

Survival Strategies of the Weak under the Algorithmic Hegemony: based on Chinese Ride-Hailing Drivers

Ye Song

School of History, Culture and Tourism, Huaiyin Normal University, Huai'an, Jiangsu, China

Abstract: With the rise of the platform economy, algorithm management has gradually become a dominant labor control mode and brought about huge challenges. This research will take Chinese ride-hailing drivers as the research subjects, explore how they perceive and adapt to the constraints of algorithm and make a living. Based on semi-structured interviews with 10 Chinese ride-hailing drivers, including 5 full-time drivers and 5 part-time drivers. At the same time, analyzing ride-hailing drivers' new difficulties and recognizing a series of survival strategies that they have already taken under the background of Marx's theory of labor value. On the one hand, the research has discovered the platform will extract the surplus value of the driver, squeeze the working hours of drivers and the drivers themselves and the labor process have both witnessed the phenomenon of labor alienation. On the other hand, full-time drivers and part-time drivers are quite different whether in the labor time, wage income, professional identity or in the relationship with the platform. For this, ride-hailing drivers have also taken some measures like accepting orders on multiple platforms and sharing orders in the online driver group to deal with the algorithm control. As the effects of those measures are not significant, some suggestions for ride-hailing drivers, platforms and the government are put at the end of the text.

Keywords: The Platform Economy; Chinese Ride-Hailing Drivers; Algorithmic Hegemony; Survival Strategies; Surplus Value; Alienated Labor

1. Introduction

Nowadays, with the rapid development of the Internet, the intelligence algorithm has diverse functions like data analysis, remote tracking and automatic decision, which actually enrich people's daily life. The rapid development of the

platform economy has made the arithmetic become more and more rigorous. It can not only bring lots of convenience to people, but also exercise ubiquitous control over people and monitor their behaviors. All these have an dominant impact on all aspects of society, especially for some workers whose forms of labor have been remodeled by the intelligence algorithm, so ride-hailing drivers have been the typical and direct group under the background. The scale of online car-hailing platforms represented by Didi Chuxing (one of the largest Chinese travel service companies) has gradually expanded during recent years. According to the online car-hailing supervision interaction system, 360 ride-hailing platform companies achieved business certificates and 7.4 million copies ride-hailing driver's licenses, around 3.16 million copies vehicle transport permits were issued by various places in China by the end of September 2024. Thus, it can be seen the platform economy has become one of the most important channels to absorb employment.

With the increase in the number of online car-hailing services, the price war between different platforms has begun and many ride-hailing drivers have faced new problems. As typical platform workers, they are facing many difficulties, such as long working hours, the reduced salary share and the lack of labor protection. Furthermore, the platform not only uses the credit score to encourage drivers to take on more orders and run more orders, which will squeeze drivers and control their labor value, but also extracts a high proportion of drivers' income and masters all drivers' achievements, including drivers' route trajectory and driving data. In such a high-intensity working environment and facing less than expected income, as the controlled weak group, how are they going to adapt to the platform economy, make a living and even deduce new survival logic. This topic is extremely significant.

In recent years, many experts have analyzed how workers are exploited in the algorithmic era in

combination with Marx's theory of labor value: some foreign scholars put forward that the invisible process was still a way to obtain surplus value and studied about how surplus value was performed in platform labor[1]; Some domestic scholars found that platform capital triggered alienation of digital labor and the platform was based on service logic, which concealed the substantive control of the labor process and realized deep exploitation of digital workers[2]. Additionally, some experts studied about drivers' current living situation from the drivers' perspective: some domestic scholars compared two different operation models, they were respectively traditional cruising vehicle and new business form of online car-hailing services and found that taxi drivers joined the online-hailing platform because of the passive compromise to the change of market and organization environment[3]; However, some foreign scholars studied about drivers' work satisfaction and found that flexibility of work was the most popular feature among drivers[4].

