Why do some taxi drivers in China turn down e-hailing?

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Abstract

Although e-hailing, also known as ridesharing, promises higher incomes, many taxi drivers in the Chinese city of Xi'an are not switching their jobs. The spatiotemporal arrangement of conventional taxi work enables drivers to build and maintain work-based communities, whereas the top-down algorithmic arrangement of e-hailing impedes community building. The piece argues that these community networks are so treasured by many taxi drivers in Xi'an – most of whom are former state-owned enterprise workers or rural migrants –, that they continue to drive traditional cabs despite the lower income.

Theme
Mobility infrastructure

Keywords
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Across the world, the established taxi industry has suffered serious damage from the introduction of a major innovation in urban transportation – e-hailing (also known as ridesharing) services. Run via digital platforms which employ algorithmic order-matching and navigation to send freelance drivers for pick-ups, e-hailing services promise drivers in China a significantly higher income than the taxi industry – hereafter "taxis" – does. Yet despite the apparent attractiveness of switching, the majority of drivers I encountered during fieldwork in Xi'an city in China in 2018 have rejected e-hailing, preferring to continue to drive taxis.

In terms of income, e-hailing certainly seems attractive to taxi drivers. In Xi'an city in 2018, the average monthly income of e-hailing drivers was around RMB 1000-1500 – approximately 20 to 30 percent – more than that of taxi drivers.[2] Nor should the cost of switching have been a barrier, for although many taxi drivers could not afford to buy a car, rental companies cooperated with e-hailing firms to provide rental vehicles. There were also few issues with certification, as it was much easier for taxi drivers to get an e-hailing licence. Moreover, according to my informants, more than half the drivers at the e-hailing firm Didi still did not have a license by 2020. So why do so many taxi drivers stick with their cabs?

In this piece, I argue that taxi drivers do not switch to e-hailing because taxi-driving enables them to form and maintain work-based communities. In comparison, e-hailing's top-down algorithmic control, together with drivers' varied socioeconomic backgrounds, restricts drivers from regular and self-selected spatiotemporal work arrangements and deprives them of opportunities to have regular interactions with their colleagues, thus preventing them from forming work-based communities.

Most taxi drivers in Xi'an are either former SOE employees laid-off during the privatisations of the 1990s, or were rural migrants who came to the city during mass urbanisation in the same period. Having experienced either the loss of job stability and state-provided welfare, or having been disembedded from rural community support and excluded from the urban welfare system, these two groups have built and now maintain and treasure work-based communities based around taxi-driving. These communities are so important because they act as a buffer against the precarity that characterises so many of their members' life experiences. In contrast, e-hailing tends to erode rather than sustain communities.[3] These concerns are clearly expressed by my informants, who were or are taxi drivers.

> All I have over these 20 years is the network of my taxi driver peers. I seek their help during work, during life, when my sons are sick, when my family runs out of money. I cannot run the risk of losing these brothers and sisters (…) After all, e-hailing is an individual and unstable job. (Taxi driver informant, laid-off SOE worker, May 2018)

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[2] Throughout the paper, the exchange rate is 1 USD = 6.7 RMB, which is quoted from google.com on 24 April 2019, when I summarised all the information about prices and money collected in my fieldwork.

[3] My argument is based on six months' fieldwork conducted in 2018 in Xi'an, China, a major centre for the state-owned industrial sector and a popular tourism destination. At this time competition between taxis and e-hailing had reached a relatively stable stage. I observed drivers by accompanying them during work, entering their work and life communities (families, neighbourhoods, colleague groups, small gatherings, and WeChat groups), and frequenting the popular venues where they gathered (e.g. petrol stations which sell compressed natural gas to taxi drivers, repair shops, and restaurants). I also did some supplementary interviews on drivers in 2019.

