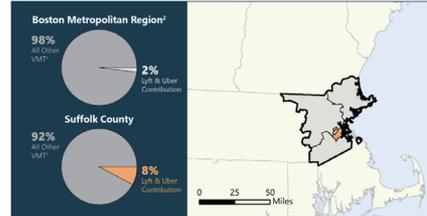


SAN FRANCISCO CURB STUDY

Uber
FEHR + PEERS



Lyft & Uber Contribution to Total VMT¹ (Sept. 2018)



- Notes:
1. Vehicle miles traveled.
 2. The Boston metropolitan region includes the following geographies: Essex, Middlesex, Norfolk and Suffolk counties.
 3. All other vehicle miles traveled include both passenger and freight.

Metropolitan Region	Share of All VMT Within Metropolitan Region		Share of All VMT Within Core County	
	All Other VMT	Lyft and Uber Contribution	All Other VMT	Lyft and Uber Contribution
Boston	98%	2%	92%	8%
Chicago	98%	2%	97%	3%
Los Angeles	99%	1%	97%	3%
San Francisco	97%	3%	87%	13%
Seattle	99%	1%	98%	2%
Washington DC	98%	2%	93%	7%

WP FOR THE 4th PANEL MEETING OF ECONOMIC POLICY OCTOBER 2018

Uber Happy? Work and Well-being in the “Gig Economy”¹

Thor Berger, Carl Benedikt Frey, Guy Levin, Santosh Rao Danda

Oxford Martin School, University of Oxford, School of Economics and Management, Lund University, Uber

Working paper to be presented at the 68th Panel Meeting of Economic Policy in October 2018

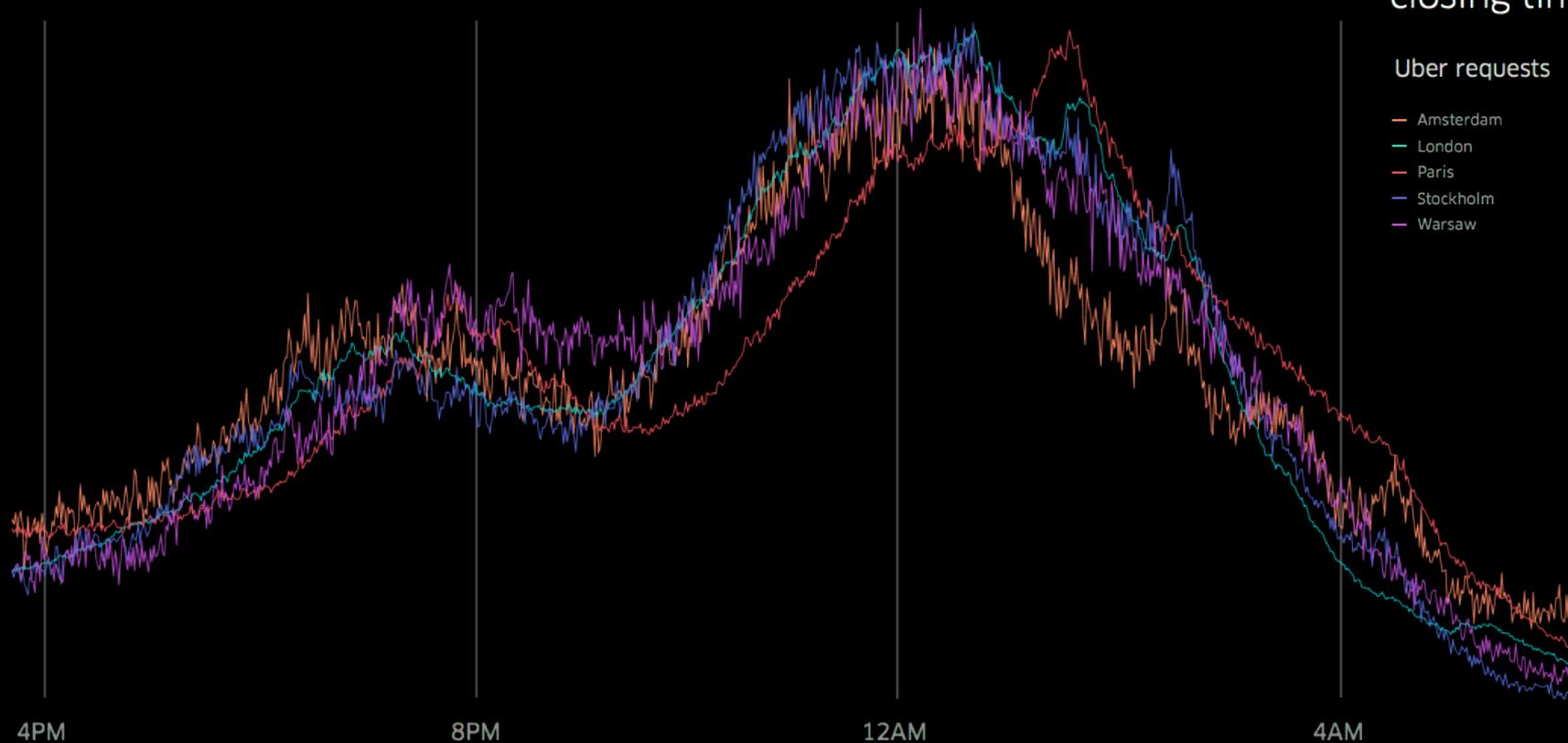
¹We are grateful to the editor, Thomas Bueh, and three anonymous reviewers, as well as Emily Oakland, Lilla Mészáros, and seminar participants at the Workshop on Independent Work at City in London for providing helpful comments that significantly improved this paper. Uber Technologies provided us with access to anonymized driver data used in this paper and we acknowledge its support in carrying out this research. The data that we have are anonymized. Uber and its affiliates do not control the data and were not involved in the data collection. We have received financial support from Uber to carry out this research. The views expressed in this paper, which are those of the authors, do not necessarily reflect those of Uber Technologies. This view expressed in this paper are those of the authors and do not necessarily reflect the views of Uber Technologies.

