

Yale University

EliScholar – A Digital Platform for Scholarly Publishing at Yale

Student Work

Council on East Asian Studies

6-2-2023

A Race Against Death: Renwu Magazine's Exposé on the Working Conditions of Chinese Food-Delivery Drivers

William James McCormack

Follow this and additional works at: https://elischolar.library.yale.edu/ceas_student_work

Recommended Citation

McCormack, William James, "A Race Against Death: Renwu Magazine's Exposé on the Working Conditions of Chinese Food-Delivery Drivers" (2023). *Student Work*. 14.

https://elischolar.library.yale.edu/ceas_student_work/14

This Article is brought to you for free and open access by the Council on East Asian Studies at EliScholar – A Digital Platform for Scholarly Publishing at Yale. It has been accepted for inclusion in Student Work by an authorized administrator of EliScholar – A Digital Platform for Scholarly Publishing at Yale. For more information, please contact elischolar@yale.edu.

A Race Against Death:
***Renwu Magazine's* Exposé on the Working Conditions of Chinese Food-Delivery Drivers**

“送外卖就是与死神赛跑, 和交警较劲, 和红灯做朋友。”

“Delivering food is racing against death, competing with traffic police, and making friends with red lights.”

– Online delivery driver comment quoted in *Renwu Magazine*

William McCormack
Timothy Dwight College
EAST 480
Advisor: Professor Valerie Hansen
December 9, 2022

Table of Contents

Introduction	1
Chapter 1. The Article	6
I. Urban Labor Reportage Literature of the 1930s	6
II. The Humanization of Delivery Drivers: Renwu’s Sympathetic Depiction	8
III. An Emphasis on Algorithmic Control	12
IV. Chinese Social Science Research	14
Chapter 2. The Reaction	17
I. The Pandemic’s Priming Effect	17
II. The General Public’s Reaction	20
III. Meituan and Ele.me’s Response	22
IV. Media Echo	24
Chapter 3. Absent from the Exposé: Government Regulation and Labor Organizing	27
I. Structural Factors and Labor Activism	27
II. Political Sensitivity and Media Controls	30
Chapter 4. Government Management of Delivery-Driver Grievances	34
I. Sustained Attention and Government Acknowledgement	34
II. Directives, Regulation, and Detainments	36
Acknowledgments	41
Bibliographical Essay	43
Bibliography	49

Introduction

Seven million people now work as food-delivery drivers in China, carving through traffic on electric scooters while shuttling meals and snacks across more than 2,000 cities.¹ In the decade since the birth of the online industry, these drivers have become a staple of the urban landscape, serving a customer base that now encompasses roughly half the country.² They are easily identified by their bright corporate uniforms — yellow for Meituan 美团 and blue for Ele.me 饿了么, the two dominant platforms that share a combined 98 percent of the Chinese food-delivery market.³ Despite their ubiquity, drivers working for online delivery platforms escaped attention for years, even as the “platform economy” that employed them rapidly grew.⁴ These drivers’ experiences and grievances at work — as well as how the public and government officials regard them — demand consideration as platform labor becomes more common for young Chinese workers.

Food-delivery drivers, who are primarily young, male migrant workers, are among a growing group of Chinese laborers in the platform gig economy alongside those like taxi drivers, freight haulers, house cleaners, and administrative service contractors. They join an even larger

¹ Lulu Chen, David Ramli, and Peter Elstrom, “The World’s Greatest Delivery Empire,” *Bloomberg Businessweek*, March 28, 2019, <https://www.bloomberg.com/features/2019-meituan-china-delivery-empire/>; For comparison, China has roughly 43 million workers in construction and about 97 million workers in manufacturing as of the end of 2019, though the labor force in these sectors is in decline. There are more than 100 million freelance workers in China’s gig economy. According to Alibaba’s think tank AliResearch, that figure could quadruple by 2036. See Viola Rothschild, “China’s Gig Economy Is Driving Close to the Edge,” *Foreign Policy*, September 7, 2018, <https://foreignpolicy.com/2018/09/07/chinas-gig-economy-is-driving-close-to-the-edge/>; Meng Jing, “Lounge Room Superstars: The Remarkable Rise of China’s Gig Economy,” *South China Morning Post*, February 26, 2017, sec. Tech, <https://www.scmp.com/tech/china-tech/article/2073048/pots-gold-chinas-gig-economy>; “China Statistical Yearbook 2020” (National Bureau of Statistics of China), accessed November 28, 2022, <http://www.stats.gov.cn/tjsj/ndsj/2020/indexeh.htm>, 4-5-4-6.

² “Meituan 2021 Annual Report,” Annual Report (Meituan, April 19, 2022), http://media-meituan.todayir.com/20220419164002405410215762_en.pdf.

³ Hannah Reale, “The Meituan Takeaway,” *The Wire China*, June 13, 2021, <https://www.thewirechina.com/2021/06/13/the-meituan-takeaway/>.

⁴ The International Labour Organization (ILO) reports that China has the world’s greatest number of workers broadly employed in the platform economy (“providing services through one way or another on platforms”) on both an absolute and percentage basis, with 75 million platform workers in 2018. See Irene Zhou, “Digital Labour Platforms and Labour Protection in China,” ILO Working Paper 11 (Geneva: International Labour Organization, October 13, 2020), https://www.ilo.org/global/publications/working-papers/WCMS_757923/lang-en/index.htm.

contingent of 200 million workers in flexible-employment (*linghuo jiuye* 灵活就业) positions that promises to expand as China's macroeconomy evolves and gross domestic product growth slows.⁵ As they buzz among restaurants, malls, offices, and apartment complexes, they illustrate several key political and economic trends in contemporary China, including the influence of large technology firms and their algorithms, white-collar workers' increased consumption and purchasing power, income inequality, and government officials' responses to working-class labor discontent. This project focuses on drivers' disgruntlement and how increased public awareness of their specific complaints affected their labor conditions and directed the central government's treatment of workers and platforms.

Workers' scattered irritation with delivery conditions and compensation incentives began to surface as the on-demand food-delivery industry grew, giving them slightly greater visibility in 2018 and 2019. But only recently, particularly since the beginning of the coronavirus pandemic in early 2020, have drivers gained public and scholarly consideration as a distinct labor force.⁶ An investigation by *Portrait Magazine* (*Renwu*《人物》) published on September 8, 2020 illustrated this shift, spotlighting the dangers and difficulties of work as a food-delivery driver for widespread public consumption.⁷

⁵ Jin Chen 金晨, "Zhongguo Linghuo Jiuyezhe Yi Da 2 Yi Ren, Xianshang Gongzuo Shoudao Nianqingren Zhuipeng 中国灵活就业者已达2亿人 线上工作受到年轻人追捧 [China's Flexibly-Employed Population Hits 200 Million, Online Work Popular among Young People]," *Renmin Ribao* 人民日报 [People's Daily], February 9, 2022, <http://yn.people.com.cn/n2/2022/0209/c372455-35126499.html>.

⁶ Recent ethnographic literature relying on interviews with drivers and researcher observations of large courier WeChat groups details the informal, digital labor organizing tactics that some workers have embraced to air grievances around wages, impractical bonus structures, safety hazards, and the intensity of their work. For example, Chuxuan Liu and Eli Friedman, "Resistance under the Radar: Organization of Work and Collective Action in China's Food Delivery Industry," *The China Journal* 86 (July 2021): 68–89, <https://doi.org/10.1086/714292>; Zizheng Yu, Emiliano Treré, and Tiziano Bonini, "The Emergence of Algorithmic Solidarity: Unveiling Mutual Aid Practices and Resistance among Chinese Delivery Workers," *Media International Australia* 183, no. 1 (May 1, 2022): 107–23, <https://doi.org/10.1177/1329878X221074793>.

⁷ The direct translation for *Renwu Zazhi*《人物》杂志 is "People Magazine," though English-language observers call the magazine both *People Magazine* and *Portrait Magazine*. I use "Portrait" here to avoid confusion with the American celebrity periodical, though this essay uses "Renwu" when referring to the magazine.

How did the piece, titled “Delivery Drivers, Stuck in the System” (*waimai qishou, kunzai xitong li* 外卖骑手, 困在系统里), influence drivers’ public perception and working conditions? This essay analyzes the *Renwu* investigation and the subsequent reaction to it — among the general public, by the major delivery platforms Meituan and Ele.me, and via the responses of state-media outlets and government agencies. Scrutinizing the feature’s angle and the reaction helps explain how informal labor organizing and public opinion combined to influence platforms’ and officials’ management of drivers’ labor grievances.

This particular magazine feature deserves attention because of its length and comprehensiveness, detailed interviews with drivers, and extensive reach — and because of the results it produced. Over the course of a six-month investigation, reporter Lai Youxuan 赖祐萱 and editor Jin Shi 金石 collected industry data, public remarks from platform executives, and traffic accident statistics while interviewing academics and several drivers, whose personal anecdotes make up the heart of the story. The final result was a 22,000-character feature that instantly gained traction online.⁸

The year after its release, the piece earned a nomination for the 2020/2021 True Story Award, a global journalism prize administered in Bern, Switzerland. The True Story Foundation’s jury of authors and journalists — including the Chinese writers Xiaolu Guo 郭小橐, Liang Hong 梁鸿, Wu Qi 吴琦, and Li Haipeng 李海鹏 — said it was “likely the most read and hotly debated nonfiction article published in China during 2020.”⁹ They praised the investigation for “not only [provoking] much discussion in the larger society, but also [forcing] the companies involved to react and to change in response.”¹⁰ Twelve months after its

⁸ Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], *Renwu Zazhi* 人物杂志 [Portrait Magazine], September 8, 2020, <https://mp.weixin.qq.com/s/Mes1RqIOdp48CMw4pXTwXw>.

⁹ “True Story Award 2020/21 Nominees,” True Story Award, accessed October 10, 2022, <https://truestoryaward.org/story/181>.

¹⁰ “True Story Award 2020/21 Nominees.”

publication, users on WeChat 微信 and Weibo 微博, two of the largest social-media networks in China, had shared the story more than 10 million times.¹¹

The essay begins with a close analysis of Lai's feature, the key primary source for this project (Chapter 1). Lai's article arrived amid the context of the pandemic and the growth of the food-delivery industry: the investigation occurred as trends like Chinese consumers' use of delivery services and the expansion of the driver force accelerated during the pandemic. Lockdowns in cities like Wuhan 武汉 during this time pushed drivers, some of whom continued to work during the throes of the pandemic, into the public consciousness. They became celebrated essential workers, making *Renwu's* online audience ripe for a deep, detailed look at their work.¹²

A focus on the article's reception reveals how the piece increased interest in food-delivery drivers (Chapter 2). How did responses from online readers, food-delivery platforms, and government-affiliated outlets affect working conditions for drivers? This analysis draws on social-media commentary, news articles, and state media stories that echoed the *Renwu* piece's criticism of major food-delivery platforms in the immediate days following publication. Establishing what Lai and Jin left out of their article shows how the omission of structural labor and government issues influenced the response to the feature (Chapter 3). The political sensitivity of topics like collective labor action, the magazine's parent entity, and the feature's source base offer possible reasons for these absences.

Finally, the essay concludes by considering the incentives that shaped government agencies' treatment of drivers' labor grievances (Chapter 4). Officials desire innovation and

¹¹ Sowmiya Ashok [@sowmiyashok], "In Sept 2020, Renwu, a Monthly Magazine under the People's Daily Press, Ran a News Article Titled 'Delivery Riders, Trapped in the System.' The Piece Was Shared More than 10 Million Times across the Chinese Internet via WeChat and Weibo. Full Text Here: <https://t.co/BMDSsAbWxZ>," Tweet, Twitter, September 7, 2021, <https://twitter.com/sowmiyashok/status/1435223677885468672>.

¹² Yuan Yang, "China's Food Delivery Workers Are Lifeline in Coronavirus Outbreak," *Financial Times*, February 11, 2020, <https://www.ft.com/content/6a116998-4ca9-11ea-95a0-43d18ec715f5>.

growth in the digital economy but are also averse to unified labor movements that threaten social stability. Lai Youxuan's article kindled instances of public outrage around courier grievances in 2021. As mass awareness of drivers' labor conditions and discontent swelled, officials' treatment of food-delivery drivers shifted from general disregard to public acknowledgement alongside platform regulation and a driver activist crackdown.

Chapter 1. The Article

Lai Youxuan's *Renwu* investigation introduced Chinese readers to the working conditions of one of the country's most ubiquitous workforces: on-demand food delivery drivers. Detailed driver anecdotes and gripping visuals in the *Renwu* investigation captured readers' attention during the first year of the pandemic, a period that had already naturally pushed delivery drivers into a more public role.

The story's characterization of drivers is extremely sympathetic, as Lai argues with gritty and occasionally devastating detail that platform algorithms increase the danger and stress of food-delivery labor. Lai depicts workers as powerless players in an infinite game (*wuxian youxi* 无限游戏) with their work streams, movement through the city, and wages all controlled by apps' algorithms.¹³ Emphasizing the relationship between workers and algorithms, Lai asks what the platforms' responsibilities to its drivers should be yet ignores government agencies' and officials' ability to regulate the industry or restructure labor relationships.

I. Urban Labor Reportage Literature of the 1930s

The *Renwu* investigation is a contemporary evolution of factory reportage literature (*baogao wenxue* 报告文学) that thrived in 1930s China. Lai's 2020 investigation shares structural and thematic similarities with this 20th-century genre, which was promoted by the League of Left-Wing Writers and tied to the Worker Correspondents Movement. The movement encouraged laborers to pen their own pieces on factory and working conditions, and in the 1930s, writers and journalists participated by contributing a "wave of labor reportage" that exposed

¹³ Lai Youxuan 赖祐萱, "Waimai Qishou, Kunzai Xitong Li" 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 12: *Wuxian Youxi* 无限游戏 [Infinite Game].

inhuman factory conditions and unfair labor practices.¹⁴ Born from a leftist literary movement, labor reportage often critiques capitalism. Works in the 1930s, like Xia Yan's 夏衍 "Indentured Laborers" (*baoshen gong* 《包身工》), carefully described the spatial layout of factories "as a sign of the relentless obsession with profit of industrial firms and its invasion of the dignity and rights of their laborers," according to Charles Laughlin.¹⁵ Writers dramatized their writing by using graphic imagery, like descriptions of bodily fluids and rancid smells, and spotlighting the state of women and children working in factories. Pieces highlighted the adversity and hardship caused by the labor "system."¹⁶

Lai and Jin structure the *Renwu* article in the fashion of its 1930s predecessors. Rather than emphasizing one course of events, 20th-century writers usually organized labor reportage into thematic sections that presented an explanation of the labor system and detailed its physical and emotional toll on workers. Small narratives appeared within these topical buckets.¹⁷

Similarly, *Renwu*'s "Delivery Drivers, Stuck in the System" tucks anecdotes from individual drivers, industry statistics, and interviews with researchers into a dozen different thematic sections.¹⁸ Although these segments of the article indirectly build on one another, they are distinct — they function like smaller articles within the main feature that combine to give readers a comprehensive sense of labor in the industry. The twelve sections explain how drivers manage the various interactions and difficulties they encounter while making deliveries, including

¹⁴ Charles A. Laughlin, *Chinese Reportage: The Aesthetics of Historical Experience* (Durham: Duke University Press, 2002), 114.

¹⁵ Laughlin, *Chinese Reportage*, 146.

¹⁶ Laughlin, *Chinese Reportage*, 145.

¹⁷ Laughlin, *Chinese Reportage*, 118.

¹⁸ In order, these sections are titled "Received," "Heavy Rain," "Navigation," "Elevators," "Gatekeepers," "Peppa Pig and Cola," "Game," "Electric Scooter," "Smiling Action," "Five-Star Ratings," "The Last Safety Net," and "Infinite Game." Lai Youxuan 赖祐萱, "Waimai Qishou, Kunzai Xitong Li" 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System].; I compared these translations to those in Chuang's English adaptation of the article. Lai Youxuan 赖祐萱 and Chuang 闯, "Delivery Workers, Trapped in the System," *Chuang* 闯 (blog), November 12, 2020, <https://chuangcn.org/2020/11/delivery-renwu-translation/>.

navigational instructions, accidents, customers, restaurant owners, building supervisors, traffic police, and adverse weather. “Peppa Pig and Cola,” for example, elaborates on the efforts drivers make to satisfy customer requests and platforms’ focus on pleasing consumers, while “Navigation” explores how drivers respond to impractical driving directions given by the platform’s artificial intelligence system.¹⁹

II. The Humanization of Delivery Drivers: Renwu’s Sympathetic Depiction

The *Renwu* investigation educates readers about the difficulties that food-delivery drivers encounter during work. The feature spotlights the daily working lives of drivers under aliases like Beijing-based Ele.me driver Zhu Dahe 朱大鹤, whom readers meet gripping the handlebars of his scooter with sweaty palms as he attempts to complete a two-kilometer delivery within 30 minutes, and Geng Zi 庚子, who battles through a barrage of orders on a stormy day in Hunan Province and suffers docked pay for late deliveries because of the weather. These personal details transport readers into the minds of drivers, animating a workforce that much of China knows only by their anonymous bright uniforms.