Imagine that you don't have time to meet your old buddies or you don't have anything common in work in one or two years – it's impossible for you to enjoy yourselves together or help each other just like before! I'm lucky because I still keep a few taxi driver friends like Old Sun. Otherwise, I could become a stranger to my old buddies. This is not the most terrible thing – even more terrible is that you cannot make new friends with your colleagues at Didi! (Mr Wang, Didi-driver, who had worked as a taxi driver for 12 years, August 2018).

The taxi business and taxi drivers in Xi'an

In Xi'an, as in other big cities in China, the taxi industry operates with the participation of the Taxi Administration Office (TAO), taxi companies, taxi owners, and employed drivers. Since 1998, all taxis have been required to be registered with and managed by taxi companies. Taxi owners typically drive 10-hour shifts and may employ a second driver to drive an additional 10-hour shift. Second drivers must pay a fixed daily rent to the taxi owner regardless of their earnings. In turn, taxi owners have to pay fixed monthly management fees to taxi companies. In 2018, the rent in Xi'an was RMB 160 per shift, and the monthly fee was between RMB 4,000 and 7,000.

According to my random, sampling-based survey conducted in 2018, 85 percent of taxi drivers in Xi'an are former state-owned-enterprise (SOE) workers or rural migrants. A typical, employed taxi driver makes RMB 4000-5000 per month and supports more than one dependent (at least one parent and one child, sometimes including a non-working wife), making taxi drivers' monthly disposable personal income much lower than the average in Xi'an (RMB 3490).[4]

Until the mid-1990s, SOE workers had been promised lifelong employment and comprehensive state welfare, but with the SOE reforms of the late 1990s many were laid off. During that same period, restrictions on rural migration to the city were eased and rural migrants started flocking to the cities in search of their fortune, in the process becoming disembedded from social support networks in their rural hometowns. At the same time the demand for urban transportation was growing in step with rapid urbanisation, offering opportunities for the two groups to become taxi drivers and to find a "good way to feed [their] families" (former SOE worker, June 2018). However, in 1998, in order to better regulate the booming industry and mitigate passenger security risks, a nationwide reform of the taxi industry stipulated that taxi owners, who were previously sole-proprietors, register their cabs with, and pay monthly management fees to taxi companies. Consequently, cab owners increased the daily rental fees that they charged their employee-drivers. This, together with the popularisation of private cars, led to a stagnation and, in cases, a decline in taxi drivers' incomes. The question that arises, then, is Why do the majority of drivers still prefer taxi-driving if e-hailing is more profitable?

Self-selected vs. algorithm-controlled work arrangements

The difference in work arrangements between taxi-driving and e-hailing is fundamental in enabling or preventing drivers from forming and maintaining work-based communities.

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[4] Xi'an Statistics Bureau. 2018. "Xi'an Shi 2018 nian guomin jingji he shehui fazhan tongji gongbao; The statistics report of domestic economic and social development of Xi'an city, 2018." Available online at. http://tjj.xa.gov.cn/tjsj/tjgb/tjgb/5d7fc5b1f99d651bbeb377a7.html. Last accessed 14 April 2019.

TIME	ACTIVITY	LOCATION
Day shift driver		
5.30 am	Start work	Regular taxi depot near a petrol station, one of the Suburbs
5.30 – 7.30 am	Drive around to get passengers catching early trains or flights	Mid-to-high end residential districts
7.30 – 9.30 am	Pick up passengers going to work	Between residential districts and major work areas (Hi-tech District, City Center); better not to stay in major work areas for long in case of traffic jams
9.30 – 11.30 am	Drive around	Hospitals, financial institutions, public institutions, commercial areas, and so on
11.30 am – 12 pm	Refuel and have lunch	Nearby petrol stations
12 – 3.30 pm	Drive around	Random
3.30 – 4 pm	Refuel and hand over cab	Same taxi depot mentioned above
Night shift driver (cab owner)		
4 – 5.30 pm	Drive around	Random
5.30 – 8.30 pm	Pick up passengers going home	Between residential districts and major work areas (Hi-tech District, City Center); better not to stay in major work areas for long in case of traffic jams
8.30 – 10.30 pm	Drive around	Random
10.30 – 11.30 pm	Wait for passengers going home late and missing public transport	Major public transport hubs like subway stations
11.30 pm – 1.30 am	Wait for nightlife customers	Nightlife sites (City Center, South Suburb)
1.30 am on	Have dinner, gather with colleagues, wash cabs, and so on	Service sites popular with taxi drivers (e.g. West Suburb)