**Does Uber compete or
complement with public transport?**

Friday night closing time

Uber requests

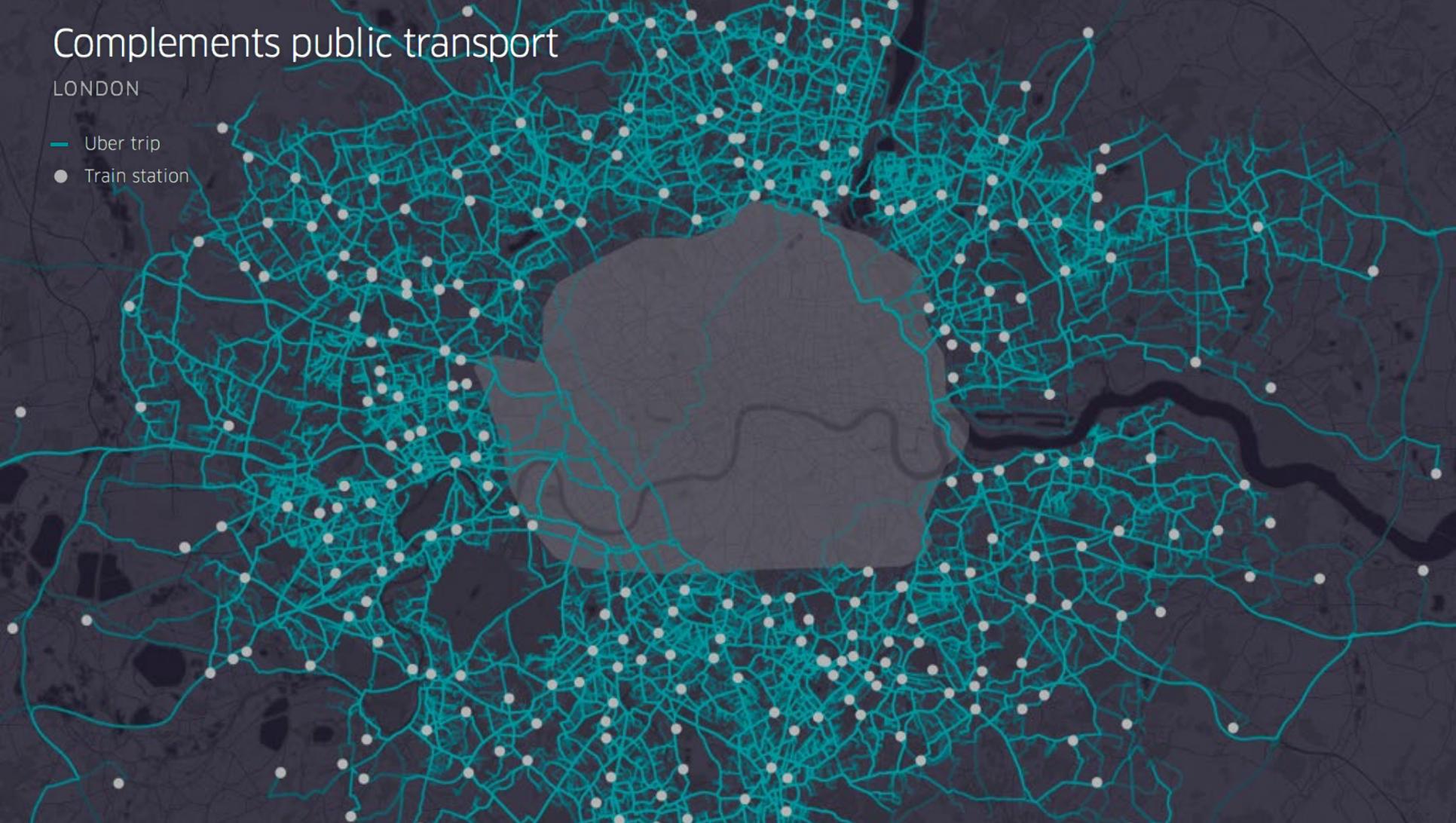
- Amsterdam
- London
- Paris
- Stockholm
- Warsaw