The *Renwu* article documents how the ticking order clock shapes the decisions that specific drivers make to avoid incurring late-delivery penalties. In the piece’s first section, “Received,” Jin Zhuangzhuang 金壮壮, a Meituan station manager who left the industry after three years, recounts how the platform’s maximum delivery limit for a three-kilometer order shrank from an hour in 2016 to 45 minutes in 2017 and to 38 minutes in 2018.²⁰ That time

¹⁹ The name of the “Peppa Pig and Cola” section (*Peiqi yu kele* 佩奇与可乐) stems from a social-media trend whereby customers requested their drivers draw a picture of the British animated television series character Peppa Pig on their order receipts. In addition to discussing other interactions between drivers and customers, the section details how Gansu Province driver Wang Bing 王兵 complied so as to avoid poor customer reviews.

²⁰ As of early 2020, Meituan claimed 67 percent of the food-delivery market, while Ele.me, which started in 2009 as the first major food delivery service in the country, owns 31 percent. Price competition between the two has made food delivery an affordable option for most in cities, contributing to the industry’s rapid growth while pushing drivers to accept more orders and complete them faster.

includes arriving at the restaurant, waiting for the food to be ready, and taking it to the customer. Zhu Dahe 朱大鹤, the Ele.me driver in Beijing, recounts spinning out after swerving to avoid a bicycle on one delivery: “The spicy dry pot (*mala xiangguo* 麻辣香锅) he [Zhu Dahe] was transporting went flying,” Lai writes, “And even before he felt any pain, the first thought in his mind was, ‘Oh no, I’m going to be late!’ (*Zaogao yao chaoshi le* 糟糕, 要超时了).”²¹

Zhu called the customer to cancel the order and paid his own money for the spicy dry pot to avoid a late fee and poor customer review. “It was too expensive, 80 *kuai*,” he told *Renwu*. “But it tasted good, so I stuffed myself.”²² After gathering himself from the spill, Zhu decided to call the customer and cancel the order. In addition to driver tales about stricter time limits forcing riskier riding, the story refers to industry statistics that show the average duration for a food delivery dropped 10 minutes between 2016 and 2019. It then mentions a domestic news report that claimed 76 delivery drivers died in accidents during the first half of 2017 in Shanghai alone.²³ In Chengdu in 2018, on average, a delivery driver received traffic violations or was involved in an accident every day.²⁴

The visuals associated with traffic accidents enable Lai, editor Jin Shi, and *Renwu* to highlight the dangers of life as a delivery driver. Lai and Jin integrate government traffic statistics and company data into the story to add quantitative rigor to drivers’ individual experiences with safety on the job while choosing images that generate pity for them. They do

As it stands, the industry is essentially a duopoly, controlled by two of China’s largest companies, though e-commerce firm JD.com has also mulled expanding into on-demand food delivery. See Reale, “The Meituan Takeaway.”; William McCormack, “JD.Com Considers a Move Into Food Delivery,” *Barron’s*, June 20, 2022, <https://www.barrons.com/articles/jd-com-considers-on-demand-food-delivery-in-china-it-would-face-off-against-ali-baba-and-meituan-5165504984>.

²¹ Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 1: *Shoudao* 收到 [Received].

²² Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 1: *Shoudao* 收到 [Received].

²³ Li Jiayu 李佳蔚, “半年76名外卖小哥因交通事故死亡, 沪警方约谈8家送餐企业_浦江头条_澎湃新闻-The Paper,” 澎湃新闻 [The Paper], August 26, 2017, https://www.thepaper.cn/newsDetail_forward_1775421.

²⁴ Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 1: *Shoudao* 收到 [Received].

not shy away from shocking visuals in their choice of photography: the first image in the body of the piece depicts a battered scooter lying flat on the pavement in Xi'an in the aftermath of a fatal collision with a truck. A six-second GIF at the end of the first section shows a collision between a driver and a passenger sedan.²⁵ The repeating clip is sudden and frightful, and its inclusion adds a clear sense of stakes to the traffic statistics that *Renwu* cites to argue that faster deliveries come with a human toll. The story's visuals add an emotional element to these statistics.

Gloomier anecdotes build more sympathy for drivers. The section "Received" ends with Meituan driver Wei Lai 魏莱 waiting at a red light and witnessing another scooter driver inch into the intersection a few seconds before the signal turns green. A bus roaring through the intersection slams into the driver at high speed, sending their scooter flying and killing the driver instantly.²⁶ But knowing that his own order would be late if he stopped, Wei Lai continues on his way. As he rides away, in a dystopian conclusion to the scene, Wei Lai hears the Meituan app's mechanical female voice chime, "New order! ... Please respond after the beep to accept."²⁷ The article later refers to the death of an electrocuted Ele.me driver in August 2019 during a typhoon in Shanghai.²⁸

A third deadly episode also illustrates how *Renwu*'s editorial staff visually arranged the piece to elicit emotional responses from readers. The article cites a fatal December 2019

²⁵ Lai Youxuan 赖祐萱, "Waimai Qishou, Kunzai Xitong Li" 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 1: *Shoudao* 收到 [Received].

²⁶ Here, I use the gender-neutral pronoun "their" because the article does not specify the driver's gender with *ta* 她 [she] or *ta* 他 [he]. Lai refers to this driver as either *qishou* 骑手 [driver], *duifang* 对方 [other party], or *ren* 人 [person]. More than 90% of Chinese food-delivery drivers are male — 97% of drivers in Beijing, according to one survey — but in this case the article does not specify definitively. "Xin Yetai Congye Renyuan Laodong Quanyi Baohu 2020 Niandu Tiao Yan Baogao 新业态从业人员劳动权益保护2020年度调研报告 [2020 Labor Rights Defense Research Report on New-Industry Employees]," Beijing Yilian laodong fa quanzhu yu yanjiu zhongxin 北京义联劳动法援助与研究中心 [Beijing Yilian Labor Legal Aid and Research Center], January 19, 2021, <http://www.yilianlabor.cn/yanjiu/2021/1909.html>.

²⁷ Lai Youxuan 赖祐萱, "Waimai Qishou, Kunzai Xitong Li" 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 1: *Shoudao* 收到 [Received].

²⁸ Lai Youxuan 赖祐萱, "Waimai Qishou, Kunzai Xitong Li" 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 2: *Dayu* 大雨 [Heavy Rain].

confrontation between a driver and a grocery-store employee in Wuhan after the driver arrived to retrieve an order. At the time, Meituan said in a statement that the altercation between the employee and the driver stemmed from a pickup issue (*quhuo wenti* 取货问题) for the item the driver was to deliver.²⁹ Although *Renwu* did not interview the driver involved, the description of the incident and a security-camera shot included in the *Renwu* piece are graphic. The color photo shows a body sprawled out in one of the store's aisles and the arm of the Meituan driver who murdered the clerk, a knife in his hands and dark blood spattered on the base of his bright yellow uniform sleeve.³⁰ At the time, the response towards the driver generally seemed sympathetic, with criticism directed towards Meituan. "After the Meituan driver stabbing incident in Wuhan," one headline in the *Xiongmo Business Observer* posed, "what should Meituan really reflect on?"³¹ In *Renwu*, Lai also absolves the driver from blame, quoting a different delivery driver who suggests that lengthening delivery time limits would make everyone less anxious.³²

Vivid quotes in the feature brings the hazards and time pressure of drivers' work to life. Lai's "Navigation" section argues that drivers are forced to choose between violating traffic laws to complete deliveries on time or going with the flow of traffic but suffering a late penalty from the platform and receiving a poor rating from the customer. Drivers complain of receiving distances and time limits in the app that reflect direct, straight-line routes, not directions that factor in lights and traffic flow: "The system treats us as helicopters, but we are not [*Xitong dang*

²⁹ "Wuhan Waimai Qishou Ciren Shijian Zhihou, Meituan Daodi Yinggai Fanxing Shenme? 武汉外卖骑手刺人事件之后, 美团到底应该反省什么? [After the Delivery Driver Stabbing Incident in Wuhan, What Should Meituan Really Reflect On?]," *Xiongmo Shangye Guancha* 雄墨商业观察 [*Xiongmo Business Observer*], December 24, 2019, <https://www.163.com/dy/article/F15FUTJT05312XKY.html>.

³⁰ Lai Youxuan 赖祐萱, "Waimai Qishou, Kunzai Xitong Li" 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 5: *Shoumen* 守门 [Gatekeepers].

³¹ "Wuhan Waimai Qishou Ciren Shijian Zhihou, Meituan Daodi Yinggai Fanxing Shenme? 武汉外卖骑手刺人事件之后, 美团到底应该反省什么? [After the Delivery Driver Stabbing Incident in Wuhan, What Should Meituan Really Reflect On?]."

³² Lai Youxuan 赖祐萱, "Waimai Qishou, Kunzai Xitong Li" 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 5: *Shoumen* 守门 [Gatekeepers].

women shi zhishengji, dan women bushi 系统当我们是直升机, 但我们不是],” one driver is quoted telling a researcher in the story.³³ The article’s “Navigation” section later includes a screenshot from the Guizhou Meituan driver Xiao Dao 小刀 that shows his Meituan app’s delivery directions ordering him to ride against the flow of traffic. The inclusion of Xiao Dao’s smartphone screenshot is a simple but direct way to convey the driver’s predicament to readers.³⁴ “And if there’s a wall,” Xiao Dao says, “[the navigation system] will make you go directly through the wall.”³⁵ Further down in the article, an unnamed Meituan driver tells *Renwu* that unless a traffic police officer is behind you telling you not to speed, “when there are a lot of orders, all drivers want to start flying.” After a pause, he adds, “even flying is not enough to cut it.”³⁶

III. An Emphasis on Algorithmic Control

As Lai and Jin craft the *Renwu* feature around the experiences of drivers, they stress the influence of algorithms on drivers’ working lives. Lai argues that algorithms exploit drivers, directing implicit blame towards the platforms Meituan and Ele.me and the market competition that Lai says pushes the apps to impose increasingly stringent time limits on deliveries. In the article, drivers themselves, like Xiao Dao and the anonymous Ele.me rider quoted in the “Navigation” section discussed above, vocalize their complaints with the platform and the

³³ Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 3: *Daohang* 导航 [Navigation].; Ping Sun, “Your Order, Their Labor: An Exploration of Algorithms and Laboring on Food Delivery Platforms in China,” *Chinese Journal of Communication* 12, no. 3 (July 3, 2019): 308–23, <https://doi.org/10.1080/17544750.2019.1583676>.

³⁴ Nearly 900 million people now use smartphones in China, according to one market research estimate, making it a fair assumption that most readers of the *Renwu* piece digested the story via WeChat and Weibo on their own phones. See “Top Countries/Markets by Smartphone Penetration & Users,” Newzoo (blog), accessed November 13, 2022, <https://newzoo.com/insights/rankings/top-countries-by-smartphone-penetration-and-users>.

³⁵ Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 3: *Daohang* 导航 [Navigation].

³⁶ Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 8: *Diandong che* 电动车 [Electric Scooter].

“system.” 系统 (*xitong*), the Chinese word for “system,” appears in the title of the article and 75 times in the body of the piece. *Renwu* directly asks readers to reflect on algorithms in an introductory blurb that precedes the body of the feature: “... we ask more people to consider one question: How exactly should algorithms exist in the era of the digital economy?”³⁷

Lai and Jin devote paragraphs in the article to explaining the basics of platforms’ delivery algorithms. The section “Heavy Rain” opens with a summary of a 2019 speech by Meituan senior algorithm expert Wang Shengyao 王圣尧 on the high-level mechanics of the firm’s delivery management artificial intelligence. Later, the article quotes a separate public interview from He Renqing 何仁清, the person in charge of Meituan’s delivery algorithm team, on how the algorithm’s time limits supposedly account for how long drivers spend waiting for elevators during deliveries. *Renwu* then argues that platforms’ systems fail to operate optimally in practice: storms that induce high order demand disrupt the proper assignment of orders to drivers, faulty navigational directions algorithms ask drivers to blatantly ignore the rules of the road, and time limits fail to accurately forecast how long restaurants take to prepare food. “The complexities of reality far surpass AI’s predictive abilities,” Lai writes.³⁸

Quoted sources in the article blame platforms and their algorithms for drivers’ stressful, dangerous labor conditions. Zhengzhou driver Zhang Hu 张虎, who worked for Ele.me before switching to Meituan because of higher local delivery volume for the platform in his Henan Province city, describes the platform (*pingtai* 平台) as eternally unsatisfied with drivers’ work: “No matter how much all-out effort drivers give to go at full speed, the platform still feels it’s not fast enough.” “Meituan drivers,” Zhang says earlier in the section titled “Elevators,” “are just a

³⁷ Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System].

³⁸ Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 4: *Dianti* 电梯 [Elevators].

group of order-chasing robots.”³⁹ Caodao 曹导, a Chinese video blogger (“vlogger”) that *Renwu* interviewed for the article, posted a video documenting her short stint as a Meituan driver in July 2020. She also points to platforms as the source of the industry’s labor problems: “All the food-delivery platforms are seeking to maximize profits, and they ultimately all offload hazards onto the drivers with the least ability to negotiate.”⁴⁰ Her temporary work experience as a vlogger made her feel every driver weighs their safety against their income.

IV. Chinese Social Science Research

To highlight the role of algorithms, the feature supplements drivers’ anecdotes and opinions with social science research on the relationship between artificial intelligence and workers. Lai leans heavily on Sun Ping 孙萍, a researcher at the Chinese Academy of Social Sciences (*Zhongguo Shehui Kexueyuan* 中国社会科学院) in Beijing.⁴¹ The article cites her almost 20 times across its dozen sections, and Sun is responsible for many of the article’s key points. For example, her input on the association between driver traffic accidents and shorter time limits influences Lai’s focus on platforms’ push for delivery speed. Sun’s concept of an “inverse algorithm” (*ni suanfa* 逆算法) — the term she coins for drivers’ decision to speed and drive dangerously in order to meet time limits set by the actual order algorithm — guides how Lai and *Renwu* frame the hazards that result from this driving behavior.⁴² The article’s discussion of emotional labor in the “Peppa Pig and Cola” section also originated with Sun Ping’s research. Another researcher quoted in the article, Central China University sociologist Zheng Guanghuai

³⁹ Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 4: *Dianti* 电梯 [Elevators].

⁴⁰ Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 3: *Daohang* 导航 [Navigation].

⁴¹ Sun, “Your Order, Their Labor.”

⁴² Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 1: *Shoudao* 收到 [Received].

郑广怀, further contributes to the article’s emphasis on algorithms’ influence. Zheng’s description of drivers as “downloaded labor” highlights platforms’ apps, which drivers download to begin work and receive orders, as the key instrument controlling labor. Paraphrasing Zheng’s research, Lai writes that “on the surface, this app is only a tool to assist [drivers] in their work, but in reality, the app drivers download is really a refined method of labor control” (“...*jingmi de laodong kongzhi moshi*” “...精密的劳动控制模式”).⁴³

The *Renwu* investigation becomes a criticism of delivery algorithms and the tech firms behind them. Drivers’ and researchers’ focus on systems and algorithmic control bleeds into Lai’s own language. The article pits drivers against platforms: “Behind platforms’ huge profits are a reduction in the individual incomes of drivers,” Lai writes.⁴⁴ Considered alongside the feature’s sympathetic recreations of driver’s delivery difficulties, this narrow conclusion leads readers to direct their frustration with drivers’ working conditions towards an amorphous algorithm. The *Renwu* article’s demonstration of drivers’ problems is far more thorough than the shallow consideration it devotes to potential solutions for improving their working conditions. “Infinite Game,” the concluding section of the feature, raises a couple suggestions for improving drivers’ experiences, but all are directed at the tech workers who craft platform algorithms. Cao Dao, the vlogger who filmed her short stint as a Meituan driver, proposes that product managers and algorithm engineers spend a month working as a driver. “That way,” she says, “they will come to know how seriously this system oppresses people.”⁴⁵ Researcher Sun Ping argues that

⁴³ Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 7: *Youxi* 游戏 [Game].

⁴⁴ Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 3: *Daohang* 导航 [Navigation].