Table 1: A typical taxi driver's typical spatiotemporal arrangement

As Table 1 shows, taxi-driving is characterised by routinised work practice. Apart from the times and places of starting and stopping work, which are fixed by the TAO, drivers have the flexibility to choose and adjust their own work arrangements regarding the areas they roam, their working time, the types of passengers they pick up,[5] when to refuel or to eat, and so on. Despite this flexibility, drivers tend to maintain a fairly regular spatiotemporal arrangement, yielding a stable income and (generally) aiming to maximise profits.

To establish such an arrangement, drivers need to develop an intimate knowledge of the city's flow of people, work, business, and information. First, they memorise the overall layout of the city and the general rhythm of city life, thus imagining the positions of people, landscapes, and themselves on the panoramic "map". Second, they need to understand the everyday lived details of the city and the dynamic situations around their cabs, including where to find potential roadside pickups, traffic lights, crossroads with cameras, possible traffic jams, dangerous roads, traffic police, distances from petrol stations, and changes in all of these factors throughout the day as well as at night. This can also include understanding passengers' attitudes and behaviours, such as "whether they prefer a route with lighter traffic or a cheaper route but with jams" (Taxi driver informant, December 2019).

Unlike taxis, e-hailing places no constraints on where or when drivers start and end a shift, nor on the length of their shifts, but it does restrict how they develop their own work arrangements. This freedom allows newcomers to start working despite a limited knowledge of the city. However, for former taxi drivers, it restricts the spatiotemporal arrangement of their work, because it relentlessly crowds in orders, and demands they follow the algorithm, even in regards to where and when to refuel, dine, and rest. This is shown in the fieldnotes I gathered whilst accompanying Mr Wang, who began working for Didi, the largest e-hailing firm both in China and globally, in 2015. He had previously worked as a taxi driver for 12 years.

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[5] When several people simultaneously try to hail cabs, drivers can choose which person they will pick up. Drivers also often refuse to take passengers. Although the TAO bans such refusals, they frequently take place in practice.

Mr Wang arrived at 8 am, one hour later than the agreed time. "Sorry – I don't keep a fixed schedule in Didi." As he started the car, a system message came through: "Please go to the Chanhe Metro Station to pick up your passenger." A route appeared on the screen.

"Unlucky. It's 1.5 kilometres away. I always wonder why the algorithm can't distribute the nearest orders to drivers! Anyway, you can't refuse. More refusals, lower service scores. Four refusals, you're suspended by the system for 24 hours."

Right after the first order, another came through. We headed to the Hi-tech District. Mr Wang asked the passenger: "Would you mind going via Huancheng Road? There's less traffic, though the app directs us along the 2nd Ring Road…"

"Don't detour," the passenger said. "Follow the app."

After the ride, which took 30 minutes, Mr Wang sighed: "She didn't trust me. It took an extra 10 minutes. The app's navigation isn't always right. It's not simply about the distance – you need to know the city and the road."

After receiving another order, we stopped the car at the pick-up point and waited for the passenger. Seeing my impatience, Mr Wang got out of the car and lit a cigarette. "Want fresh air? Such chances of rest are rare. It's unlike driving a taxi, when I could stop and refuse passengers."

We arrived at the West Suburb at 1.30 pm, Mr Wang decided to refuel. "Let's go to the nearby West Zaoyuan Road petrol station. If we had more natural gas, we could go to the Hongguang Road Station, meet some taxi buddies, and have lunch. Now I know nobody here – taxi drivers don't take a break now, while Didi drivers just don't refuel regularly."