2. Method

2.1 The Concept of Marx's Theory of Labor Value

Marx's theory of labor value pointed out the value of a commodity is determined by the socially necessary labor time required to produce the commodity[5]. In the "Das Kapital", Marx established the principle of duality of labor, which was the foundation for Marx's theory of labor value. He pointed out that specific labor creates use value while abstract labour forms value, which also revealed the social relationship essence of commodity value[6]. For the ride-hailing drivers' labor, they are not only specific but also abstract labour. On the one hand, drivers need to operate the steering wheel, step on the accelerator and brake and observe the road conditions carefully to provide a punctual and safe environment for passengers, which will create the use value of online car-hailing services--displacement effect; On the other hand, apart from simple driving, ride-hailing drivers also need to focus attention, map out a route and predict risks. The physical exertion of maintaining a sitting posture for a long time and the long time spent driving, this kind of human labor forms the value of online car-hailing services.

Additionally, Marx's theory of labor value

directly leads to two core discoveries--surplus value and alienated labor. Marx pointed out: "The first trend of capital is to create free time at one's disposal, the second one is to turn the time at your disposal into surplus labor." It is also applicable to the algorithmic era. At present, in order to strengthen the exploitation of surplus value, some capitalists encroach on workers' free time constantly, blur working hours and free time and even force workers to turn their free time into labor time [7]. This process is performed in a more concealed and efficient form in the ride-hailing labor. The online car-hailing platform is an ultimate surplus value extraction device and it maximizes surplus value in many ways. Firstly, in terms of route optimization and carpooling matching, it always forces drivers to complete more orders in a shorter time. Secondly, it also induces drivers to carry out high-intensity work during the remaining working hours, like rush hours or midnight. In addition, the high platform commission rate (20% - 30%) is a direct manifest of the surplus value. However, the entire process was mystified by the algorithmic through complex and opaque pricing formula to make drivers feel difficult to calculate how much was he deprived of surplus value precisely during the whole labor process.

Marx also pointed out labor under the capitalist production system was alienated labor. He also said that labor was no longer a free and conscious activity for workers and it turned into a kind of forced and compulsory labor under the capitalist employment labor relations. Workers couldn't freely exert their physical strength and intelligence and they couldn't feel happy during the labor process. Therefore, the production activities of workers are not autonomous activities of the workers, but activities of serving others, dominated by others and even under the coercion and suppression of others [8]. Drivers' labor experience is a typical template of alienation in the digital era. Driving was an autonomous and skillful activity originally, but all drivers underwent a complete alienation in the algorithm management. All routes, prices and orders are decided by the algorithm while drivers become living robots that follow rules. Furthermore, in order to get more income, drivers have to voluntarily accept the algorithm's arrangements. Therefore, drivers' labor becomes an external and coercive activity, not the source of inner satisfaction.

2.2 Research Design

The study mainly adopted the comparative analysis method and the semi-structured interview method. Taking 5 full-time drivers and 5 part-time drivers (they are from Nantong City and Huai'an City in Jiangsu Province, all engage in this profession for at least half a year and take Didi Chuxing as the main order-taking platform) as the research subjects and analyzing income gap, work happiness index, work time and so on. Finally, the study provides targeted suggestions to ride-hailing drivers according to the interview content. Through chatting with drivers online and interacting with them face to face, drivers' attitudes and ideas to algorithm control, their occupation and behaviors that they have already done to deal with algorithmic control will show up. The interview method is very flexible and it can help to master interviewees' information deeply and roundly. For example, drivers' expressions and changes of tone can reflect their thoughts, which can help modify questions of interview timely and ask for reasons behind them. At the same time, the comparative analysis method can provide new perspectives and frameworks and maximize the respective

characteristics of full-time and part-time drivers, which can give more targeted suggestions and measures to ride-hailing drivers in the era of algorithms.

The research mainly chose 10 ride-hailing drivers as interviewees (See Table 1). There is more than one reason for choosing them as interviewees, not only are they in the center of algorithm control, platform economy and labor service, but their experience can also reflect how macro structural forces specifically act on individuals. What's more, problems like algorithm control, unstable income and lack of protection are also faced by couriers and people for takeaway. Therefore, this study conclusion will have extensive implications.

On the basis of ride-hailing drivers' attitudes to algorithm control and the gains they have made from this profession to design the outline of questions. The questions mainly involve work time, income (the commission situation of the platform), whether to care about customer ratings, suggestions for the platform and measures they have taken to adapt to the platform. The interview time for each interviewee is about 30 minutes.