⁴⁵ Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 12: *Wuxian Youxi* 无限游戏 [Infinite Game]. It’s worth noting that this statement, as with any generalization about a delivery-driver labor force of seven million, is very broad. These generalizations are another potential pitfall of *Renwu*’s investigation. Even as it humanizes drivers and recreates their lived experiences on the job, the feature depicts their stance towards platforms and their opinions on the danger and hazards of their work as identical. It’s logical to assume — and there is evidence to suggest — that different drivers view their work

these programmers designing algorithms lack social science backgrounds and therefore have a poor understanding of normative problems around fairness and values. Still, she moderates this criticism by shifting the blame back to impersonal platforms: “Food-delivery platforms are the formulators of these rules, and programmers are only implementing the decisions of platforms.”⁴⁶

This conclusion is disappointingly simplistic for a 22,000-character feature.

differently based on their location, specific employer, time in the industry, personal preferences, and career goals. For example, in May 2021 Protocol published a translated opinion article from a gig delivery driver for Ele.me in Xiamen. The driver, Xiao Wu, details his routine and expresses appreciation for the job’s flexibility. “People think of food delivery as an inhumane, exploitative job. I disagree,” the driver says. “And it comes with perks: I get to travel around the beautiful city while I work. I moved to Xiamen because I love the sea. Sometimes, on a delivery trip, I ride along the island’s seaside road as the sun sets. It’s just breathtaking.” See Xiao Wu, “I’m a Delivery Worker in China. My Job Is Better than You Think.,” Protocol (blog), May 28, 2021, <https://www.protocol.com/china/china-delivery-worker-first-person>.

⁴⁶ Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 12: *Wuxian Youxi* 无限游戏 [Infinite Game].

Chapter 2. The Reaction

Within the digital ecosystem of content consumption, the reaction to the story was immediate. Its effect on public opinion not only prodded the platforms Meituan and Ele.me to adjust certain policies for drivers, but also influenced how state media and government officials discussed delivery drivers and treated digital platforms.

I. The Pandemic's Priming Effect

The *Renwu* article generated reactions from the public, platforms, and government officials because of its extensive reach. The magazine achieved this wide readership by conducting the investigation at an opportune time for generating public buzz: its pandemic-era audience was eager to learn more about the food-delivery industry and its labor force. The feature succeeded in eliciting sympathy for drivers because the pandemic primed its audience for a detailed glimpse into their working lives. Years of growth in the sector had exposed hundreds of millions of urban consumers to platforms and the workforce that was delivering their lunches and dinners; then, the early months of the pandemic pushed drivers into the spotlight.

Drivers who continued to work through public health lockdowns in early 2020 raised the profile of their profession. In Wuhan, the city of 11 million where the pandemic originated, drivers and other essential courier workers were occasionally the only ones on the streets, meeting a sudden, urgent demand for delivery and takeout. In late February 2020, 760 million Chinese people — just over half the country — remained in some form of residential lockdown.⁴⁷ Drivers also continued to work during Beijing and Shanghai lockdowns as strict pandemic restrictions continued into 2021 and 2022. Collective respect for their labor during the

⁴⁷ Vivian Wang, “In a City Under Lockdown, Hope Arrives by Motorbike,” *The New York Times*, February 20, 2020, sec. Business, <https://www.nytimes.com/2020/02/20/business/china-coronavirus-wuhan-delivery.html>.

height of the pandemic elevated the stature of delivery drivers. Meituan said drivers' tips from customers tripled between the start of the pandemic and March 2020.⁴⁸ During summer 2020, the National Museum of China archived the signed blue uniform of a Wuhan Ele.me driver.⁴⁹ Anecdotally, this shift in appreciation made drivers more prideful about their work as well. "All the doctors and nurses are coming to Wuhan to help, so we, the [drivers], should also fight with them on the frontline," a Wuhan Meituan worker told *Time*, which also featured a Beijing driver on the cover of its special March 30, 2020 coronavirus edition.⁵⁰ While concern about viral spread made labor organizing more treacherous, the significant drop in recorded delivery driver strikes during the early pandemic — from 45 in 2019 to three in 2020 — suggests greater labor satisfaction at that time.⁵¹

Public curiosity about drivers' routines during lockdown drove some workers to publish essays and videos about their work, compounding the uptick in attention. Content production also gave some drivers a digital public platform. Wuhan driver Zhang Sai 张赛 wrote a blog post describing his experiences as a driver during the beginning of the pandemic. A WeChat channel that reposted it heaped Zhang and delivery drivers with praise in a short introductory blurb, thanking them for their hard work (*xinku le* 辛苦了).⁵² Other delivery drivers released videos of their daily work. In turn, vloggers like Caodao 曹导, the influencer who was interviewed for the

⁴⁸ Charlie Campbell, "China's Delivery Drivers Keep E-Commerce on Track Amid Virus," *Time*, March 16, 2020, <https://time.com/5803803/china-delivery-driver-ecommerce-covid19/>.

⁴⁹ cnBeta, "Ele.me waimai fu bei guojia bowuguan shoucong song wan fen waimai kang yi zhan pao 饿了么外卖服被国家博物馆收藏 送万份外卖抗疫战袍 [National Museum of China collects Ele.me delivery uniform, sends 10,000 anti-viral delivery uniforms]," cnBeta.com, August 31, 2020, <https://tech.sina.com.cn/roll/2020-08-31/doc-iivhvpwy4114378.shtml>.

⁵⁰ Campbell, "China's Delivery Drivers Keep E-Commerce on Track Amid Virus.," "Behind the Covers of TIME's Special Coronavirus Issue," *Time Magazine*, March 19, 2020, <https://time.com/5805947/time-coronavirus-covers/>.

⁵¹ "China Labour Bulletin Strikes Map."

⁵² Zhang Sai 张赛, "Yiwei Wuhan waimaiyuan de zishu 一位武汉外卖员的自述 [The self-narration of an Wuhan delivery worker]," *Weixin Official Accounts Platform* (blog), January 29, 2020, http://mp.weixin.qq.com/s?__biz=MzA3MzYzNjMyMA==&mid=2650193671&idx=1&sn=aa17c2c03190c9735ccc75999ad00952&chksm=870e1f88b079969e358b12424b0c6abe1c9f8b70dba4639400bb202925a1ad8a6f33e2c2c5e7#rd.

Renwu article, produced their own videos on delivery drivers, amplifying their pandemic visibility and capitalizing on the heightened public interest in their profession.⁵³ “What’s the life of a delivery worker *really* like?” the title of one May 2020 video asked.⁵⁴

The pandemic pushed state media to devote more attention to drivers too. In February 2020, CCTV released a dramatic, narrated video of a Wuhan delivery driver’s journal.⁵⁵ *China Daily*, an English-language state newspaper, also published an opinion piece expressing support for drivers after the influencer Caodao’s video generated online buzz around delivery drivers’ treatment in public spaces. In her video, a Beijing security guard denied Caodao, who was working as a Meituan driver, entry into a luxury mall to retrieve an order because of her yellow uniform.⁵⁶ The *China Daily* op-ed reiterated that “epidemic prevention and control should not be an excuse for denying food delivery workers entry into a mall.”⁵⁷

The pandemic’s abrupt shutdown of other economic sectors also caused the driver workforce to swell. Factories and other employers laid off migrant workers, leading many to adopt gigs as delivery drivers. Meituan alone added 457,800 new drivers to its workforce over a two-month stretch in early 2020, most of whom were likely migrant workers.⁵⁸ More than

⁵³ *Wo qu dangle jitian waimai qishou, bei qidao chaofeng maoshi quankai* 我去当了几天外卖骑手，被气到嘲讽模式全开 [I went to work as a delivery driver for a few days, and I was routinely mocked the entire time], 2020, <https://www.youtube.com/watch?v=AHIBz0LYApo>.

⁵⁴ *Waimaiyuan de Zhenshi Shenghuo Daodi Shi Zhenmeyang de? Women Qiaoban Qu Dangle Yitian Qishou* 外卖员的真实生活到底是怎么样的？我们翘班去当了一天骑手 [What’s the Life of a Delivery Worker Really like? We Skipped Work to Be a Delivery Driver for a Day] (DxChannel, 2020), https://www.youtube.com/watch?v=eew9_9zD-xc.

⁵⁵ *Tamen Shi Wuhan Ren: Waimai Qishou de Wuhan Rizhi* 他们是武汉人 | 外卖骑手的武汉日志 [They Are Wuhan People: A Delivery Driver’s Wuhan Journal] (Yangshi xinwen 央视新闻 [CCTV], 2020), https://v.youku.com/v_show/id_XNDU1NDAzMzY5Ng==.html?spm=a2h0c.8166622.PhoneSokuUgc_32.dtitle.

⁵⁶ Zhang Wanqing, “Fancy Beijing Mall Denies Discriminating Against Delivery Drivers,” *Sixth Tone*, July 13, 2020, <https://www.sixthtone.com/news/1005921/https%3A%2F%2Fwww.sixthtone.com%2Fnews%2F1005921%2Ffancy-beijing-mall-denies-discriminating-against-delivery-drivers>.

⁵⁷ Wang Yiqing, “Call for Uniform Treatment of People Irrespective of Uniform,” *China Daily*, July 14, 2020, <https://www.chinadaily.com.cn/a/202007/14/WS5f0ce650a31083481725923b.html>.

⁵⁸ “DCCI Fabu Q4 Waimai Shichang Baogao: 67.1% Yonghu Zuichang Tongguo Meituan Shiyong Waimai Fuwu” DCCI发布Q4外卖市场报告:67.1%用户最常通过美团使用外卖服务 [DCCI Releases Fourth-Quarter Food-Delivery Market Report: 67.1% of Users Most Often Use Meituan for Delivery Service],” *Zhongguo Wang*

three-quarters of Meituan’s labor force are workers from the countryside, while 98% of Beijing drivers were not from the city in 2020, according to a study by Chinese legal aid organization Yilian.⁵⁹ Especially in China’s megacities, these drivers work long hours exclusively on food delivery. In Beijing, for example, 90% have no other source of income, and 67% work an average of at least 10 hours a day.⁶⁰ The labor supply shock depressed wages in some large cities, and drivers anecdotally responded by working longer hours to recover lost wages. In Shanghai, a driver quoted in *Sixth Tone* reported working an extra three to five hours a day to achieve his daily pre-pandemic income.⁶¹ The pandemic piqued the public’s interest, but it also created new difficulties for workers. Despite enjoying a greater degree of occupational recognition, many of drivers’ central grievances with their work remained unaddressed.

II. The General Public’s Reaction

The general public, already accustomed to the growing food-delivery industry as consumers, possessed a newfound sense of drivers’ working conditions after reading the *Renwu* feature. On September 8, the article immediately incited commentary and reactions from readers

Keji 中国网科技 [*Tech China*], March 31, 2020,

<https://baijiahao.baidu.com/s?id=1662648726629279020&wfr=spider&for=pc>.

⁵⁹ “Meituan 《2018 Waimai Qishou Jiuye Baogao》: 77% de Qishou Laizi Nongcun 美团《2018外卖骑手就业报告》: 77%的骑手来自农村 [Meituan’s ‘2018 Delivery Driver Employment Report:’ 77% of Drivers From Rural Areas],” *Wangyi Keji Baodao* 网易科技报道 [*NetEase Science and Technology Report*], January 17, 2019,

<https://www.163.com/tech/article/E5NVLTF800097U7R.html>.; “Xin Yetai Congye Renyuan Laodong Quanyi Baohu 2020 Niandu Tiao Yan Baogao 新业态从业人员劳动权益保护2020年度调研报告 [2020 Labor Rights Defense Research Report on New-Industry Employees].”

⁶⁰ “Xin Yetai Congye Renyuan Laodong Quanyi Baohu 2020 Niandu Tiao Yan Baogao 新业态从业人员劳动权益保护2020年度调研报告 [2020 Labor Rights Defense Research Report on New-Industry Employees].”

⁶¹ Kenrick Davis, “China’s Laid-Off Workers Rush Into Food Delivery,” *Sixth Tone*, May 22, 2020, <https://www.sixthtone.com/news/1005691/https%3A%2F%2Fwww.sixthtone.com%2Fnews%2F1005691%2Fchinas-laid-off-workers-rush-into-food-delivery>.; In a journal article relying on more than 50 interviews with drivers, Hui Huang argues that the pandemic generally increased the “precarity of drivers’ work and life.” See Hui Huang, “Riders on the Storm: Amplified Platform Precarity and the Impact of COVID-19 on Online Food-Delivery Drivers in China,” *Journal of Contemporary China* 31, no. 135 (May 4, 2022): 351–65, <https://doi.org/10.1080/10670564.2021.1966895>.

online as delivery drivers became a trending topic on Weibo.⁶² Several voiced their sympathy for drivers. On Zhihu 知乎, a blogging and question-and-answer site where *Renwu* also posted the article, one user was so moved that they cried.⁶³ “I hope [delivery] drivers across the world are all able to safely return home,” a Weibo user wrote in a caption above the link to the *Renwu* article.⁶⁴

Much discussion of the article centered around the influence of platforms, aligning with the angle of the feature, although several users also blamed consumers for exacerbating drivers’ stressful conditions. One long post on Zhihu used the article as a launching point to discuss the speed of modern society, impatience, and instant gratification. The author collectively blamed users for drivers’ stressful conditions: “Looking back, when it comes to who pushed [delivery] drivers into the abyss, perhaps every one of us users all bear the blame.”⁶⁵ Another post on Zhihu arrived at a similar conclusion, suggesting that consumers exhibit more patience and understanding for drivers.⁶⁶

Some Chinese users raised the government and the absence of labor unions in their reactions, though these responses were scarce. One Zhihu commenter wrote that they hoped the article would attract the attention of the government and spark legislation, adding that they

⁶² Yantao Sanshou 晏涛三寿, “Youmeiyou zixi xiangguo, kunzhu qishou de bushi suanfa, ershi women ziji 有没有仔细想过, 困住骑手的不是算法, 而是我们自己 [Have you carefully thought about it? What’s trapping drivers isn’t the algorithm. It’s ourselves.],” Zhihu 知乎 (blog), September 10, 2020, <https://zhuanlan.zhihu.com/p/234444804>.

⁶³ [@Dage wolaile 大哥我来了 [Older brother, I’m here]], “Zuozhe yongxin ye zouxin le, waimai de suoyou tong dian yige bulou, kan ku le 作者用心也走心了, 外卖的所有痛点一个不漏, 看哭了 [The author was diligent and I was moved, all drivers’ pains drawn out and not one left out, I cried.],” Zhihu 知乎 Comment, Waimai qishou, kunzai xitong li 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], September 8, 2020.

⁶⁴ [@Xiaobeishuo 小北说 [Little Northern talk]], “Yuan tianxia qishou douneng pingan huijia 愿天下骑手都能平安回家 [I hope drivers across the world are all able to safely return home.],” Weibo 微博 Post, September 8, 2020, https://weibo.com/1861344752/JjJ5agzXk?refer_flag=1001030103_.

⁶⁵ Yantao Sanshou 晏涛三寿, “Youmeiyou zixi xiangguo, kunzhu qishou de bushi suanfa, ershi women ziji 有没有仔细想过, 困住骑手的不是算法, 而是我们自己 [Have you carefully thought about it? What’s trapping drivers isn’t the algorithm. It’s ourselves.],”

⁶⁶ [@Tuling lianbang 图灵联邦 [Turingtopia]], “Waimai qishou kunzai xitong li, suanfa shi zuikuihuoshou ma? 外卖骑手困在系统里, 算法是罪魁祸首吗? [Delivery Drivers, Stuck in the System: Are Algorithms the Main Culprit?],” Zhihu 知乎, September 9, 2020, <https://zhuanlan.zhihu.com/p/230916865>.

believed artificial intelligence should serve the people, not exploit them.⁶⁷ Another user on the same post asked, “Why hasn’t the labor union started to protect worker’s rights?”⁶⁸

III. Meituan and Ele.me’s Response

The attention the *Renwu* article generated was intense enough to demand immediate responses from the major food-delivery platforms Meituan and Ele.me. On September 9, the day after the story’s publication, both platforms issued public statements expressing support for drivers and announcing immediate policy changes. Ele.me, the first to respond, directly addressed the *Renwu* article’s emphasis on algorithmic systems. “The system is dead, but people are living (*xitong shi side, ren shi huode* 系统是死的, 人是活的),” the company wrote in the first sentence of its statement.⁶⁹ Below it, Ele.me announced a new feature allowing consumers to extend the delivery time limit on their orders: during e-payment, customers could now opt to give their driver an extra five or ten minutes for delivery. The platform also said that drivers with a history of good service would no longer bear responsibility for individual late deliveries.⁷⁰

Later that day, Meituan issued similar changes for its own drivers, acknowledging the swell of platform criticism that the *Renwu* article had triggered without explicitly citing it. In a conciliatory but vague admission, Meituan owned responsibility for “the system’s problems” and

⁶⁷ [@ Shashibiya de mao 莎士比亚的猫 [Shakespeare Cat]], “Wo zunzhong mei yige waimai xiaoge, xiangjiaoyu jinkuai chishang fan, wo geng zaiyi tamen shifou anquan 我尊重每一个外卖小哥, 相较于尽快吃上饭, 我更在意他们是否安全 [I respect every delivery driver. Compared to eating food as quickly as possible, I care more about whether they’re safe or not.],” Zhihu 知乎 Comment, *Waimai qishou, kunzai xitong li* 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], September 8, 2020.