Complements public transport

LONDON

- Uber trip
- Train station

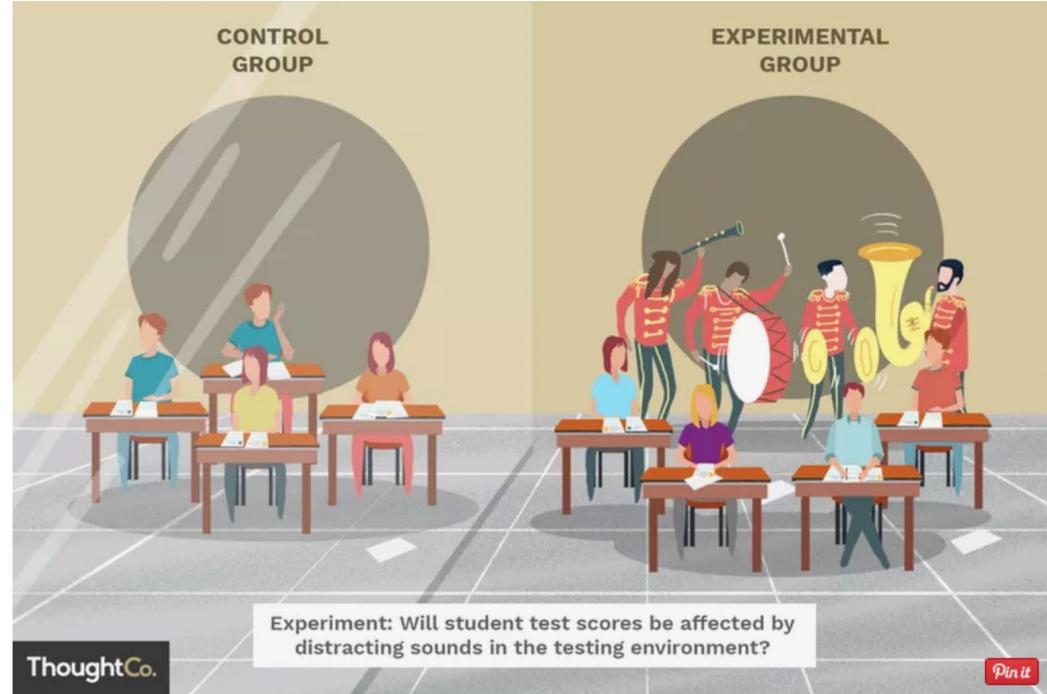


Why is it hard to establish a relationship here?