Table 1. Information of Each Interviewee

Number	Age	Gender	Whether full-time	Working experience in ride-hailing	Average daily online duration	Approximate average monthly income (yuan)	living city
S1	46	Male	Yes	6 months	13 hours	6000	Huai'an, Jiangsu
S2	40	Male	Yes	5 years	12 hours	6000	Huai'an, Jiangsu
S3	48	Male	Yes	8 years	13 hours	6500	Huai'an, Jiangsu
S4	33	Male	Yes	2 years	12 hours	6000	Nantong, Jiangsu
S5	53	Female	Yes	5 years	10 hours	5000	Nantong, Jiangsu
S6	30	Male	No	2 years	5 hours	8000	Nantong, Jiangsu
S7	53	Female	No	6 months	6 hours	5000	Huai'an, Jiangsu
S8	38	Male	No	1 year	4 hours	8500	Nantong, Jiangsu
S9	48	Male	No	2 years	2 hours	7000	Huai'an, Jiangsu
S10	52	Female	No	5 years	2 hours	6000	Nantong, Jiangsu

3. Result

3.1 The Drivers' Difficulties: Surplus Value Extraction and Alienated Labor

On the one hand, the platform blurs the line between drivers' work and rest and it also forces drivers to accept orders during the rush hour to squeeze out more working time for drivers. However, in order to maintain basic income, drivers were forced to voluntarily work overtime while the platform doesn't need to pay more fees

to drivers. On the other hand, surplus value has concealment and the platform usually takes a 20% - 30% cut on drivers' income, which shows the platform directly possesses values that drivers have created. However, the platform may cover up the essential fact of exploitation in the name of information service fees. Learning from S2's saying that the platform also controls over the dispatching rules and it usually gives priority to dispatching orders to new car drivers or drivers with high credit scores. As a result, this will bring helplessness and powerlessness to

certain drives, which may lead to competitions among drivers and can also further depress the overall remuneration level.

Furthermore, exploring this phenomenon from the theory of alienated labor. Firstly, it is about the alienation of the object of labor-the revenue from each ride-hailing order couldn't completely be taken by drivers because the platform will take a certain proportion of the income. In addition, drivers with high scores may not necessarily lead to an increase in income. Instead, the platform may increase their commission to earn more, which will trap drivers deeply into the platform. Just as S3 said: "Even if you handle as many orders as possible, it's still this much money because the platform has already set a limit on our daily income." Therefore, it is revealed that drivers' scores and income are both watched by the platform. Such a running order mechanism creates many flexible employments for drivers on the surface, but in fact, it traps drivers in a mire where they are silently exploited actually.

Secondly, it is about the alienation of the process of labor. Drivers' labor process is completely controlled by the platform algorithm, including standards of route, order and service. All drivers need to follow the platform's routes to pick up and drop off passengers and they only function as human navigators. Throughout the entire labor process, drivers don't exert autonomous consciousness because all the routes are replaced by advanced technology and their labor is demoted to mechanical execution. As a result, drivers couldn't find any happiness and realize their self-worth from this job.

In conclusion, the algorithm control of the platform leads to new labor relationships in the new economic era. Although drivers know that they are experiencing this kind of exploitation, they are forced to adapt to the platform operation mechanism because of subsistence. Most drivers from interviews spoke that "There are not other ways, this is all we can do, you know that one person can't outdo a platform system."

3.2 Algorithmic Hegemony-A New Form of Control

The rise of intelligence algorithms marks the birth of a new form of social control. This kind of control is not achieved through fixed training institutions, but through a dynamic and highly adaptable algorithm mechanism. These mechanisms can shape and guide individuals'

behavior and don't rely on traditional disciplinary measures[9].

Through interview, it was found that the algorithm exercises all-round control over the driver. The first is the control of time, which means the platform forces drivers to extend online time to get priority order dispatching rights through service score, travel score and credit score. The second is the control of behavior: the platform provides strict route planning and timeout penalties, which deprive drivers of their autonomy. The third is evaluation control: the Five-star Review System compels drivers to do some extra emotional labor like air conditioning service in summer, the clean and tidy interior of the vehicle and polite behaviors toward passengers; Even the slightest mistake will affect the positive review score of drivers. What's more, the platform extracts drivers' surplus value covertly through taking 20% - 30% of the drivers' income and complex pricing rules. S3 once said: "Throw away the cost of fuel, maintenance and insurance, the platform has taken a large part of the income and what we earn is just hard-earned money."