⁶⁸ [@ Chang Zange 常簪戈], “Gonghui weishenme meiyou weihuqi laodongzhe de quanyi 工会为什么没有维护起劳动者的权益 [Why hasn’t a labor union started to defend worker’s rights],” Zhihu 知乎 Comment, *Waimai qishou, kunzai xitong li* 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], September 8, 2020.

⁶⁹ Ele.me 饿了么, “Ni Yuanyi Duogei Wo Wu Fenzhong Ma? 你愿意多给我5分钟吗? [Are You Willing to Give Me Five Extra Minutes?],” Weixin 微信 Official Accounts Platform, September 9, 2020, http://mp.weixin.qq.com/s?__biz=MzA3NDM1NTY0Nw==&mid=2651380807&idx=1&sn=0a461c5f3ca25d1b0e6972dd4c6d6035&chksm=84fd7a97b38af381405a562fd4efb7757db40765d17a44ccc8f28aad8c1886cb04250f9710e0#rd.

⁷⁰ Ele.me 饿了么, “Ni Yuanyi Duogei Wo Wu Fenzhong Ma? 你愿意多给我5分钟吗? [Are You Willing to Give Me Five Extra Minutes?].”

said it had a duty to solve them as “the people behind the system” (*xitong beihou de ren* 系统背后的人).⁷¹ “Not doing right is not doing right, and there is no excuse,” the firm’s statement read.⁷² Its newly updated policy gave drivers eight additional minutes of flexible time on each order, which Meituan justified by referring to two specific issues the *Renwu* article raised: elevator wait time and traffic safety. In a response to the feature’s “Heavy Rain” section, Meituan also said its system would extend time limits or even stop dispatching orders in bad weather. The platform vowed to “earnestly listen” (*renzhen tingqu* 认真听取) to different stakeholders’ opinions and said it planned to convene regular discussion sessions with drivers.⁷³

Platforms’ announcements set off a new string of reactions from *Renwu* readers. Some online users reiterated their criticism of the companies, arguing that offering consumers the option to extend drivers an additional few minutes simply offloaded responsibility from the platforms, shifting the burden to consumers. “Are you willing to make five fewer dollars?” one user quipped in one of the most-liked comments under the Ele.me announcement, which was titled “Are you willing to give five extra minutes?”⁷⁴ Others responded positively, writing that they thought driver safety was most important and would give extra time. Somewhat surprisingly, still others expressed little sympathy for drivers, declaring that they did not intend to exercise the option to give them additional time to complete orders. A lawyer from Hefei 合肥

⁷¹ Wang Lu 王路, “Eleme, Meituan Huiying ‘Waimai Qishou Kunzai Xitongli,’ Huhuan Jiqi Renxinghua 饿了么、美团回应‘外卖骑手困在系统里’, 呼唤机器人人性化 [Ele.Me, Meituan Respond to ‘Delivery Drivers, Stuck in the System,’ Calls for Humanization of the Machine],” *Meiri Shangye Ribao* 每日商业报道 [*Daily Business Report*], September 11, 2020, <https://new.qq.com/omn/20200911/20200911A037N500.html>.

⁷² In its original Chinese: “*Mei zuohao jiushi mei zuohao, meiyou jiekou...* 没做好就是没做好, 没有借口...” See Wang Lu 王路, “Eleme, Meituan Huiying ‘Waimai Qishou Kunzai Xitongli,’ Huhuan Jiqi Renxinghua 饿了么、美团回应‘外卖骑手困在系统里’, 呼唤机器人人性化 [Ele.Me, Meituan Respond to ‘Delivery Drivers, Stuck in the System,’ Calls for Humanization of the Machine].”

⁷³ Wang Lu 王路, “Eleme, Meituan Huiying ‘Waimai Qishou Kunzai Xitongli,’ Huhuan Jiqi Renxinghua 饿了么、美团回应‘外卖骑手困在系统里’, 呼唤机器人人性化 [Ele.Me, Meituan Respond to ‘Delivery Drivers, Stuck in the System,’ Calls for Humanization of the Machine].”

⁷⁴ Wang Lu 王路, “Eleme, Meituan Huiying ‘Waimai Qishou Kunzai Xitongli,’ Huhuan Jiqi Renxinghua 饿了么、美团回应‘外卖骑手困在系统里’, 呼唤机器人人性化 [Ele.Me, Meituan Respond to ‘Delivery Drivers, Stuck in the System,’ Calls for Humanization of the Machine].”

published an entire blog post on Zhihu explaining why he would not be giving drivers extra time, arguing that every industry comes with its hardships: “You don’t need to think that just because you sit in a cubicle you have an obligation or the qualifications to take pity on a delivery driver.”⁷⁵

IV. Media Echo

State media outlets covered the *Renwu* exposé by emphasizing its focus on algorithmic control and framing the feature as an outcry against the platforms. An article from China Global Television Network, a state-run English-language news source, treated drivers with sympathy and only covered online reactions that were critical of “food delivery giants.”⁷⁶ The title of the piece referred to “trapped” delivery drivers, imitating the headline of the *Renwu* article. Notably, the CGTN coverage also mentioned a central government effort to recognize food-delivery workers in fall 2019, when some drivers participated in a Tiananmen Square parade celebrating the People Republic of China’s 70th anniversary.⁷⁷ Including that context served to further shift negative backlash from the exposé away from the government. *People’s Daily* (*renmin ribao* 人民日报) published an article on platforms’ response to the article.⁷⁸

⁷⁵ Shi kuxiang lüshi 舒圣祥律师 [Lawyer Shi Kuxiang], “Wo weishenme bu yuanyi duogei waimai qishou 5 fenzhong 我为什么不愿意多给外卖骑手5分钟 [Why I’m not willing to give delivery drivers an extra 5 minutes],” *Zhihu* 知乎 (blog), September 9, 2020, <https://zhuanlan.zhihu.com/p/228492795>.

⁷⁶ Ai Yan, “Who Can Free Trapped Food Delivery Riders?,” *China Global Television Network*, September 9, 2020, <https://news.cgtn.com/news/2020-09-09/Who-can-free-trapped-food-delivery-riders--TEtahnREBi/index.html>.

⁷⁷ CGTN also covered drivers’ inclusion in the parade in October 2019, which was perhaps the most government acknowledgement they received before the pandemic. At the time, an online account for the *People’s Daily* (*renmin ribao* 人民日报) shared a GIF of drivers in the parade which called them “saviors.” Their feature in the parade followed the largest number of food-delivery driver strikes in a two-year period, according to the *China Labour Bulletin*, although there may not exist any direct causal relationship between the two. See Katrin Büchenbacher, “Why Delivery Riders Were the Secret Stars of China’s 70th Anniversary Parade,” *China Global Television Network*, October 3, 2019, <https://news.cgtn.com/news/2019-10-03/Delivery-riders-the-secret-stars-of-China-s-70th-anniversary-parade-KurcmkFPLq/index.html>.

⁷⁸ “Waimaiyuan chuang shu shiyi lirun que nanfen yibeigeng? Shanghai mei 2.5 tian jiuyou yiming waimaiyuan shangwang 外卖员创数十亿利润却难分一杯羹？上海每2.5天就有1名外卖员伤亡 [Delivery workers generate several billion in profits, but is it difficult to get a slice of the pie? In Shanghai, delivery worker passes away every

On television, CCTV-2, the country's national channel for business news, broadcast an eight-minute segment on the feature. The channel's coverage summarized the *Renwu* article's main points — platforms' need for speed wearing on drivers' physical and mental health — and included on-the-street interviews with drivers. Again, it highlighted the role of algorithmic control, flashing a ticker on the screen that read “How to balance safety and efficiency for algorithms and people.”⁷⁹ Later in the week, well-known anchor Bai Yansong 白岩松 delivered a short monologue on the article live on CCTV-13, mainland China's biggest single channel. Bai warned platforms not to treat delivery drivers like robots.⁸⁰

Foreign media also echoed the investigation over the next six months, as English-language news organizations devoted similar coverage to Chinese delivery drivers.⁸¹ The *Financial Times* wrote about the *Renwu* investigation two days after its release in a piece that briefly recapped the article's focus and explored the business impact of the platforms' immediate policy changes easing delivery-time restrictions. Reporters there also reached out to Meituan and Ele.me for comment.⁸² A different reporter at the FT built on that coverage by publishing a shorter January 2021 feature on Chinese food-delivery workers whose angle perfectly matched

2.5 days],” *Diyi shijian* 《第一时间》 [*First Thing*] (Yangshi caijing 央视财经 [CCTV Finance and Economics], September 10, 2020), <https://finance.sina.com.cn/chanjing/cyxw/2020-09-10/doc-iivhuipp3636472.shtml>.

⁷⁹ “Waimaiyuan chuang shu shiyi lirun que nanfen yibei geng? Shanghai mei 2.5 tian jiuyou yiming waimaiyuan shangwang 外卖员创数十亿利润却难分一杯羹? 上海每2.5天就有1名外卖员伤亡 [Delivery workers generate several billion in profits, but is it difficult to get a slice of the pie? In Shanghai, delivery worker passes away every 2.5 days].”

⁸⁰ “Bai Yansong: Waimai pingtai bie ba qishou dang jiqi 白岩松: 外卖平台别把骑手当机器 [Bai Yansong: Delivery platforms, don't treat drivers like robots],” *Xinwen zhoukan* 新闻周刊 [*News Weekly*] (Zhongguo zhongyang dianshitai xinwen pindao 中国中央电视台新闻频道 [China Central Television News Channel 13], September 12, 2020), <https://www.bilibili.com/video/BV13p4y1e7vs/>.

⁸¹ I highlight coverage of Chinese delivery drivers above, but the pandemic also generated coverage for American food-delivery workers, especially New York City e-bike riders working for platforms like DoorDash and Uber. Kimiko de Freytas-Tamura, “Food Delivery Apps Are Booming. Their Workers Are Often Struggling.” *The New York Times*, November 30, 2020, sec. New York, <https://www.nytimes.com/2020/11/30/nyregion/bike-delivery-workers-covid-pandemic.html>.

⁸² Meituan declined to comment, while Ele.me issued a short statement to the publication that read, “Driver safety is a top priority for Ele.me and we have many measures in place to protect their welfare.” See Ryan McMorro and Nian Liu, “China's Meituan and Ele.Me Tackle Backlash against Demands on Couriers,” *Financial Times*, September 10, 2020, <https://www.ft.com/content/bcc453b2-0da5-41a5-af76-eb43b044e822>.

the *Renwu* story's focus. "Computer-dictated deadlines and fines for delays are pushing couriers to take chances on the road," the story's subhead read.⁸³ In December 2020, NPR's Beijing Correspondent Emily Feng also published a feature on "overburdened delivery workers," highlighting courier workers who deliver packages in addition to food-delivery labor.⁸⁴ In April 2021, The China Project released a translated firsthand account of the day in the life of a pseudonymous migrant delivery driver in Beijing.⁸⁵ Later foreign coverage came to emphasize labor activism and the labor rights of delivery drivers, but most articles in late 2020 and early 2021 reflected the *Renwu* feature's criticism of platforms and algorithms.⁸⁶

⁸³ Yuan Yang, "How China's Delivery Apps Are Putting Riders at Risk," *Financial Times*, January 26, 2021, <https://www.ft.com/content/63bf1817-91fc-4720-9d51-b79e6734d790>.

⁸⁴ Emily Feng, "For China's Overburdened Delivery Workers, The Customer — And App — Is Always Right," NPR, December 1, 2020, sec. World, <https://www.npr.org/2020/12/01/938876826/for-chinas-overburdened-delivery-workers-the-customer-and-app-is-always-right>.

⁸⁵ Huang Chenkuang, "A Day in the Life of a Beijing Delivery Driver," *The China Project*, April 13, 2021, <https://thechinaproject.com/2021/04/13/a-day-in-the-life-of-a-beijing-delivery-driver/>. The China Project was called SupChina until September 2022.

⁸⁶ Beyond foreign media, the *Renwu* investigation also earned a mention in the U.S. State Department's 2020 Human Rights Practices Report for China. See "2020 Country Reports on Human Rights Practices: China (Includes Hong Kong, Macau, and Tibet)," *Country Reports on Human Rights Practices* (U.S. Department of State's Bureau of Democracy, Human Rights, and Labor, March 30, 2021), <https://www.state.gov/reports/2020-country-reports-on-human-rights-practices/china/>.

Chapter 3. Absent from the Exposé: Government Regulation and Labor Organizing

Constrained by its narrow focus on algorithms, the *Renwu* investigation does not discuss how government agencies, labor laws, or broader economic policies may contribute to drivers' issues or offer an avenue for potential solutions.⁸⁷ This sole focus on the platforms undermines the painstaking detail with which Lai documents drivers' difficulties at work, leading *Renwu*'s diagnosis of drivers' labor conditions to lack sufficient nuance. The article also ignores driver-led efforts at localized labor organizing and mutual aid.

I. Structural Factors and Labor Activism

The story ignores structural economic drivers like youth unemployment and weak social insurance that underpin drivers' experience working in the industry. The youth unemployment rate reached a record 19.9 percent in July 2022, but even before the problem grew more acute due to economic disruptions caused by the pandemic, working-class urban migrant workers, like those who work as delivery drivers, already suffered disproportionately from youth and urban employment.⁸⁸ With manufacturing employment having already peaked, young migrants increasingly opt to work in the gig economy, where labor scholar Eli Friedman says unemployment adds downward pressure to wages since workers are less likely to have multiple job options.⁸⁹ The *Renwu* article leaves out how these overarching trends — and the relative lack

⁸⁷ The only government officials that feature in the article are low-level traffic police officers and the departments for whom they work. The article's "Five-Star Ratings" section explores how these officers treat drivers' unlawful speeding or navigation on city streets. It also mentions how traffic police departments in cities like Shanghai, Xingtai, Hebei, Shenzhen, and Guangdong have imposed policies to curb dangerous driving by delivery workers. The focus is on street-level government agencies, and Lai does not consider how larger government departments regulate or enforce tech platforms.

⁸⁸ "China Youth Jobless Rate Hits Record 20% in July on Covid Woes," Bloomberg.com, August 15, 2022, <https://www.bloomberg.com/news/articles/2022-08-15/china-youth-jobless-rate-hits-record-20-in-july-on-covid-woes>; Qin Chen et al., "China's Record Urban Youth Unemployment," ChinaFile (blog), June 16, 2022, <https://www.chinafile.com/conversation/chinas-record-urban-youth-unemployment>.

⁸⁹ Qin Chen et al., "China's Record Urban Youth Unemployment."

of other employment opportunities for low-skilled urban migrant workers as China's economy transitions to a lower-growth regime more reliant on services and consumption — remove incentives for platforms to better compensate their labor force.⁹⁰ One section of the article, “The Last Safety Net,” highlights the inadequacy and inconsistency of accident insurance policies offered to drivers by platforms and through the “stations” that platforms can contract to hire drivers on a full-time basis.⁹¹ But the feature does not mention the state's weak social safety net — a point of emphasis for economists and think tanks in the West and a system that also requires laborers to possess an urban household registration (*hukou* 户口) — or agencies' ability to regulate.⁹² Weak social insurance makes drivers especially averse to unemployment. In 2020, the government's unemployment insurance program covered less than a fifth of the country's roughly 300 million migrant workers.⁹³

Notably, the *Renwu* article leaves out instances of labor unrest in the food-delivery platform economy. Drawing on American academic James Carse's concept of finite and infinite games, the concluding section “Infinite Game” casts drivers as unaware cogs in the delivery system, while the subtitle of the piece, “Stuck in the System” (*kunzai xitong li* 困在系统里) suggests that drivers are trapped. The feature ends with the image of drivers hopelessly ferrying orders around and chasing upwards mobility:

⁹⁰ Viola Rothschild, “China's Gig Economy Is Driving Close to the Edge,” *Foreign Policy* (blog), accessed November 7, 2022, <https://foreignpolicy.com/2018/09/07/chinas-gig-economy-is-driving-close-to-the-edge/>.

⁹¹ Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 11: *Zuihou yidao pingzhang* 最后一道屏障 [The Last Safety Net].

⁹² Brad Hebert, “Is Reform on the Horizon for China's Weak Social Safety Net?,” *Center for Strategic and International Studies* (blog), September 9, 2020, <https://www.csis.org/blogs/new-perspectives-asia/reform-horizon-chinas-weak-social-safety-net>. Also see Nicholas R Lardy and Tianlei Huang, “China's Weak Social Safety Net Will Dampen Its Economic Recovery,” *Peterson Institute for International Economics* (blog), May 4, 2020, <https://www.piie.com/blogs/china-economic-watch/chinas-weak-social-safety-net-will-dampen-its-economic-recovery>.