- Ridership levels, for both Uber and transit, depend on multiple different factors such as
 - Service level
 - Service quality
 - Employment levels
 - Population levels
 - Network design etc.
- This makes it difficult to establish a causal relationship between ridesharing and public transport
- Moreover these factors change based on service provider, city, region etc.
- This means the relationship changes market to market

One friend... Natural experiments

- Establish a relationship by looking at the impact of changes to transit service
- Helps control for exogenous factors that impact ridership



In London

- In 2016, the Night Tube- a new service on the London Underground was started
- It served passengers travelling between 12.30am and 5.30am on weekends along the Central and Victoria lines.
- With weekday nights as control this served as the perfect natural experiment

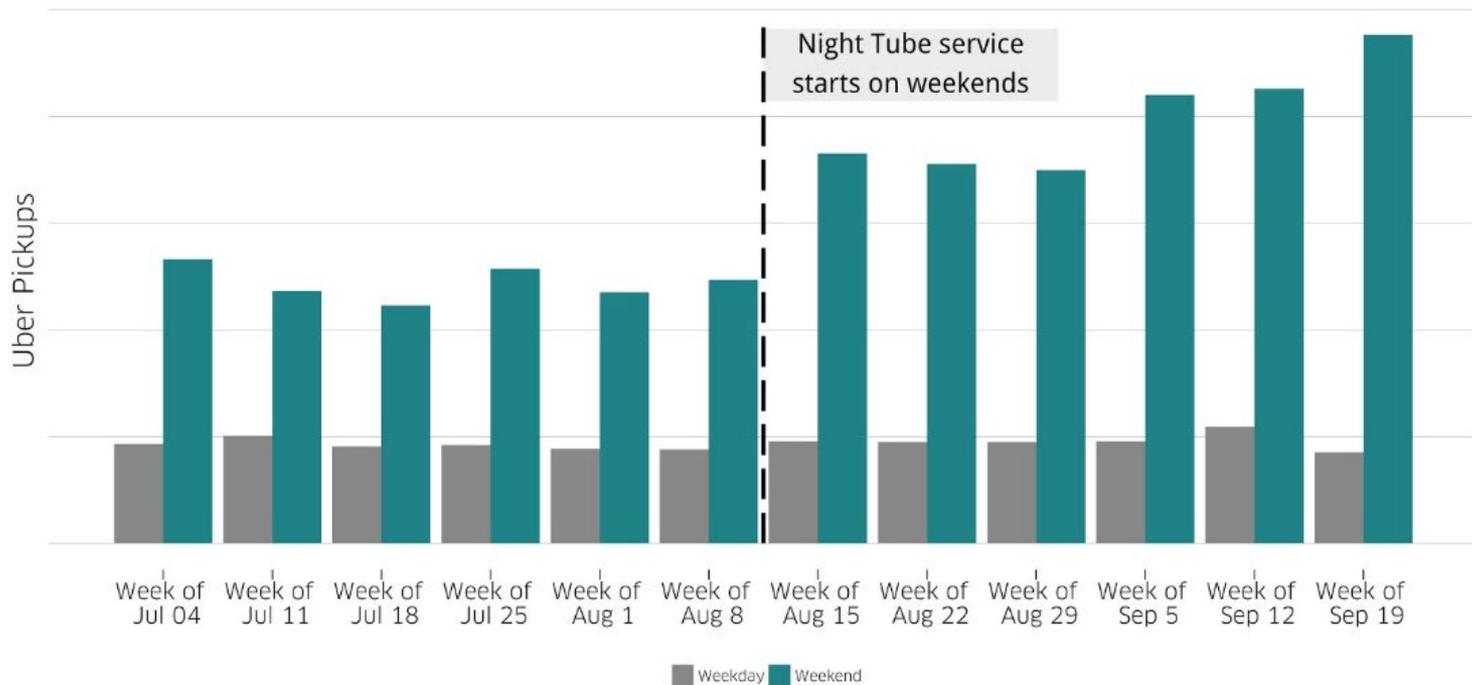


In London...



In London...