3.3 The Weapon of the Weak: Survival Strategies and Daily Resistance

The concept of "the weapon of the weak" was put forward by James C. Scott, which was a new theoretical perspective to explain peasant rebellion. Scott thought that the daily forms of resistance by farmers often included pretending to be compliant, playing dumb and acting foolish and acting slowly. The common features of all these resistances are that they do not need to be organized in advance and they should avoid going against rules set by those in power[10].

Facing hegemony, drivers have thought of some coping strategies. The first was playing a game of wits with the platform's algorithm. Some drivers said that sometimes they would like to choose orders carefully and accept orders during the rush hour to maintain high scores instead of choosing low-price orders according to their experience. What's more, accepting orders from multiple platforms was the most common behavior. Secondly, drivers also preferred to share information about orders like areas with a large number of orders online or offline with each other and this kind of sharing actually provided great emotional support between drivers.

3.4 Differentiation and Difference: A Comparative Analysis of Full-Time and Part-Time Drivers

This study has found that the influence of algorithmic hegemony is not homogeneous and different drivers showed significant differentiation because of different job motivations and degrees of dependence. Additionally, there are some differences in experience, strategies and alienated feelings between full-time drivers and part-time drivers.

3.4.1 Job motivation and forced to volunteer: survival logic or supplementary logic

Most full-time drivers are driven by the logic of survival, so they often regard this job as the sole source of family income. Full-time drivers usually have a stronger sense of forced voluntariness even though they feel unsatisfied with the platform rules. In order to make a living, they have no choice but to follow the algorithm system. S2 once said: "I have no choice, I need to support a family, so I must have to hold on no matter how tired I am."

However, part-time drivers usually regard this job as a way to increase additional income because they have their main occupations and the job of a ride-hailing driver is just a side business for them. S10 spoke that "I often accept an order on my way to and from work, it is really convenient and it can also help me save on oil costs." As a part-time driver, S9 said: "My main job is as a flower store owner and I will take ride-hailing orders when the flower store encounters an off-season. You know that online ride-hailing has a high flexibility, so I can do it whenever I have spare time." However, the driver S10 has a different situation from the first two part-time drivers. As the boss of a factory, S10 faces many financial difficulties because of the recent pressure of the overall environment, "There are no orders to take in the factory, so I choose to be a part-time driver to earn some money and the most important reason is that I find it can be a fallback option if the factory closes down in the future." This kind of a state with fallback option can give him a stronger psychological advantage.

3.4.2 Differential experience of algorithm control: deep embedding or finite embedding

Algorithm is a genuine boss for full-time drivers and they embed themselves deeply into the algorithm system. Drivers pay high attention to various scoring indicators in the system because the control of the algorithm is round-the-clock

and high-intensive. There is a close connection between the fluctuation of the algorithm and the working pace, income level and even the emotional situation of full-time drivers. However, the algorithm is more like a temporary employer for part-time drivers and they keep a loose relationship that is both close and distant with the algorithm. Part-time drivers can choose to log off freely and at any time and their sensitivities to algorithms are relatively low. Therefore, part-time drivers experience an indirect and low-intensity algorithm control and their sense of alienation is low.

4. Discussion

This research reveals the labor control, the predicament faced by workers and targeted strategies under the framework of Marx's theory of labor value through deep investigation into Chinese ride-hailing drivers. This chapter will deepen and expand findings of the research and place them in a broader theoretical and practical context for dialog.