⁹³ Brad Hebert, “Is Reform on the Horizon for China's Weak Social Safety Net?”; Chao Deng and Jonathan Cheng, “Some Economists Question Strength of China's Labor Market,” *Wall Street Journal*, June 7, 2020, sec. World, <https://www.wsj.com/articles/chinas-jobs-rebound-doesnt-appear-as-robust-as-the-government-claims-11591551390>

The system remains in operation and the game still continues, but drivers are almost completely ignorant of their own role in the middle of this “infinite game.” They are still rushing about, all for the possibility of a better life.⁹⁴

This depiction lacks nuance, as it leaves out efforts by drivers to protest grievances relating to unpaid wages, low bonuses, and delivery conditions. The word for “labor strike” (*bagong* 罢工) is only used metaphorically in the article to describe a driver’s damaged electric scooter that breaks down.

In fact, labor organizing in the industry has been small-scale but prevalent. As of November 2022, the China Labour Bulletin’s Strike Map has recorded 138 strikes or protests by food-delivery workers, with the first occurring in 2016. Recorded strikes increased sharply in 2018 (57) and 2019 (45) before falling in 2020 (3) and 2021 (13).⁹⁵ Drivers coordinate most of these labor protests digitally using WeChat. Drivers’ resistance is usually modest and generally does not involve direct confrontations: as a gig worker, striking can be as simple as refusing to accept new orders from the platform’s app.⁹⁶ Despite the informal, muted nature of this labor organizing, its existence indicates that drivers actively work to improve their labor conditions and are conscious of their agency as workers, even if that agency is limited.

The *Renwu* article also discounts the assistance that drivers extend to each other on the job, portraying the labor force as more fractured than is actually the case. While drivers do work and deliver food independently, ethnographic research has also shown how drivers use large WeChat groups as informal “unions.” These group chats with hundreds of drivers allow workers

⁹⁴ In its original Chinese, this paragraph reads, “*Xitong rengzai yunzhuān, youxi haizai jixu, zhishi, qishoumen dui ziji zai zhe chang “wuxian youxi” zhong de shenfen, jihu yiwu suozi. Tamen rengzai feiben, weile yi ge genghao shenghuo de keneng.*” [系统仍在运转, 游戏还在继续, 只是, 骑手们对自己在这场「无限游戏」中的身份, 几乎一无所知。他们仍在飞奔, 为了一个更好生活的可能。] Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 12: *Wuxian Youxi* 无限游戏 [Infinite Game].

⁹⁵ “China Labour Bulletin Strikes Map,” China Labour Bulletin, accessed November 26, 2022, https://maps.clb.org.hk/?i18n_language=en_US&map=1&startDate=2015-01&endDate=2022-10&eventId=&keyword=&addressId=&parentAddressId=&address=&parentAddress=&industry=10308&parentIndustry=&industryName=Food%20delivery.

⁹⁶ Liu and Friedman, “Resistance under the Radar.”

to share news about bonuses and traffic updates; assist newcomers to the industry and experienced workers with delivery equipment; and offer each other a lifeline during emergencies.⁹⁷ Although the *Renwu* article refers to news reports about traffic police officers helping drivers complete ongoing orders after accidents or violations, the feature largely presents drivers as independent, unconnected workers. When order volume is high, Lai writes in “Electric Scooter,” “the only thing that can help [drivers] are their own scooters.”⁹⁸

II. Political Sensitivity and Media Controls

The *Renwu* article’s conclusions about drivers’ labor grievances lack appropriate nuance because collective labor action and government criticism are politically sensitive in contemporary China. Invoking government agencies or highlighting labor organizing in the *Renwu* feature may have induced direct censorship of the article. Jingrong Tong suggests news organizations in China self-censor as a way to minimize political conflicts while maximizing public interest in their work.⁹⁹ Controls over media discourse and investigative journalism have tightened in China, particularly since Xi Jinping took power in 2013, increasing the likelihood of direct and self-censorship.¹⁰⁰ Despite this increased censorship, investigative journalism can still

⁹⁷ Yu, Treré, and Bonini, “The Emergence of Algorithmic Solidarity.” A block quote from one driver interviewed about his smaller chat group with other drivers for this journal article is worth highlighting. It illustrates how these WeChat groups give drivers the opportunity to form connections with other gig workers that help them manage the difficulties of the job while benefiting them personally: “We share our experience and various tactics and information in time to truly help each other. Once I accidentally ran into a car during the delivery of one order, I asked for help in the group. The three of them quickly arrived at my place to help me. At that time, A helped me call the police, B helped me complete the order, and C helped me negotiate with the driver. At that moment, I felt the warmth and sense of belonging. Our small group is really good. If they need me at any time, I will help them as soon as possible, just like what they did for me.”

⁹⁸ Lai Youxuan 赖祐萱, “Waimai Qishou, Kunzai Xitong Li” 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], 8: *Diandong che* 电动车 [Electric Scooter].

⁹⁹ Jingrong Tong, “Press Self-Censorship in China: A Case Study in the Transformation of Discourse,” *Discourse & Society* 20, no. 5 (2009): 593–612.

¹⁰⁰ Javier C. Hernández, “‘We’re Almost Extinct’: China’s Investigative Journalists Are Silenced Under Xi,” *The New York Times*, July 13, 2019, sec. World, <https://www.nytimes.com/2019/07/12/world/asia/china-journalists-crackdown.html>.

be impactful in China, as the state only begins to censor or co-opt media when a crisis threatens social instability, according to Chinese media scholar Maria Repnikova.¹⁰¹ The existence of commercial media in authoritarian countries like China may also serve to strengthen the state when reporters offer readers more credible and engaging coverage on topics that are compatible with the Party's interests.¹⁰²

Labor activism is a particularly sensitive topic for the CCP, meaning that the *Renwu* team had to carefully consider its approach to covering drivers' working conditions. A series of crackdowns on labor activism, civil society groups, and nongovernmental organizations intensified in 2015.¹⁰³ For the CCP, unified working-class discontent with government policy represents a threat to social stability. This reality may have driven *Renwu* to shape the article's angle around algorithms and platforms rather than the lack of government labor protection for migrant gig workers. China's 2008 Labor Contract Law tightened employment security regulations but left many workers in unstable positions uncovered. The growth of the platform economy means that even more Chinese workers, delivery drivers among them, are unprotected by the Labor Contract Law, either because of poor enforcement or inapplicability.¹⁰⁴

The magazine's parent entity may also explain the lack of discussion around government regulation and labor protests in the article, even though *Renwu* has published daringly before. The magazine was founded in 1980 under the state-owned People's Publishing House (*Renwu chubanshe* 人物出版社), China's leading state press which also publishes political and academic

¹⁰¹ Maria Repnikova, "The Subtle Muckrakers of the Coronavirus Epidemic," *The New York Times*, February 5, 2020, sec. Opinion, <https://www.nytimes.com/2020/02/05/opinion/coronavirus-china-news-journalism.html>.

¹⁰² Maria Repnikova, "Information Management During Crisis Events: A Case Study of Beijing Floods of 2012," *Journal of Contemporary China* 26, no. 107 (September 3, 2017): 711–25, <https://doi.org/10.1080/10670564.2017.1305503>.

¹⁰³ "The Gig Economy Challenges China's State-Run Labour Unions," *The Economist*, January 27, 2021, <https://www.economist.com/china/2021/01/27/the-gig-economy-challenges-chinas-state-run-labour-unions>.

¹⁰⁴ Mary Gallagher, "The Labour Contract Law and Its Discontents," in *Proletarian China: A Century of Chinese Labour*, ed. Ivan Franceschini and Christian P. Sorace (New York: Verso Books, 2022), 588.

books, and has also been controlled by the People's Oriental Publishing and Media Company.¹⁰⁵ Despite being under the purview of a CCP-affiliated publishing house, just six months before releasing the delivery-driver investigation, *Renwu* had published a long feature on an even more sensitive subject, the coronavirus. The magazine interviewed Ai Fen 艾芬, one of the first Wuhan doctors to share information about the coronavirus, in an article titled “The Whistleblower” (*fa shaozi deren* 发哨子的人) released in early March 2020 under the same editor Jin Shi.¹⁰⁶ Censors removed the article from the Chinese internet a few hours after its release, though readers attempted to creatively recreate it using emojis, Braille, and Morse code.¹⁰⁷

The investigation's source base also contributes to the missing discussion of strikes and legal policies. By giving Sun Ping and her research so much attention, the *Renwu* investigation relies extensively on a source affiliated with the central government and the Chinese Communist Party (CCP). While Sun's interest in digital algorithmic labor may be intrinsic, it is important to consider how the limits on her umbrella organization may subtly influence the direction of her research, and subsequently, the angle of the *Renwu* investigation.¹⁰⁸ Sun's organization, CASS, is

¹⁰⁵ Lai Youxuan 赖祐萱 and Chuang 闯, “Delivery Workers, Trapped in the System.”; “Guanyu Jituan 关于集团 [About The Group],” *Renmin dongfang chubun zhuanmei wang* 人民东方出版传媒网 [People's Oriental Publishing and Media], 2012, https://baike.baidu.com/reference/878982/257eIPf-AHwwcKeAgaSI2B2E2-tGQBd2vpIJ0JMN3_agNIMx3hJzPSX XmYcYlqCOnlA2nA-fSJ72rvfMvoH79y5WfA.

¹⁰⁶ Joey Qi, “Editor's Pick: 2020's Best Investigative Stories from China and Taiwan,” *Global Investigative Journalism Network*, December 14, 2020, <https://gijn.org/2020/12/14/editors-pick-2020s-best-investigative-stories-from-china-and-taiwan/>.

¹⁰⁷ Jane Li, “Martian Language, Emoji, and Braille: How China Is Rallying to Save a Coronavirus Story Online,” *Quartz*, March 11, 2020, <https://qz.com/1816219/chinese-internet-rallied-to-save-a-censored-coronavirus-story/>.

¹⁰⁸ In her own scholarly work, Sun does make passing note of the government's ability to regulate platforms, but her main diagnosis of gig drivers' stressful and hazardous labor conditions emphasizes algorithms, tech platforms, and capitalism more broadly: “The Chinese government is still in the initial stage of regulating platform development. Hence, the logic of algorithms in food delivery platforms mainly reflects the logic of capitalism. With the continued digitalization and platformization of the Chinese economy, algorithms are becoming a new infrastructure that is transforming and reconfiguring labor politics. By linking different parties, such as platform corporations, outsourcing companies, migrant workers, and customers, an ecosystem of goods and services that prioritizes consumption while exacerbating the precariousness of platform laborers is being established.” See Sun, “Your Order, Their Labor.”

a Chinese research institute with more than 4,000 employees. The University of Pennsylvania's Think Tanks and Civil Societies Program recognizes it as one of the top think tanks in Asia, but its government affiliations are strong.¹⁰⁹ CASS's president from 2018 until 2022, the period during which researcher Sun Ping completed her scholarly article on algorithms and Chinese food-delivery labor and when *Renwu* published its delivery-driver investigation, was economist Xie Fuzhan 谢伏瞻, a former Communist Party Secretary and governor of Henan Province who had just missed out on becoming the governor of China's central bank.¹¹⁰ CASS's current president, Shi Taifeng 石泰峰, gained a seat on the CCP's 25-person Politburo in October 2022.¹¹¹ At that time, Shi also became head of the CCP Central Committee's United Front Work Department (*Zhonggong zhongyang tongyi zhanxian gongzuobu* 中共中央统一战线工作部), a group tasked with managing potential domestic opposition and conducting foreign influence campaigns targeted at Chinese living abroad.¹¹² Shi, therefore, simultaneously heads a large research institute and the Party's influence department.

¹⁰⁹ James McGann, "2020 Global Go To Think Tank Index Report," TTCSP Global Go To Think Tank Index Reports, January 28, 2021, https://repository.upenn.edu/think_tanks/18.; "About CASS," Chinese Academy of Social Sciences, accessed November 25, 2022, http://casseng.cass.cn/about/about_cass/.

¹¹⁰ Nectar Gang, "Veteran Economist Takes Charge of China's Top Think Tank," South China Morning Post, March 23, 2018, sec. News, <https://www.scmp.com/news/china/policies-politics/article/2138487/veteran-economist-takes-helm-chinese-academy-social>.; "About CASS."

¹¹¹ "Communique of the First Plenary Session of the 20th Central Committee of the Communist Party of China," Ministry of Foreign Affairs of the People's Republic of China, October 23, 2022, https://www.fmprc.gov.cn/mfa_eng/zxxx_662805/202210/t20221025_10791365.html.

¹¹² Kelly Wang, "Chinese Academic Institute President Named Head of United Front Work Department," Caixin Global, October 28, 2022, <https://www.caixinglobal.com/2022-10-28/chinese-academic-institute-president-named-head-of-united-front-work-department-101957333.html>.; Alexander Bowe, "China's Overseas United Front Work: Background and Implications for the United States" (U.S.-China Economic and Security Review Commission, August 24, 2018), <https://www.uscc.gov/research/chinas-overseas-united-front-work-background-and-implications-united-states>.; The United Front Work Department's influence and importance has increased under Xi Jinping. One of its many bureaus focuses on economics and "works to cultivate loyalty among people and areas that have been left behind by the country's economic advance," according to the Financial Times. See James Kyng, Lucy Hornby, and Jamil Anderlini, "Inside China's Secret 'Magic Weapon' for Worldwide Influence," Financial Times, October 26, 2017, <https://www.ft.com/content/fb2b3934-b004-11e7-beba-5521c713abf4?mhq5j=e7>.

Chapter 4. Government Management of Delivery-Driver Grievances

While the intensity of public attention subsided after the *Renwu* investigation's release in September 2020, Chinese consumers and internet users remained attuned to the working conditions of delivery drivers.¹¹³ As 2020 became 2021, specific, local instances of delivery-driver discontent that went mostly unnoticed before now garnered broad attention. Amid this persistent public focus on drivers and their labor, government officials publicly acknowledged delivery drivers and their labor concerns, while state agencies initiated new regulations of Meituan and Ele.me. Ultimately, Chinese officials responded to the working conditions highlighted in the *Renwu* piece — and to the swell of public buzz incited by those complaints — with a familiar strategy. They signaled a pro-labor stance by issuing state directives while silencing and detaining the most outspoken driver activists.

I. Sustained Attention and Government Acknowledgement

The public's heightened awareness of delivery drivers' working conditions continued into 2021. The *Renwu* exposé and its virality primed members of the public to react when a series of incidents highlighted drivers' concerns again in early 2021. In January at the start of the year, Ele.me faced backlash on social media after the platform only gave 2,000 yuan to compensate the family of a migrant driver who collapsed while working in Beijing.¹¹⁴ Ele.me, which claimed it did not bear liability for the driver's death given his gig-worker status, increased the payment

¹¹³ Artist Peking Fox's "Dance of Delivery" oil canvases, painted in early 2021, offer a form of visual evidence for this sustained public interest and sympathy. Fox created a series of six paintings that depict skeletons haunting yellow-clad delivery drivers in regards to different aspects of their work. Peking Fox, *Dance of Delivery: Negative Rating*, Oil on canvas, March 12, 2021,

<https://thechinaproject.com/2021/03/11/dance-of-delivery-chinese-delivery-drivers-oil-on-canvas/>.

¹¹⁴ Che Pan and Minghe Hu, "Ele.Me Hit by Online Backlash after Delivery Worker's Death," *South China Morning Post*, January 8, 2021, sec. Tech, <https://www.scmp.com/tech/enterprises/article/3117000/chinas-eleme-stirs-outcry-after-initial-low-compensation-delivery>.

to 600,000 yuan after a strong online reaction. “If not an employee, then what is he to Ele.me? A bounty hunter?” one Weibo user asked.¹¹⁵ That same month, an Ele.me driver in Taizhou 台州 self-immolated to protest a pay dispute.¹¹⁶ In February 2021, Ele.me again faced the internet’s collective ire when drivers complained that Lunar New Year incentive targets were unrealistic.¹¹⁷

Around the same time, drivers assumed a more prominent role in government messaging. In an April 2021 speech during a visit to Nanning 南宁 in Guangxi 广西, China’s leader Xi Jinping 习近平 stressed the importance of protecting the “legitimate interests of truck drivers, couriers and food delivery riders.”¹¹⁸ That same week, a viral video featuring an official in the Labor Relations Department of the Beijing Human Resources and Social Security Bureau reignited public disapproval of Meituan. The official, Wang Lin 王林, worked as a Meituan driver for a day, earning only 41 yuan in 12 hours. The experience triggered another round of online criticism of Meituan, including almost 40,000 comments on the news article with the embedded video, and a public statement from the company promising improved conditions for drivers.¹¹⁹ State media outlets later published opinion articles commending the official’s

¹¹⁵ Che Pan and Minghe Hu, “Ele.Me Hit by Online Backlash after Delivery Worker’s Death,” *South China Morning Post*, January 8, 2021, sec. Tech, <https://www.scmp.com/tech/enterprises/article/3117000/chinas-eleme-stirs-outcry-after-initial-low-compensation-delivery>.