UBER PICKUPS AT NIGHT TUBE STATIONS OUTSIDE ZONE 1

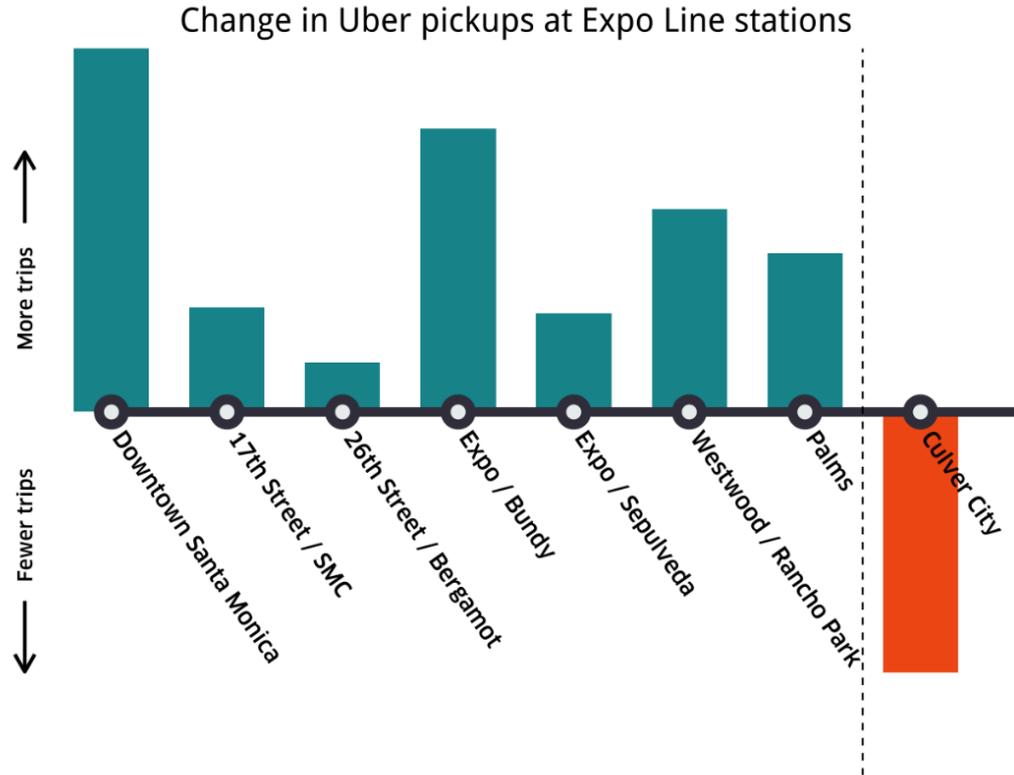


In Los Angeles

- 6 new stations were added to the Gold line serving the San Gabriel Valley suburbs
- 7 new stations were added to the Expo line which traverses the relatively high-density (and heavily congested) Downtown LA-Santa Monica Corridor

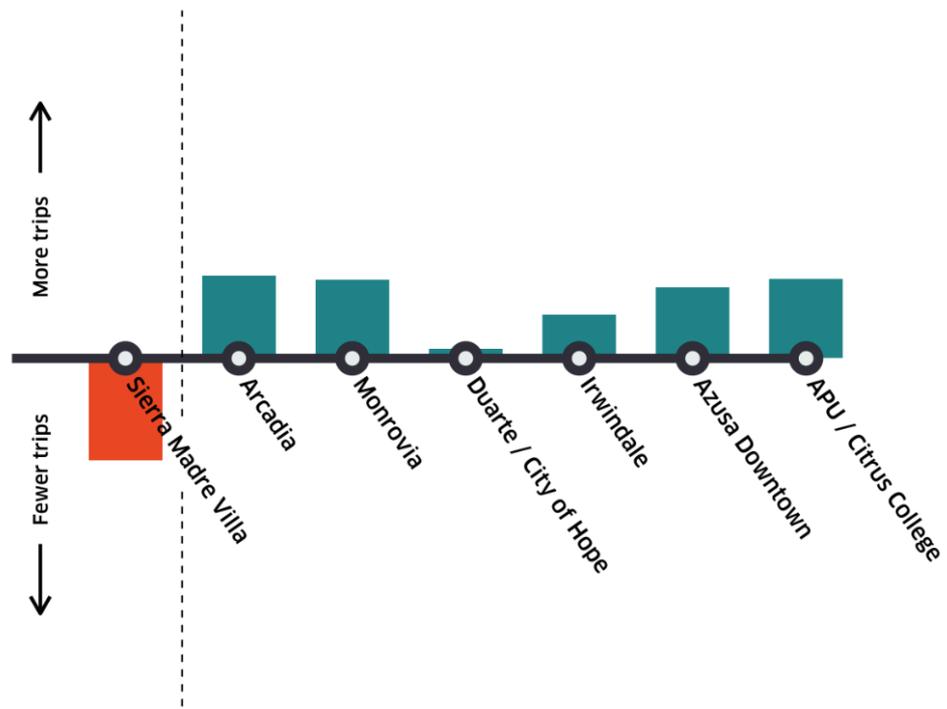


In Los Angeles...