Work continued. At night, exhausted and still receiving orders, Mr Wang asked: "What's the time?"

"8 pm."

"Time flies. I don't feel it. When driving a taxi, you have a clock in your mind: 4 pm, go home. Now the algorithm doesn't tell you, and you just want to make more money. Yesterday, I came home after 9 pm – my wife was angry!" (Fieldnotes, August 2018)

As shown in the fieldnotes, the algorithm instructs e-hailing drivers where to pick up passengers and which routes to take. If drivers refuse orders, their service scores, used by the platform to evaluate performance, go down. While they may deviate from the app's navigation instructions, this could result in negative comments or lower star ratings from passengers, which in turn are used by the platform to monitor drivers' behaviours. A lower service score can negatively impact on a drivers' priority in the order-distribution.

For former taxi drivers, Didi's algorithm adopts a clear-cut and panoramic view of the city. Traffic data are rendered as a legible map. When orders come in, the app calculates the distance between passengers and cars, and combines the distance with service scores and star ratings to distribute the rides. Then it forms what is ostensibly a perfect route on map. In doing so, the algorithm tends to ignore the everyday lived details of the city as experienced by drivers, or the dynamic situations unfolding outside their cars. As a result, drivers often need to drive long distances to pick up passengers even if others are nearby, stick to the recommended routes (unless

the passenger allows otherwise), stay in crowded areas, and take short-distance orders even if they are less profitable.[6]

Facilitating vs. restricting work-based communities

Taxis gathering, Xi'an, 2022. Photo by the author.

The different work arrangements of taxis and e-hailing affect drivers' efforts to establish and maintain work-based communities. The regular and self-selected work arrangement of taxis facilitates drivers' work-based communities. First, given that most work arrangements are regular, each driver usually takes breaks, dines, refuels, and stops working at fixed times and places. Drivers on the same shifts meet the same colleagues at fixed times and places. By interacting with the same colleagues every day, drivers develop close relationships, even to the level of helping each other out with family affairs. Fixed schedules also enable drivers to have frequent, small gatherings after work. They call or send messages to one another, agree to meet at certain times, and regularly go to the same restaurants, typically picking up passengers en route.

Second, more related to their knowledge of the city, drivers use WeChat groups to exchange practical and entertaining messages. Such groups usually have over 300 members and over 1000 messages per day. Messages commonly deal with issues like real-time traffic situations, the availability of petrol, queues and prices at stations, TAO investigations, traffic accidents, conflicts with passengers, and problems with gangsters.[7] With their knowledge of the city, drivers can make sense of what is happening in certain places of the city at certain times, adapt their plans accordingly, or drive to a relevant location to help.

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[6] Constantly taking short-distance orders in heavy traffic can significantly hurt drivers' incomes. First, flagfall orders can take a long time in heavy traffic. Second, e-hailing drivers usually need to drive a distance to pick up passengers for the coming order; sometimes the distance to the pickup can be longer than the ride itself.
[7] Night-shift drivers are frequently vulnerable to gangsters because they typically roam around nightlife sites. Minor cases of robbery or refusing to pay are typical problems.

> As I sat in Mr Shi's cab, WeChat messages came in constantly: "Accident on South Chang'an Road from north to south! Heavy jam! Go around!" "Mingde Gate petrol station, full pressure, no queue, come soon!" In response, Mr Shi sometimes replied on the group with a "Thanks," or sometimes suddenly changed direction: "Better avoid the jam ahead." He also reciprocated by sharing his encounters in the group, such as "just left Yanxiang Road petrol station. No natural gas left! Don't come!" or "TAO investigation teams at Xiying Road crossing. Take care!" (Fieldnotes, June 2018)