¹¹⁶ Qiang Tong and Yang Ge, “Takeout Delivery Driver Sets Self on Fire Over Withheld Pay,” *Caixin Global*, January 13, 2021, <https://www.caixinglobal.com/2021-01-13/takeout-delivery-driver-sets-self-on-fire-over-withheld-pay-101650351.html>.; In an unrelated incident in August 2022, a different delivery driver in Taizhou stabbed himself three times but survived after an Ele.me station deducted 1,000 yuan from his salary upon his resignation from the station. “Zhejiang: Eleme Qishou Zhaoji Cizhi, Bei Kou Yian Hou Qingxu Bengkui, Liantong Ziji San Dao 浙江:饿了么骑手着急辞职, 被扣一千后情绪崩溃, 连捅自己三刀 [Zhejiang: Ele.Me Driver, Anxious to Resign, Emotionally Breaks down, Stabs Himself Three Times after Pay Docked 1,000 Yuan],” *Wangyi Xinwen* 网易新闻 [*NetEase News*], August 26, 2022, <https://www.163.com/dy/article/HFNAAATV0553EMFJ.html>.

¹¹⁷ Phoebe Zhang, “Chinese Food Delivery Giant Ele.Me Apologises for Setting Drivers ‘Impossible’ Targets for Lunar New Year Bonuses,” *South China Morning Post*, February 20, 2021, https://www.scmp.com/news/china/article/3122485/chinese-food-delivery-giant-eleme-apologises-setting-drivers-impossible?module=hard_link&pgtype=article.

¹¹⁸ “Xi Focus: Xi Stresses Advancing High-Quality Development in Border Ethnic Regions,” *Xinhua*, April 27, 2021, http://www.xinhuanet.com/english/2021-04/27/c_139910639.htm.

¹¹⁹ “Beijing Yi Chuji Ganbu Tiyan Zuo Waimai Xiaoge, 12 Xiaoshi Zhuan 41 Yuan: ‘Wo Jude Hen Weiqu’ 北京一级干部体验做外卖小哥, 12小时赚41元:‘我觉得很委屈’ [Beijing Department Official Experienced Work as a Delivery Driver, Made 41 Yuan in 12 Hours: ‘I Feel Wronged’],” *Beijing Ribao* 北京日报 [*Beijing Daily*], April 28,

investigation.¹²⁰ Acknowledgement of drivers could be subtle but symbolic, like their inclusion in the CCTV Spring Festival Gala, commonly referred to as *chunwan* 春晚. The glitzy introduction to the 2022 show, whose high viewership makes it the world's most-watched television program and a useful medium for political messaging, briefly featured a pack of delivery drivers. They were wearing blue and yellow helmets but did not bear any Ele.me or Meituan logos.¹²¹

II. Directives, Regulation, and Detainments

Following the *Renwu* article's release and reaction, in addition to increased attention from officials, government agencies imposed penalties and new regulations on the platforms. These actions aligned with a wave of stricter regulation for many of the country's largest internet firms. In November 2020, China's State Administration for Market Regulation met with Meituan and Alibaba 阿里巴巴, the parent company of Ele.me, along with 25 other tech companies to discuss a new draft of antimonopoly rules for digital platforms.¹²² Like the *Renwu* article, the government concentrated on algorithms: around the same time, the Cyberspace Administration

2021, <https://www.163.com/news/article/G8LINEEU0001899O.html>.; "Meituan Vows to Improve Work Condition for Deliverymen after Official's Undercover Work," *Global Times*, April 28, 2021, <https://www.globaltimes.cn/page/202104/1222379.shtml>.

¹²⁰ Yuan Yang, "China's Food Delivery Groups Slammed after Undercover TV Exposé," *Financial Times*, April 29, 2021.

¹²¹ "Zhongyang Guangbo Dianshi Zongtai 2022 Nian Chunjie Lianhuan Wanhui 中央广播电视总台2022年春节联欢晚会 [China Central Television 2022 Spring Festival Gala]" (Zhongyang guangbo dianshi zongtai 中央广播电视总台 [China Media Group], February 2, 2022), <https://www.youtube.com/watch?v=q9TbIpOOXxY>.

¹²² Liza Lin, "China Targets Alibaba, Other Homegrown Tech Giants With Antimonopoly Rules," *Wall Street Journal*, November 10, 2020, <https://www.wsj.com/articles/chinas-regulators-prepare-to-roll-out-new-antimonopoly-rules-11605013205>.; Alibaba acquired Ele.me at a valuation of \$9.5 billion in 2018. See Shelly Banjo, "Alibaba Takes Control of Ele.Me, at \$9.5 Billion Value," *Bloomberg*, April 2, 2018, <https://www.bloomberg.com/news/articles/2018-04-02/alibaba-buys-ele-me-in-deal-that-implies-9-5b-enterprise-value>.

of China, the country’s internet regulator, posted a statement warning that consumers should not be “prisoners to algorithms.”¹²³

More targeted government action arrived in the summer of 2021, when China’s State Administration for Market Regulation directed platforms to increase drivers’ safety and income. The central bureau released a policy memo with six other agencies, including the All-China Federation of Trade Unions, that issued broad “guidance for safeguarding the rights and interests of food-delivery employees” (*weihu waimai songcanyuan quanyi de zhidao yijian* 维护外卖送餐员权益的指导意见).¹²⁴ These directives included relaxing delivery time limits, ensuring drivers’ normal incomes meet local minimum wage standards, and strengthening drivers’ traffic safety education and compliance, among others. The new regulations did not specifically refer to the *Renwu* investigation, but a *China Daily* article on the government action — that the government’s official English-language State Council website reposted in the “Policy Watch” section of its site — referred extensively to the investigation after summarizing the regulations. The *China Daily* article’s language suggested that central government action had resolved drivers’ discontent. The piece portrayed the state as the solution to drivers’ grievances and framed their problems around algorithms and delivery time limits, just as the *Renwu* feature emphasized: “Food delivery workers, whose busy schedules have largely been decided by algorithms and time limits set by food delivery platforms, can now breathe easier thanks to a recent move by the central government to reinforce their protection.”¹²⁵

¹²³ Lin, “China Targets Alibaba, Other Homegrown Tech Giants With Antimonopoly Rules.”

¹²⁴ “Shichang jianguan zongju deng qi bumen lianhe yinfa ‘guanyu luoshi wangluo canyin pingtai zeren qieshi weihu waimai songcan yuan quanyi de zhidao yijian’ 市场监管总局等七部门联合印发《关于落实网络餐饮平台责任切实维护外卖送餐员权益的指导意见》 [State Administration for Market Regulation and seven departments jointly issue ‘Guidance pertaining to the practical responsibility of digital food-and-beverage platforms to feasibly safeguard the rights and interests of food-delivery employees’]” (Guojia shichang jianguan guanli zongju 国家市场监督管理总局 [State Administration for Market Regulation], July 26, 2021), https://www.samr.gov.cn/xw/zj/202107/t20210726_333061.html.

¹²⁵ Cheng Si, “Guideline Offers Relief for Nation’s 7m Harried Food Delivery Workers,” *China Daily*, August 10, 2021, https://english.www.gov.cn/policies/policywatch/202108/10/content_WS6111d2d6c6d0df57f98de41e.html.

Officials met with the platforms in September 2021, exactly a year after the *Renwu* article's publication, to follow up on their summer guidance.¹²⁶ Within a few days, Meituan publicly released the rules its algorithm used to set delivery time limits for drivers and said it was adjusting them.¹²⁷ Finally, in December 2021, officials also permitted policy changes allowing delivery drivers, ride-hailing drivers for companies like Didi 滴滴, and other gig workers to form occupational unions that would be required to register with the government-backed All-China Federation of Trade Unions.¹²⁸

While issuing guidance to protect drivers' rights and meeting with platforms to increase regulation of the industry, government officials concurrently silenced driver activists. Most prominently, they arrested driver Chen Guojiang 陈国江, also known as Mengzhu 盟主, who had become the unofficial leader of an informal delivery-driver mutual aid group known as the "Delivery Knights' Rivers and Lakes Alliance" (*waisong jianghu qishi lianmeng* 外送江湖骑士联盟).¹²⁹ Authorities detained Chen and four other delivery drivers with whom he lived in Beijing for "picking quarrels and provoking trouble" in spring 2021.¹³⁰ Chen had amassed groups of over 10,000 drivers in WeChat groups while posting videos of his work and developing his

¹²⁶ Brenda Goh, "China Tells Delivery, Ride-Hailing Firms to Better Protect Workers," *Reuters*, September 10, 2021, sec. China,

<https://www.reuters.com/world/china/china-tells-delivery-ride-hailing-firms-better-protect-workers-2021-09-10/>.

¹²⁷ Yingzhi Yang and Brenda Goh, "Meituan to Change Delivery Algorithm Rules as China Urges Labour Protection," *Reuters*, September 13, 2021, sec. China,

<https://www.reuters.com/world/china/meituan-change-delivery-algorithm-rules-china-urges-labour-protection-2021-09-13/>.

¹²⁸ Albee Zhang, Brenda Goh, and Josh Horwitz, "China to Let Ride-Hailing Drivers, Delivery Workers Form Unions - Xinhua," *Reuters*, December 17, 2021, sec. China,

<https://www.reuters.com/world/china/china-amend-laws-allow-ride-hailing-drivers-food-delivery-workers-form-unions-2021-12-17/>.

¹²⁹ Zixu Wang, "In China, Delivery Workers Struggle against a Rigged System," *The China Project*, April 20, 2021, <https://thechinaproject.com/2021/04/20/in-china-delivery-workers-struggle-against-a-rigged-system/>.

¹³⁰ Ann Scott Tyson, "Beijing Embraces Gig Workers' Cause – but Not Their Activists," *Christian Science Monitor*, May 14, 2021,

<https://www.csmonitor.com/World/Asia-Pacific/2021/0514/Beijing-embraces-gig-workers-cause-but-not-their-activists>.; Emily Feng, "He Tried To Organize Workers In China's Gig Economy. Now He Faces 5 Years In Jail," *NPR*, April 13, 2021, sec. Asia,

<https://www.npr.org/2021/04/13/984994360/he-tried-to-organize-workers-in-chinas-gig-economy-now-he-faces-5-years-in-jail>.

own digital influence among drivers.¹³¹ For example, Chen gave a podcast interview the week after the *Renwu* investigation's release and spoke out against Ele.me's impractical Lunar New Year bonus targets in a video that received half a million views.¹³²

This seemingly contradictory combination of government activity — regulatory action paired with activist detainment — matches a pattern for how officials manage popular labor grievances. Manfred Elfstrom analyzes this paradox of crackdowns on individual labor activists and efforts to address their concerns and statistically demonstrates that more protests are associated with more spending on the People's Armed Police and more pro-worker decisions in courts. The uptick in both suggests that officials simultaneously repress and respond to labor grievances.¹³³ China commentator Bill Bishop characterized the government's regulatory treatment of Meituan and the Chen arrest as “pages from the playbook:” “The problems are real, someone stands up to protest them, [and] the authorities arrest that person but realize there is a broader stability threat,” which leads officials to address the core labor concern as well.¹³⁴

The *Renwu* investigation and drivers' own efforts to communicate labor discontent built public support for the rights of Meituan and Ele.me drivers. All three forces — the article, drivers' efforts, and the public — shaped how government officials treated drivers, the activists among them, and the platforms. Understanding these strategies and how they might evolve — for managing grievances raised by food-delivery drivers as well as other flexibly-employed workers

¹³¹ Zhao Jiajia 赵佳佳, “Jingcheng qi xia chuan 京城骑侠传 [The Capital's Heroic Driver Spreads],” *Nan Fengchuan* 南风窗 [*South Reviews*], November 30, 2020, <http://posts.careerengine.us/p/5fc4ba00ecfd7a4d9f5930fd>.

¹³² “Zhen Qishi — Xiayi Pojie Pingtai Taolu 真骑士—侠义破解平台套路 [A Real Delivery Knight — a Chivalrous Explanation of Platform's Methods],” 打工谈 [Work Chat], accessed October 2, 2022, <https://open.spotify.com/episode/0XBqU9wyLxDnsVW9zIDfgf>.

¹³³ Isaac Manfred Elfstrom, “Increased Repressive and Responsive Capacity,” in *Workers and Change in China : Resistance, Repression, Responsiveness* (Cambridge: Cambridge University Press, 2021), 128.

¹³⁴ Bill Bishop, “Meituan's Mess; Political Inspections for Universities; Zhao Lijian Goes after Japan,” Substack newsletter, *Sinocism* (blog), April 28, 2021, <https://sinocism.com/p/meituans-mess-political-inspections>.

— remains an important task for political economists, historians, and journalists as slowing Chinese economic growth increases the probability of future labor unrest.

Acknowledgments

Feedback and suggestions I received from several others in the Yale community benefited this essay tremendously, and I am very thankful for their contributions.

I'm especially grateful to my senior-essay advisor Valerie Hansen, who is also the Director of Undergraduate Studies for East Asian Studies. Her suggestions and support helped me sharpen the focus of my project, develop a logical structure for the essay, and improve early drafts, particularly the introduction. She inspired me to see the *Renwu* investigation as the centerpiece of the project and wisely suggested I build the essay around it. In some ways, we were an unlikely pairing — Professor Hansen's specialty being traditional China and my interest lying in contemporary urban China — but the match was perfect for my senior-essay experience. Good advice is timeless.

Michael Meng, the head of Yale's East Asia Library and the librarian for Chinese Studies, provided valuable research guidance as I searched for primary sources to shape the essay around. I also want to thank the professors, postdoctoral associates, and PhD candidates at Yale who agreed to meet with me early in the fall semester or directed me to resources as I narrowed my topic and brainstormed different approaches for studying food-delivery driver labor. They include Dan Mattingly, Odd Arne Westad, Zeren Li, Peng Peng, and Zekun Zhang. David Borgonjon, my "Modern Chinese Literature" professor, encouraged me to check out Charles Laughlin's work on 1930s factory reportage literature (*baogao wenxue* 报告文学). Laughlin's description of those 20th-century pieces matched the structure and focus of the 2020 *Renwu* investigation surprisingly well. Nicholas Disantis, of Yale's Council on East Asian Studies, circulated resources for research support and kept me on track with the timeline for the project — much like he helped ensure I was on track with major requirements in recent years.

I owe so much gratitude to every Chinese instructor who has taught me Mandarin, pushed me to improve, and filled me with the joy of language learning. This essay would not have been possible without them. Penghua Shen, who remains a friend and mentor, set my foundation in Chinese at the Belmont Hill School along with Paul DiResta and Kimberly Latimer. I have their classrooms to thank for much of that joy. Exposure to the language and annual Lunar New Year celebrations at the Michael Driscoll School in my hometown of Brookline, Massachusetts inspired me to pursue studying Chinese. At Yale, Yu-Lin Wang Saussy, William Zhou, Min Chen, and Wei Su have been excellent professors and friendly sources of support. The U.S. State Department's National Security Language Initiative for Youth and Yale's Richard U. Light Fellowship enabled me to spend a pair of summers studying in China — 2016 in Xi'an and 2019 in Beijing — where I learned from two other cohorts of hardworking Chinese instructors, especially those at the Harvard Summer Beijing Academy.

Words can't convey how much love and support I receive from my parents and brother. I thank them for everything.

Bibliographical Essay

I first developed the underlying interest for this senior essay during the summer of 2019 after my first year at Yale. I lived in Beijing that summer studying Mandarin at Beijing Language and Culture University through Yale's Richard U. Light Fellowship. Upon arriving in the city, I was fascinated by the proliferation of yellow and blue-vested scooter drivers ferrying plastic bags of food around the city. The sheer size of the workforce was remarkable. Their presence was ubiquitous: drivers hovered outside malls, darted into restaurants, zipped through city streets, and frequently transported meals to the university's campus. At Harvard's Summer Beijing Academy where I studied, drivers delivered teachers' lunches most days. After our instructors taught us students how to order on Meituan, they soon started arriving at our classroom building with beef-noodle soup for me.

I returned to Yale in the fall with sharper language skills and a broad interest in how both people and goods flow through contemporary Chinese cities. Delivery drivers seemed to embody this mobility as individual laborers and overlooked engines for China's much-discussed digital economy. When the beginning of the pandemic pushed drivers into the spotlight in early 2020, they began to subtly influence my research in classes. For an anthropology seminar called "Urban Ethnography of Asia" taught by Erik Harms in spring 2020, I briefly mentioned delivery drivers in a paper on luxury and exclusion in the urban Chinese shopping mall. In Stephen Roach's economics seminar, "Inside the Next China," I also touched on delivery workers with a final paper on the future of e-commerce in China's low-tier cities, though I wasn't yet considering drivers as a labor force. Dan Mattingly's lecture "Rise of China" added a political element to this thinking about cities and the economy. I came to see urban issues in contemporary China as the root of my interest in East Asian Studies.