In Los Angeles...

Change in Uber pickups at Gold Line stations



Externally...

Is Uber a substitute or complement for public transit?*

Jonathan D. Hall Craig Palsson
University of Toronto Utah State University

Joseph Price
Brigham Young University and NBER

October 16, 2018

Abstract

How Uber affects public transit ridership is a relevant policy question facing cities worldwide. Theoretically, Uber's effect on transit is ambiguous: while Uber is an alternative mode of travel, it can also increase the reach and flexibility of public transit's fixed-route, fixed-schedule service. We estimate the effect of Uber on public transit ridership using a difference-in-differences design that exploits variation across U.S. metropolitan areas in both the intensity of Uber penetration and the timing of Uber entry. We find that Uber is a complement for the average transit agency, increasing ridership by five percent after two years. This average effect masks considerable heterogeneity, with Uber increasing ridership more in larger cities and for smaller transit agencies.

So, the jury is still out...

Another Study Blames Uber and Lyft for Public Transit's Decline

[LAURA BLISS](#) JAN 24, 2019

Ride-hailing services drive down bus and rail ridership in urban markets, a new University of Kentucky paper claims.

Intercept surveys

Based on intercept surveys X% of trips would have happened on Public transit

Hypothesis

Uber competes with transit when transit service is poor and complements otherwise

Upcoming research

Research with University of Toronto

Diff in diff approach to study the impact of 80 rail systems that opened new stations on Uber usage patterns

Research with TU Delft

A study that overlays Uber trip data and public transit data to study where, when and why the two services compete and complement each other

Research UIUC in Cairo

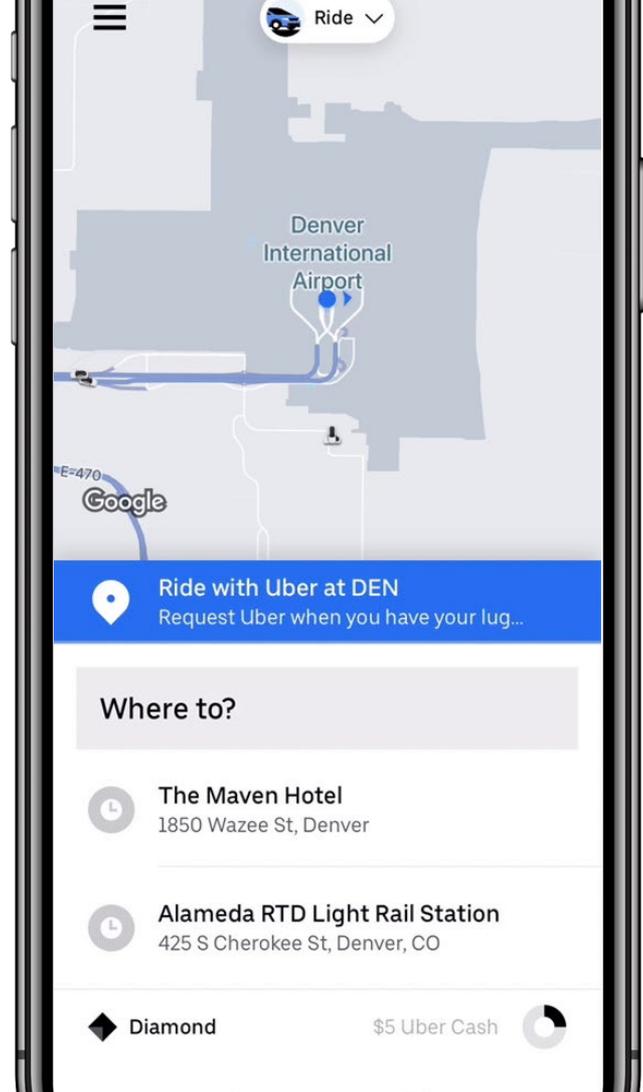
Looking at the impact of cheaper transportation on mobility outcomes in Cairo, Egypt

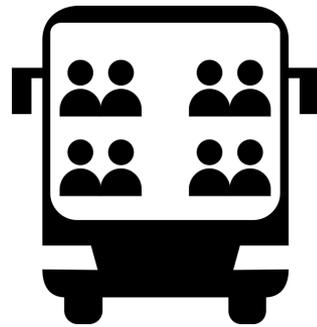
Public Transport in the Uber app

Integration of public transport

First steps to integrate public transportation into the Uber App earlier this year.