4.1 Digital Alienation: From Machine Accessory to Algorithm Appendage

The dissimulation that Marx described has shown new forms in the platform labor. Drivers are not only alienated from labor products and labor processes, but also become alienated from the data and evaluation system that give labor meanings to them. Firstly, many precious data that drivers create, such as traveling tracks, consumption customs and urban flow, are occupied by the platform for free and become information that can help optimize algorithms, attract capital and consolidate the platform's monopolistic position. On the contrary, drivers become slaves to data that are created by themselves and all these data are used to control themselves effectively [11]. In addition, the five-star review system makes people's social relationships and emotional labor more quantized and commercialized and simplifies drivers' social value into a digital score—drivers' work dignity and income will be connected with passengers' subjective assessment, which will lead to the alienation of pursuing identity, separation from drivers themselves and continuous and unnatural in order to achieve high scores [12].

4.2 The Paradox of "the Weapon of the Weak" : the Dual Nature of Resistance and

Conspiracy

Drivers' daily resistance strategies reveal a core paradox in the platform labor: many resistance strategies are effective survival skills in a short period while they may strengthen the rationality of the algorithmic hegemony unconsciously in the long term.

The premise of refusing low-price orders for drivers is to master algorithmic logic totally and extremely and this kind of resistance is an internalization and a compliance with the algorithm routine. This will force drivers to pay more mental labor into understanding and adapting the system, which will make drivers be controlled by the algorithm further. What's more, most drivers' strategies are individualized and they often turn the conflict with the platform into a problem that they need to solve independently. Oppositely, this action will distract drivers' attention, dispel the collective anger and hinder the implementation of collective actions while maintaining the stability of the platform system. Therefore, the resistance of the ride-hailing drivers is a kind of resistance in the platform system in fact, which is really hard to shake the inequity of the structure of the system.

5. Conclusion and Suggestions

This research has revealed the control, exploitation and alienation of the ride-hailing drivers' labor process under the algorithmic hegemony and drivers' daily strategies to deal with it. It also shows that the labor-capital relationship has entered into a new period when technology-enhanced control and individual resistance coexist.

For full-time drivers, they can expand side businesses appropriately instead of taking online orders all day long. For example, they can spend some time on some flexible jobs like the same-city delivery service and substitute driving to expand income channels. Additionally, they can adopt the method of staggered operation, such as taking orders during the rush hour, especially around places like university towns, bars and high-speed rail stations to avoid some low-price orders. The most important thing is that ride-hailing drivers need to protect their own legitimate rights and interests firmly, especially when they meet situations like having disputes with passengers or the money is deducted by the platform for no apparent reasons. So drivers should keep records of orders and complaints and this evidence can help drivers fight for rights

and interests through collective negotiations with the Drivers' Union and the Guild.

What's more, the platform also needs to take some measures to make itself better. Firstly, it should make the public know the rules of the dispatching logic and point clearly which factor or which reason will lead to different situations to avoid drivers' misunderstandings on some manipulates from behind the scenes. At the same time, the platform needs to set a dynamic commission ratio rationally to maintain the income security of drivers instead of a one-size-fits-all approach-uniform prices will be given in all regions and at all times, even in different weathers. In addition, the platform should improve the scoring system-make the service scores and credit scores be connected with actual operational data, order acceptance rate and driving safety factors instead of subjective assessments from passengers solely, which is a more rational and fair way. Lastly, the platform also needs to provide some free algorithm training, service skills and measures for responding to emergencies, which can improve their recognition ability on orders and avoid blind parades.

Next comes with the government, it needs to standardize the platform algorithm firstly and supervise the platform timely, which can help prevent the platform from abusing the dominant position of the market. At the same time, in order to avoid drivers being bound by a single platform, the government should advocate competitions across multiple platforms. The government also needs to maintain the protection of the rights and interests of newly employed workers and actively explore and introduce policies on flexible payment of social security to protect their labor rights and interests. The current predicament of the ride-hailing driver is caused by multiple reasons. As a result, this phenomenon should be solved by cooperation among multiple parties. For the platform, it should better balance the relationship between equality and efficiency. Next, it is essential for the government to become a perfecter of operational rules and guarantees. Finally, the drivers should also adapt to the new technological change actively. Only under the joint adjustment efforts of the three parties, the era of algorithmic economy can open a new aspect-all the drivers have stable income, their improved service equality and a healthy platform environment. The research samples are

concentrated in specific cities, so it can expand to cities of different levels for comparison in the future. Additionally, this is a qualitative study and large-scale questionnaire surveys can be adopted in the future to verify the relevant hypotheses.

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