At the same time, my personal interest in the gig economy was growing. In the few weeks between the end of my first year at Yale and my flight to Beijing, my little brother and I charged electric scooters as gig contractors for Bird in our Brookline neighborhood in Boston. While living at home during the pandemic summer of 2020, I became a part-time delivery biker myself, completing about 200 orders for Uber Eats over the course of four months to supplement an internship on Zoom. My work was much less intense, stressful, and dangerous than the labor of Chinese food-delivery workers — and several American drivers who rely on gig work for their main income. I only logged onto the app during busy lunch and dinner rushes and appreciated how the job enabled me to experience Boston in a new way. The work also prompted me to think more about the Beijing Meituan and Ele.me drivers I had observed from a distance the summer before.

As I gravitated towards Chinese food-delivery labor as a potential senior essay topic, good journalism and a new strain of ethnographic research on drivers clarified my focus. *The Wire China*, where I interned on a gap semester from Yale in spring 2021, published a data analysis piece on Meituan and a full cover story on the company in August 2021 that mentioned scrutiny of the company's treatment of its workforce.¹³⁵ Masha Borak's March 2022 feature for *Wired* on drivers' efforts at informal digital labor organizing introduced me to a fresh batch of ethnographic research on their working experiences and the mass WeChat groups they use for mutual aid.¹³⁶ These articles from Ya-Wen Lei; Hui Huang; Zizheng Yu, Emiliano Treré, and Tiziano Bonini; and Chuxuan Liu and Eli Friedman on drivers' labor frustration and nascent collective action were fascinating.¹³⁷ Scanning other work by Friedman, a Chinese labor scholar

¹³⁵ Reale, "The Meituan Takeaway.,"; Brent Crane, "Special Delivery," *The Wire China*, August 15, 2021, <https://www.thewirechina.com/2021/08/15/special-delivery/>.

¹³⁶ Masha Borak, "China's Gig Workers Are Challenging Their Algorithmic Bosses," *Wired UK*, March 4, 2022, <https://www.wired.co.uk/article/china-gig-workers-algorithmic-bosses>.

¹³⁷ Huang Hui, "Riders on the Storm.,"; Ya-Wen Lei, "Delivering Solidarity: Platform Architecture and Collective Contention in China's Platform Economy," *American Sociological Review* 86, no. 2 (April 1, 2021): 279–309,

at Cornell who studies how the country's economic ascent has influenced labor politics, gave me more context on migrant workers and urbanization. Exploring the anthology *Proletarian China: A Century of Chinese Labour* also taught me about labor discontent.¹³⁸ In the background, business headlines about Chinese government regulation of big technology companies — and those U.S.-listed firms' sinking stock prices — continued to appear. I wondered, could these trends in the platform economy be connected? How was Beijing managing the pandemic surge of public appreciation for drivers, their attempts at collective action, and the massive platforms and entrepreneurs that personified China's 21st-century economic growth?

Even with a sense of what I wanted to explore, it was challenging to identify an academic discipline and primary source base for the essay. I hoped the project could feel interdisciplinary — a mix of history, political science, economics, anthropology, and journalism. After all, one of the main reasons I have enjoyed the East Asian Studies major has been my ability to select courses from a variety of disciplines. My advisor Valerie Hansen helped me conceive the project as one that could feel interdisciplinary while relying on the methods of a “contemporary history.” We agreed that in an ideal world with no pandemic and seamless access to China, traveling to a Chinese city during summer 2022 and actually interviewing drivers would have been great material to form the essay around. With that path not possible, we considered whether the essay could function as the setup for interviews, assuming I could — hopefully sooner rather than later — conduct some form of ethnographic research in the future. We also briefly weighed the feasibility and morality of connecting with gig drivers for virtual interviews and calls. Zeren Li, a postdoctoral associate focused on the political economy of China at Yale's MacMillan Center,

<https://doi.org/10.1177/0003122420979980>; Yu, Treré, and Bonini, “The Emergence of Algorithmic Solidarity.”; Liu and Friedman, “Resistance under the Radar.”

¹³⁸ Ivan Franceschini and Christian P. Sorace, eds., *Proletarian China: A Century of Chinese Labour* (London ; Brooklyn, NY: Verso Books, the imprint of New Left Books, Made in China Journal, 2022).

suggested another approach: analyzing legal verdicts and court documents to examine the government's treatment of delivery drivers' labor grievances. As intriguing as it was, the concept ultimately seemed beyond the scope of a senior essay.

While continuing to read around about drivers and the government's 2021 platform regulations online, the *Renwu* exposé kept surfacing in my research. I did not know much about the article at first, but reporters — both inside China and at English-language newspapers — often referred to the investigation in context paragraphs tucked towards the bottom of their stories. When I located the feature itself, I was struck by its length (22,000 characters!) and its deep pool of sources: not only drivers, but social scientists, public comments from platform executives, and industry statistics. Even though Lai Youxuan centers the firsthand experiences of delivery drivers in the feature, I could begin to see how the massive investigation put forth an argument of its own, directing drivers' grievances — and readers' outrage — towards the platforms and their algorithms. Professor Hansen encouraged me to construct my essay around the investigation and the reaction to it. Highlighting what the feature ignored — what the source didn't say — became an important part of the analysis. I was also pleased that the project could incorporate media and journalism, which is another interest of mine and was an important part of my college experience at the *Yale Daily News*.

As I began to write the essay, I focused on the text of the investigation and the immediate reaction to it. Yet even with my attention devoted to the piece and its impact on drivers' public perception, the relationship between government officials, drivers, and their fledgling efforts at labor activism still felt like my motivating interest. I could sense the dynamic lurking in my analysis of the investigation, but I didn't see it clearly until a subtle but significant realization came to me relatively late in the drafting process. Looking further into Sun Ping — the

researcher quoted frequently in the *Renwu* investigation whose thoughts and 2019 study shape the feature's angle — and the research institute that employs her helped expose the government's influence. I learned there were close ties between her Chinese Academy of Social Sciences and the Party-State — a connection that had grown even closer when the institute's current president Shi Taifeng became a member of the Politburo and the head of the United Front Work Department in October 2022. Although Shi's appointment in 2022 would not have affected Sun's research in 2019 or the *Renwu* article in 2020, I was startled to discover that the same individual leading a massive think tank is also the head of the CCP's de facto influence machine. Officials' role in this delivery-driver story was conceivably hiding right in the text of the *Renwu* investigation, implicitly mentioned during the almost 20 times Lai cites Sun or CASS.

All translations of Chinese sources cited in the essay are my own, and I accept full responsibility for any errors. The *Renwu* investigation had been translated into English before, and it was helpful to read these blog translations as I acquainted myself with the exposé and attempted to translate my own passages.¹³⁹ The version on the blog Chuang 闯, which did not name a translator, was the best of these. The contemporary focus and digital nature of my analysis presented me with several other Chinese articles and commentaries to draw from. Zeren Li's suggestion to study drivers' presence on social media platforms like Douyin 抖音, WeChat, and YouTube inspired my use of social-media comments to gauge public sentiment towards drivers as well as my inclusion of Chen Guojiang, the driver activist who commanded a large following online, in the essay's final chapter.

¹³⁹ Lai Youxuan, "Delivery Drivers, Stuck in the System," trans. Freya Ge and David Ownsby, *Reading the China Dream*, accessed October 29, 2022, <https://www.readingthechinadream.com/lai-youxuan-ldquodelivery-drivers-stuck-in-the-systemrdquo.html>; Lai Youxuan 赖祐萱 and Chuang 闯, "Delivery Workers, Trapped in the System.,"; Jeffrey Ding, "ChinAI #111: The Human Cost of 30-Min Food Deliveries," Substack newsletter, *ChinAI Newsletter* (blog), September 14, 2020, <https://chinai.substack.com/p/chinai-111-algorithms-and-food-delivery>.

Two specific Yale classes — William Zhou’s “Chinese for Current Affairs” and Min Chen’s “Chinese for Global Enterprises” — prepared me to handle the news reports and economics terminology I encountered most often in this project. The fact that the essay’s Chinese sources all live online also allowed me to use 21st-century language tools to help read and process them efficiently. Especially useful software included Google Chrome’s “Zhongwen Chinese Popup Dictionary” — a plugin that William Zhou encouraged me and other “Chinese for Current Affairs” students to install that essentially embeds a dictionary onto your roving cursor — and the Apple iOS stroke keyboard for typing Chinese characters whose pronunciations or meanings I had either forgotten or didn’t recognize.

I am indebted to every single Chinese teacher I have had. The Chinese classroom has always been a place where I have felt stimulated and supported, and I thank all my teachers for their warmth and dedication. Their language instruction formed the basis for my interest in Chinese Studies and gifted me the skills I needed to complete this essay.

Bibliography

- “2020 Country Reports on Human Rights Practices: China (Includes Hong Kong, Macau, and Tibet).” Country Reports on Human Rights Practices. U.S. Department of State’s Bureau of Democracy, Human Rights, and Labor, March 30, 2021.
<https://www.state.gov/reports/2020-country-reports-on-human-rights-practices/china/>.
- Chinese Academy of Social Sciences. “About CASS.” Accessed November 25, 2022.
http://casseng.cssn.cn/about/about_cass/.
- Ai Yan. “Who Can Free Trapped Food Delivery Riders?” *China Global Television Network*, September 9, 2020.
<https://news.cgtn.com/news/2020-09-09/Who-can-free-trapped-food-delivery-riders--TEtahmREBi/index.html>.
- “Bai Yansong: Waimai pingtai bie ba qishou dang jiqi 白岩松：外卖平台别把骑手当机器 [Bai Yansong: Delivery platforms, don’t treat drivers like robots].” *Xinwen zhoukan* 新闻周刊 [News Weekly]. Zhongguo zhongyang dianshitai xinwen pindao 中国中央电视台新闻频道 [China Central Television News Channel 13], September 12, 2020.
<https://www.bilibili.com/video/BV13p4y1e7vs/>.
- Banjo, Shelly. “Alibaba Takes Control of Ele.Me, at \$9.5 Billion Value.” *Bloomberg*, April 2, 2018.
<https://www.bloomberg.com/news/articles/2018-04-02/alibaba-buys-ele-me-in-deal-that-implies-9-5b-enterprise-value>.
- Time Magazine. “Behind the Covers of TIME’s Special Coronavirus Issue,” March 19, 2020.
<https://time.com/5805947/time-coronavirus-covers/>.
- Beijing Ribao 北京日报 [Beijing Daily]. “Beijing Yi Chuji Ganbu Tiyan Zuo Waimai Xiaoge, 12 Xiaoshi Zhuan 41 Yuan: ‘Wo Jude Hen Wei’ 北京一处级干部体验做外卖小哥, 12小时赚41元: ‘我觉得很委屈’ [Beijing Department Official Experienced Work as a Delivery Driver, Made 41 Yuan in 12 Hours: ‘I Feel Wronged’].” April 28, 2021.
<https://www.163.com/news/article/G8LINEEU0001899O.html>.
- Bishop, Bill. “Meituan’s Mess; Political Inspections for Universities; Zhao Lijian Goes after Japan.” Substack newsletter. *Sinocism* (blog), April 28, 2021.
<https://sinocism.com/p/meituans-mess-political-inspections>.
- Borak, Masha. “China’s Gig Workers Are Challenging Their Algorithmic Bosses.” *Wired UK*, March 4, 2022. <https://www.wired.co.uk/article/china-gig-workers-algorithmic-bosses>.
- Bowe, Alexander. “China’s Overseas United Front Work: Background and Implications for the United States.” U.S.-China Economic and Security Review Commission, August 24, 2018.
<https://www.uscc.gov/research/chinas-overseas-united-front-work-background-and-implications-united-states>.

Büchenbacher, Katrin. “Why Delivery Riders Were the Secret Stars of China’s 70th Anniversary Parade.” *China Global Television Network*, October 3, 2019.
<https://news.cgtn.com/news/2019-10-03/Delivery-riders-the-secret-stars-of-China-s-70th-anniversary-parade-KurcmkFPLq/index.html>.

Campbell, Charlie. “China’s Delivery Drivers Keep E-Commerce on Track Amid Virus.” *Time*, March 16, 2020. <https://time.com/5803803/china-delivery-driver-ecommerce-covid19/>.

Chang Zange 常簪戈. “Gonghui weishenme meiyou weihuqi laodongzhe de quanyi 工会为什么没有维护起劳动者的权益 [Why hasn’t a labor union started to defend worker’s rights].” Zhihu 知乎 Comment. *Waimai qishou, kunzai xitong li 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System]*, September 8, 2020.

Chen, Lulu, David Ramli, and Peter Elstrom. “The World’s Greatest Delivery Empire.” *Bloomberg Businessweek*, March 28, 2019.
<https://www.bloomberg.com/features/2019-meituan-china-delivery-empire/>.

Chen, Qin, Alison Sile Chen, Eli Friedman, Ho-fung Hung, and Taylor Loeb. “China’s Record Urban Youth Unemployment.” *ChinaFile* (blog), June 16, 2022.
<https://www.chinafile.com/conversation/chinas-record-urban-youth-unemployment>.

Cheng Si. “Guideline Offers Relief for Nation’s 7m Harried Food Delivery Workers.” *China Daily*, August 10, 2021.
https://english.www.gov.cn/policies/policywatch/202108/10/content_WS6111d2d6c6d0df57f98de41e.html.

Chenkuang, Huang. “A Day in the Life of a Beijing Delivery Driver.” *The China Project*, April 13, 2021.
<https://thechinaproject.com/2021/04/13/a-day-in-the-life-of-a-beijing-delivery-driver/>.

China Labour Bulletin. “China Labour Bulletin Strikes Map.” Accessed November 26, 2022.
https://maps.clb.org.hk/?i18n_language=en_US&map=1&startDate=2015-01&endDate=2022-10&eventId=&keyword=&addressId=&parentAddressId=&address=&parentAddress=&industry=10308&parentIndustry=&industryName=Food%20delivery.

China Labour Bureau [@chinalabour]. “#jishi waimai jianghu qishi lianmeng ‘mengzhu’ lounian: ‘Wo hai hao, nimen hao ma?’ #即时 外送江湖骑士联盟‘盟主’露面:‘我还好, 你们好吗?’ [#Breaking Mengzhu of Delivery Knights’ Rivers and Lakes Alliance Appears: ‘I’m fine, how are you?’].” Tweet. *Twitter*, January 4, 2022.
<https://twitter.com/chinalabour/status/1478284385258336256>.

“China Statistical Yearbook 2020.” National Bureau of Statistics of China. Accessed November 28, 2022. <http://www.stats.gov.cn/tjsj/ndsj/2020/indexeh.htm>.

- Bloomberg. “China Youth Jobless Rate Hits Record 20% in July on Covid Woes,” August 15, 2022.
<https://www.bloomberg.com/news/articles/2022-08-15/china-youth-jobless-rate-hits-record-20-in-july-on-covid-woes>.
- cnBeta. “Ele.me waimai fu bei guojia bowuguan shoucong song wan fen waimai kang yi zhan pao 饿了么外卖服被国家博物馆收藏 送万份外卖抗疫战袍 [National Museum of China collects Ele.me delivery uniform, sends 10,000 anti-viral delivery uniforms].” cnBeta.com, August 31, 2020. <https://tech.sina.com.cn/roll/2020-08-31/doc-iivhvpwy4114378.shtml>.
- Ministry of Foreign Affairs of the People’s Republic of China. “Communique of the First Plenary Session of the 20th Central Committee of the Communist Party of China,” October 23, 2022.
https://www.fmprc.gov.cn/mfa_eng/zxxx_662805/202210/t20221025_10791365.html.
- Crane, Brent. “Special Delivery.” *The Wire China*, August 15, 2021.
<https://www.thewirechina.com/2021/08/15/special-delivery/>.
- Dage wolaile 大哥我来了 [@Older brother, I’m here]. “Zuozhe yongxin ye zouxin le, waimai de suoyou tong dian yige bulou, kan ku le 作者用心也走心了, 外卖的所有痛点一个不漏, 看哭了 [The author was diligent and I was moved, all drivers’ pains drawn out and not one left out, I cried.]” Zhihu 知乎 Comment. *Waimai qishou, kunzai xitong li* 外卖骑手, 困在系统里 [*Delivery Drivers, Stuck in the System*], September 8, 2020.
- Davis, Kenrick. “China’s Laid-Off Workers Rush Into Food Delivery.” *Sixth Tone*, May 22, 2020.
<https://www.sixthtone.com/news/1005691/https%3A%2F%2Fwww.sixthtone.com%2Fnews%2F1005691%2Fchinas-laid-off-workers-rush-into-food-delivery>.
- Zhongguo wang keji 中国网科技 [Tech China]. “DCCI Fabu Q4 Waimai Shichang Baogao: 67.1% Yonghu Zuichang Tongguo Meituan Shiyong Waimai Fuwu DCCI发布Q4外卖市场报告: 67.1%用户最常通过美团使用外卖服务 [DCCI Releases Fourth-Quarter Food-Delivery Market Report: 67.1% of Users Most Often Use Meituan for Delivery Service].” March 31, 2020.
<https://baijiahao.baidu.com/s?id=1662648726629279020&wfr=spider&for=pc>.
- Deng, Chao and Jonathan Cheng. “Some Economists Question Strength of China’s Labor Market.” *Wall Street Journal*, June 7, 2020, sec. World.
<https://www.wsj.com/articles/chinas-jobs-rebound-doesnt-appear-as-robust-as-the-government-claims-11591551390>.
- Ding, Jeffrey. “ChinAI #111: The Human Cost of 30-Min Food Deliveries.” Substack newsletter. *ChinAI Newsletter* (blog), September 14, 2020.
<https://chinai.substack.com/p/chinai-111-algorithms-and-food-delivery>.