Live in Denver, London, Paris, Boston, Chicago, Sydney, SF, and Mexico City.

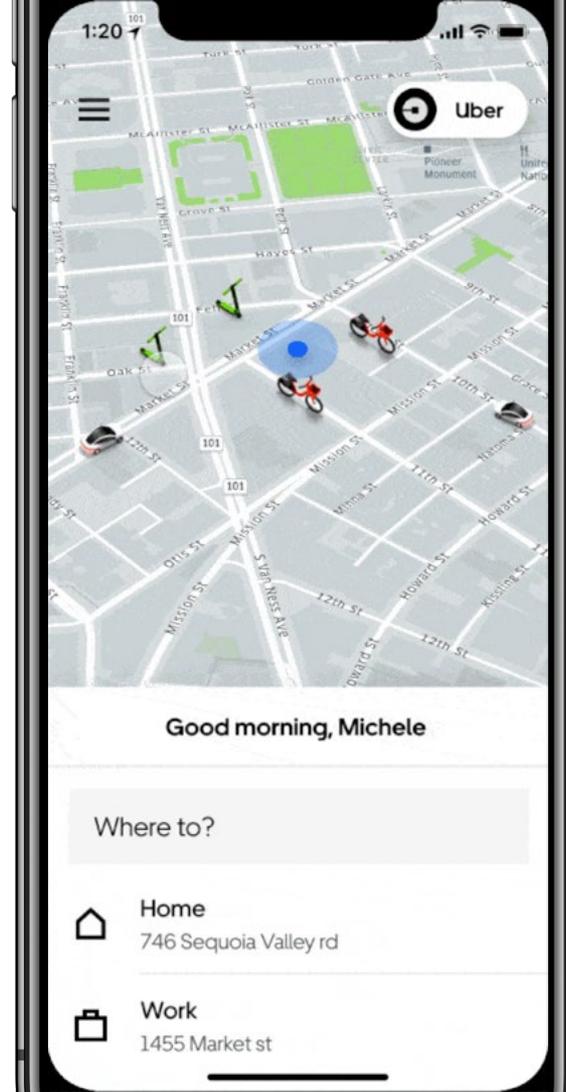
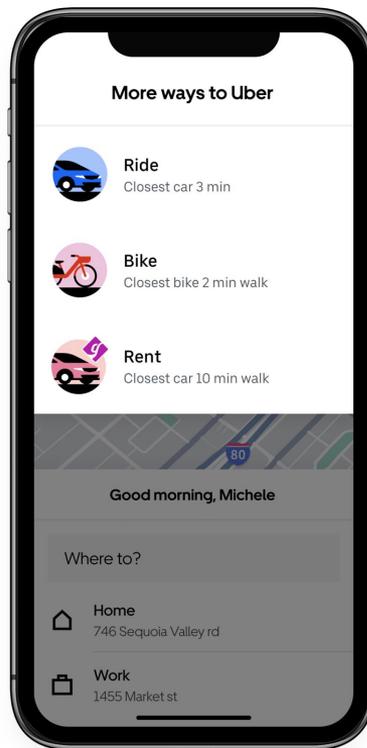




How does a multimodal platform impact rider behavior? What are the policy implications?