> Mr Xiao and I gave two young, drunk men a ride at 2 am. When they refused to pay the RMB 100 fare, Mr Xiao summoned help by sending a voice message into a group: "Crossroad of Mingde 1st Road and Hanguang Road, two guys refused to pay! Any help?" Four colleagues, who were at a nearby petrol station, were with us within five minutes. They parked their cabs in the middle of the street, surrounding the two men: "Pay the fare and go!" The young men suddenly seemed shocked and less drunk. They paid. (Fieldnotes, August 2018)

Aside from their practical functions, such messages help construct a feeling of togetherness. Upon receiving a message, drivers can intuitively imagine or picture the location and activities of their colleagues in real-time based on their knowledge of the city. As such, although they are scattered across the city, the drivers each have a clear sense of one another's relative position, as if they were facing a common situation together "in the same huge map of the city" (Taxi driver informant, December 2019).

The top-down algorithmic control in e-hailing has a very different effect on drivers' formation and maintenance of work-based communities. First, given that the algorithm treats each independently and from a top-down perspective, drivers usually start work at different places and times and are directed by the algorithm's order distribution. This means they rest, refuel, and end work at different places and different times. It is therefore difficult for Didi drivers to have common times and places for interpersonal exchanges, shared work experiences, or a common language, making it difficult for them get to know one another or to build communities.

Second, drivers' limited opportunities to use their smartphones and their lack of knowledge of the city render them unable to conduct frequent and practical online exchanges. Didi drivers cannot use their smartphones as frequently as taxi drivers because passengers may see this as careless or unprofessional, and give them low star ratings, which will negatively affect their priority in order-matching. While Didi drivers frequent WeChat groups with their colleagues during off-work hours, they typically do not have practical connections with each other even if they are in the same city. I participated in "No. 1 E-hailing," a 280-member group of Didi drivers from various Chinese cities. The group circulates approximately 500 messages every day, mostly about work experiences in different cities. They discuss rate changes and government policy updates, and share interesting work encounters. Nevertheless, their discussions, compared to those in the taxi drivers' groups, are usually abstract and detached from the everyday practical details of their work. Even if there are former taxi drivers in these groups, they cannot get practical feedback from most of their colleagues, as few drivers have the requisite working knowledge of the city. As such, they cannot convey, share, understand, or react to the everyday practical details happening around the city and in one another's cars.

Another factor restricting Didi drivers' work-based communities lies in their varied socioeconomic backgrounds, life experiences, and future plans. Half of my Didi driver informants were part-time drivers who had various primary jobs: sales agents, shop clerks, teachers, petty traders, and so on. Full-time Didi drivers were often former taxi drivers, construction workers, businessmen, petty traders, or retired civil servants. They have widely different life experiences and future plans. Some regard e-hailing as a long-term career; others do it temporarily. Such differences, in addition to the top-down algorithmic work arrangement, further prevent them from forging a common language and perceiving themselves as a group.

> Didi drivers are from *sanjiaojiuliu* [three religions and nine schools – i.e., different classes and occupations]. Anyone can start for any reason. Moreover, many don't consider the job as long-term. How can you imagine making friends with people so different from you? How is it possible to have these people go for a collective activity? There's not a collectivity called 'Didi drivers'! (Former taxi driver who became Didi driver, July 2018)

To conclude, for many current and former taxi drivers, the restrictions imposed by Didi's top-down algorithmic work arrangement affords fewer opportunities to gather and socialise with old colleagues, or to interact regularly with new ones. For former taxi drivers now working in e-hailing, the camaraderie that they once shared is no longer relevant in their work. These factors may gradually push drivers away from their previous work-based communities, while also making it difficult to establish new ones. For the majority of (former) taxi drivers, this potential loss of community is not easy to accept, and cannot be compensated for by higher incomes alone. Taxi drivers in Xi'an city rely heavily on – and greatly treasure – the work-based community and the support it provides, especially as they have been deprived of such community and support by the rapid privatisation and urbanisation of China.