Suite of options

- Multiple different transportation options at your fingertips
- Seamless and frictionless switching between these modes



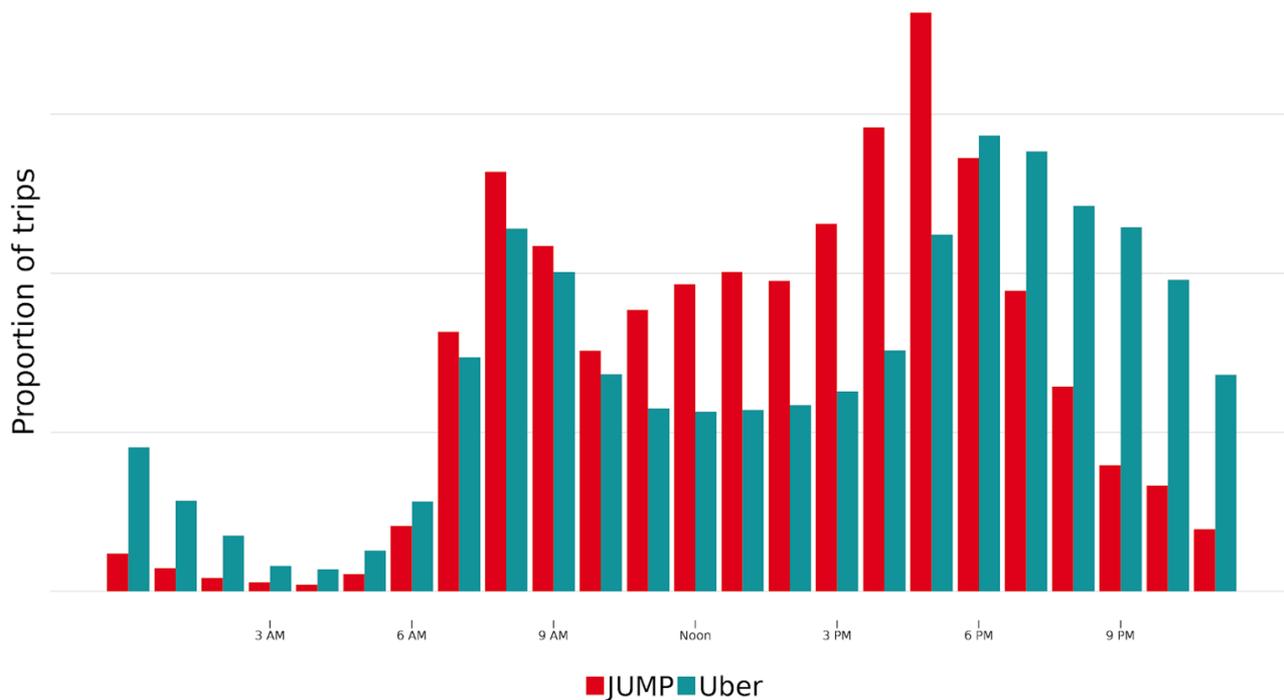
Questions we are thinking about

- How do riders choose between different modes?
- What happens to overall engagement
- How much do the different products interact with each other?
- To what extent is there cannibalization?
- How do the above change based on location and time of day?

Early study of JUMP in San Francisco... Usage trends

First and foremost, for this cohort of riders, **overall trip frequency (Uber + JUMP trips) increased by 15% after their first JUMP ride**. The entire increase can be attributed to the use of eBikes; Uber trips actually declined by 10%. During the workday (Mon- Fri, 8a-6p) when congestion is at its worst, this decline in early adopters' Uber trips was even higher, 15%. To sum up, eBikes were popular with these early adopters and **some Uber trips, especially during congested periods, were replaced by JUMP trips**. This is a promising early sign of the ability of eBikes to alleviate congestion and reduce car trips. The fact that demand for eBikes is currently constrained by limited supply (there are only 250 JUMP bikes in San Francisco) makes this all the more promising.

Early study of JUMP in San Francisco... Interaction



Early study of JUMP in San Francisco... Inclement weather

That Friday, JUMP trips were 78% lower than the Friday average. On the other hand, Uber trips saw a 40% increase which means, instead of being stranded, **some of these riders replaced their usual Friday JUMP trip with an Uber ride.** Riders were able to switch seamlessly between modes and reliably get to their desired destination.

Challenges in this research area

- Very early days
- Seasonality
- Limited data
- Regulatory issues (supply caps)
- Pricing changes
- Setting up experiment design

Other areas of interest:

- Public transportation
- Multimodality
- Congestion
- Environment and sustainability
- Car usage and ownership
- Infrastructure / built environment
- Public tools and products
- Underserved areas
- Transportation equity
- Seniors and health
- Safety



Thank you!