Ele.me 饿了么. “Ni Yuanyi Duogei Wo Wu Fenzhong Ma? 你愿意多给我5分钟吗? [Are You Willing to Give Me Five Extra Minutes?].” Weixin 微信 Official Accounts Platform, September 9, 2020.

http://mp.weixin.qq.com/s?__biz=MzA3NDM1NTY0Nw==&mid=2651380807&idx=1&sn=0a461c5f3ca25d1b0e6972dd4c6d6035&chksm=84fd7a97b38af381405a562fd4efb7757db40765d17a44ccc8f28aad8c1886cb04250f9710e0#rd.

Elfstrom, Isaac Manfred. “Increased Repressive and Responsive Capacity.” In *Workers and Change in China : Resistance, Repression, Responsiveness*, 110–28. Cambridge: Cambridge University Press, 2021.

Fan Wenxin [@xinwenfan]. “Right This Moment, a Chinese Magazine Interview with Dr. Ai Fen Is Being Censored, Copied and Posted, Deleted Again, C&p Again...on Wechat. Ai Talked about Being Reprimanded for Telling Ppl about Virus: ‘I Did What a Doctor, a Human, Would Normally Do. WHAT’S WRONG WITH THAT?’” Tweet. *Twitter*, March 10, 2020. <https://twitter.com/xinwenfan/status/1237261569223880704>.

Feng, Emily. “For China’s Overburdened Delivery Workers, The Customer — And App — Is Always Right.” *NPR*, December 1, 2020, sec. World. <https://www.npr.org/2020/12/01/938876826/for-chinas-overburdened-delivery-workers-the-customer-and-app-is-always-right>.

———. “He Tried To Organize Workers In China’s Gig Economy. Now He Faces 5 Years In Jail.” *NPR*, April 13, 2021, sec. Asia. <https://www.npr.org/2021/04/13/984994360/he-tried-to-organize-workers-in-chinas-gig-economy-now-he-faces-5-years-in-jail>.

China Labour Bulletin. “Food Delivery Driver Stabs Self in Protest over Fines and Unpaid Wages,” August 30, 2022. <https://clb.org.hk/content/food-delivery-driver-stabs-self-protest-over-fines-and-unpaid-wages>.

Fox, Peking. *Dance of Delivery: Negative Rating*. March 12, 2021. Oil on canvas. <https://thechinaproject.com/2021/03/11/dance-of-delivery-chinese-delivery-drivers-oil-on-canvas/>.

Franceschini, Ivan, and Christian P. Sorace, eds. *Proletarian China: A Century of Chinese Labour*. London ; Brooklyn, NY: Verso Books, the imprint of New Left Books, Made in China Journal, 2022.

Freytas-Tamura, Kimiko de. “Food Delivery Apps Are Booming. Their Workers Are Often Struggling.” *The New York Times*, November 30, 2020, sec. New York. <https://www.nytimes.com/2020/11/30/nyregion/bike-delivery-workers-covid-pandemic.html>

- Gallagher, Mary. “The Labour Contract Law and Its Discontents.” In *Proletarian China: A Century of Chinese Labour*, edited by Ivan Franceschini and Christian P. Sorace, 586–97. New York: Verso Books, 2022.
- Gang, Nekar. “Veteran Economist Takes Charge of China’s Top Think Tank.” *South China Morning Post*, March 23, 2018, sec. News.
<https://www.scmp.com/news/china/policies-politics/article/2138487/veteran-economist-take-s-helm-chinese-academy-social>.
- Goh, Brenda. “China Tells Delivery, Ride-Hailing Firms to Better Protect Workers.” *Reuters*, September 10, 2021, sec. China.
<https://www.reuters.com/world/china/china-tells-delivery-ride-hailing-firms-better-protect-workers-2021-09-10/>.
- Renmin dongfang chuban zhuanmei wang 人民东方出版传媒网 [People’s Oriental Publishing and Media]. “Guanyu Jituan 关于集团 [About The Group],” 2012.
https://baike.baidu.com/reference/878982/257eIPf-AHwwcKeAgaS12B2E2-tGQBd2vpIJ0JMN3_agNlMx3hJzPSXXmYcYlqCONlA2nA-fSJ72rvfMvoH79y5WfA.
- Hebert, Brad. “Is Reform on the Horizon for China’s Weak Social Safety Net?” *Center for Strategic and International Studies* (blog), September 9, 2020.
<https://www.csis.org/blogs/new-perspectives-asia/reform-horizon-chinas-weak-social-safety-net>.
- Hernández, Javier C. “‘We’re Almost Extinct’: China’s Investigative Journalists Are Silenced Under Xi.” *The New York Times*, July 13, 2019, sec. World.
<https://www.nytimes.com/2019/07/12/world/asia/china-journalists-crackdown.html>.
- Huang Hui. “Riders on the Storm: Amplified Platform Precarity and the Impact of COVID-19 on Online Food-Delivery Drivers in China.” *Journal of Contemporary China* 31, no. 135 (May 4, 2022): 351–65. <https://doi.org/10.1080/10670564.2021.1966895>.
- Jin Chen 金晨. “Zhongguo Linghuo Jiuyezhe Yi Da 2 Yi Ren, Xianshang Gongzuo Shoudao Nianqingren Zhuipeng 中国灵活就业者已达2亿人 线上工作受到年轻人追捧 [China’s Flexibly-Employed Population Hits 200 Million, Online Work Popular among Young People].” *Renmin Ribao* 人民日报 [*People’s Daily*], February 9, 2022.
<http://yn.people.com.cn/n2/2022/0209/c372455-35126499.html>.
- “Kunzai xitongli de waimai qishou 困在系统里的外卖骑手 [The delivery drivers stuck in the system].” *Liaowang pingbian tianxia* 瞭望评辨天下 [*Outlook Talk*], September 27, 2020.
https://v.youku.com/v_show/id_XNDg4MDA1MDI4NA==.html?spm=a2h0c.8166622.PhoneSokuUgc_3.dtitle.
- Kynge, James, Lucy Hornby, and Jamil Anderlini. “Inside China’s Secret ‘Magic Weapon’ for Worldwide Influence.” *Financial Times*, October 26, 2017.
<https://www.ft.com/content/fb2b3934-b004-11e7-beba-5521c713abf4?mhq5j=e7>.

- Lai Youxuan 赖祐萱. “Delivery Drivers, Stuck in the System.” Translated by Freya Ge and David Ownsby. *Reading the China Dream*. Accessed October 29, 2022. <https://www.readingthechinadream.com/lai-youxuan-ldquodelivery-drivers-stuck-in-the-syst emrdquo.html>.
- Lai Youxuan 赖祐萱. “Waimai Qishou, Kunzai Xitong Li 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System].” *Renwu Zazhi 人物杂志 [Portrait Magazine]*, September 8, 2020. <https://mp.weixin.qq.com/s/Mes1RqIOdp48CMw4pXTwXw>.
- Lai Youxuan 赖祐萱 and Chuang 闯. “Delivery Workers, Trapped in the System.” *Chuang 闯* (blog), November 12, 2020. <https://chuangcn.org/2020/11/delivery-renwu-translation/>.
- Lardy, Nicholas R. and Tianlei Huang. “China’s Weak Social Safety Net Will Dampen Its Economic Recovery.” *Peterson Institute for International Economics* (blog), May 4, 2020. <https://www.piie.com/blogs/china-economic-watch/chinas-weak-social-safety-net-will-damp en-its-economic-recovery>.
- Laughlin, Charles A. *Chinese Reportage: The Aesthetics of Historical Experience*. Durham: Duke University Press, 2002.
- Lei, Ya-Wen. “Delivering Solidarity: Platform Architecture and Collective Contention in China’s Platform Economy.” *American Sociological Review* 86, no. 2 (April 1, 2021): 279–309. <https://doi.org/10.1177/0003122420979980>.
- Li, Jane. “Martian Language, Emoji, and Braille: How China Is Rallying to Save a Coronavirus Story Online.” *Quartz*, March 11, 2020. <https://qz.com/1816219/chinese-internet-rallied-to-save-a-censored-coronavirus-story/>.
- Li Jiayu 李佳蔚. “半年76名外卖小哥因交通事故死伤, 沪警方约谈8家送餐企业_浦江头条_澎湃新闻新闻-The Paper.” 澎湃新闻新闻 *[The Paper]*, August 26, 2017. https://www.thepaper.cn/newsDetail_forward_1775421.
- Lin, Liza. “China Targets Alibaba, Other Homegrown Tech Giants With Antimonopoly Rules.” *Wall Street Journal*, November 10, 2020. <https://www.wsj.com/articles/chinas-regulators-prepare-to-roll-out-new-antimonopoly-rules-11605013205>.
- Liu, Chuxuan, and Eli Friedman. “Resistance under the Radar: Organization of Work and Collective Action in China’s Food Delivery Industry.” *The China Journal* 86 (July 2021): 68–89. <https://doi.org/10.1086/714292>.
- McCormack, William. “JD.Com Considers a Move Into Food Delivery.” *Barron’s*, June 20, 2022. <https://www.barrons.com/articles/jd-com-considers-on-demand-food-delivery-in-china-it-w ould-face-off-against-alibaba-and-meituan-51655504984>.

- McGann, James. “2020 Global Go To Think Tank Index Report.” *TTCSP Global Go To Think Tank Index Reports*, January 28, 2021, 376.
- McMorrow, Ryan, and Nian Liu. “China’s Meituan and Ele.Me Tackle Backlash against Demands on Couriers.” *Financial Times*, September 10, 2020.
<https://www.ft.com/content/bcc453b2-0da5-41a5-af76-eb43b044e822>.
- Wangyi Keji Baodao 网易科技报道 [NetEase Science and Technology Report]. “Meituan 《2018 Waimai Qishou Jiuye Baogao》: 77% de Qishou Laizi Nongcun 美团《2018外卖骑手就业报告》: 77%的骑手来自农村 [Meituan’s ‘2018 Delivery Driver Employment Report:’ 77% of Drivers From Rural Areas],” January 17, 2019.
<https://www.163.com/tech/article/E5NVLTF800097U7R.html>.
- “Meituan 2021 Annual Report.” Annual Report. Meituan, April 19, 2022.
http://media-meituan.todayir.com/20220419164002405410215762_en.pdf.
- Bloomberg. “Meituan Said to Mull First Global Push as China Growth Slows,” October 8, 2022.
<https://www.bloomberg.com/news/articles/2022-10-08/meituan-said-to-mull-first-global-push-as-china-growth-slows>.
- Global Times. “Meituan Vows to Improve Work Condition for Deliverymen after Official’s Undercover Work,” April 28, 2021.
<https://www.globaltimes.cn/page/202104/1222379.shtml>.
- Pan, Che, and Minghe Hu. “Ele.Me Hit by Online Backlash after Delivery Worker’s Death.” *South China Morning Post*, January 8, 2021, sec. Tech.
<https://www.scmp.com/tech/enterprises/article/3117000/chinas-eleme-stirs-outcry-after-initial-low-compensation-delivery>.
- Qi, Joey. “Editor’s Pick: 2020’s Best Investigative Stories from China and Taiwan.” Global Investigative Journalism Network, December 14, 2020.
<https://gijn.org/2020/12/14/editors-pick-2020s-best-investigative-stories-from-china-and-taiwan/>.
- Reale, Hannah. “The Meituan Takeaway.” *The Wire China*, June 13, 2021.
<https://www.thewirechina.com/2021/06/13/the-meituan-takeaway/>.
- Repnikova, Maria. “Information Management During Crisis Events: A Case Study of Beijing Floods of 2012.” *Journal of Contemporary China* 26, no. 107 (September 3, 2017): 711–25.
<https://doi.org/10.1080/10670564.2017.1305503>.
- . “The Subtle Muckrakers of the Coronavirus Epidemic.” *The New York Times*, February 5, 2020, sec. Opinion.
<https://www.nytimes.com/2020/02/05/opinion/coronavirus-china-news-journalism.html>.

Rothschild, Viola. “China’s Gig Economy Is Driving Close to the Edge.” *Foreign Policy*, September 7, 2018. <https://foreignpolicy.com/2018/09/07/chinas-gig-economy-is-driving-close-to-the-edge/>.

“Seven Departments Including the State Administration for Market Regulation Jointly Issued the ‘Guiding Opinions on Implementing the Responsibilities of Online Catering Platforms and Effectively Safeguarding the Rights and Interests of Takeaway Delivery Workers.’” Accessed December 8, 2022. https://www.samr.gov.cn/xw/zj/202107/t20210726_333061.html.

Shashibiya de mao 莎士比亚的猫 [@Shakespeare Cat], “Wo zunzhong mei yige waimai xiaoge, xiangjiaoyu jinkuai chishang fan, wo geng zaiyi tamen shifou anquan 我尊重每一个外卖小哥, 相较于尽快吃上饭, 我更在意他们是否安全 [I respect every delivery driver. Compared to eating food as quickly as possible, I care more about whether they’re safe or not.]” Zhihu 知乎 Comment, Waimai qishou, kunzai xitong li 外卖骑手, 困在系统里 [Delivery Drivers, Stuck in the System], September 8, 2020, <https://zhuanlan.zhihu.com/p/225120404>.

Shi kuxiang lüshi 舒圣祥律师 [Lawyer Shi Kuxiang]. “Wo weishenme bu yuanyi duogei waimai qishou 5 fenzhong 我为什么不愿意多给外卖骑手5分钟 [Why I’m not willing to give delivery drivers 5 minutes].” Zhihu 知乎 (blog), September 9, 2020. <https://zhuanlan.zhihu.com/p/228492795>.

“Shichang jianguan zongju deng qi bumen lianhe yinfa ‘guanyu luoshi wangluo canyin pingtai zeren qieshi weihu waimai songcan yuan quanyi de zhidao yijian’ 市场监管总局等七部门联合印发《关于落实网络餐饮平台责任切实维护外卖送餐员权益的指导意见》 [State Administration for Market Regulation and seven departments jointly issue ‘Guidance pertaining to the practical responsibility of digital food-and-beverage platforms to feasibly safeguard the rights and interests of food-delivery employees’].” Guojia shichang jiandu guanli zongju 国家市场监督管理总局 [State Administration for Market Regulation], July 26, 2021. https://www.samr.gov.cn/xw/zj/202107/t20210726_333061.html.

Sowmiya Ashok [@sowmiyashok]. “In Sept 2020, Renwu, a Monthly Magazine under the People’s Daily Press, Ran a News Article Titled ‘Delivery Riders, Trapped in the System.’ The Piece Was Shared More than 10 Million Times across the Chinese Internet via WeChat and Weibo. Full Text Here: <https://t.co/BMDSsAbWxZ>.” Tweet. *Twitter*, September 7, 2021. <https://twitter.com/sowmiyashok/status/1435223677885468672>.

Sun Ping. “Your Order, Their Labor: An Exploration of Algorithms and Laboring on Food Delivery Platforms in China.” *Chinese Journal of Communication* 12, no. 3 (July 3, 2019): 308–23. <https://doi.org/10.1080/17544750.2019.1583676>.

Tamen Shi Wuhan Ren: Waimai Qishou de Wuhan Rizhi 他们是武汉人 | 外卖骑手的武汉日志 [They Are Wuhan People: A Delivery Driver’s Wuhan Journal]. Yangshi xinwen 央视新闻 [CCTV], 2020.

https://v.youku.com/v_show/id_XNDU1NDAzMzY5Ng===.html?spm=a2h0c.8166622.PhoneSokuUgc_32.dtitle.

The Economist. “The Gig Economy Challenges China’s State-Run Labour Unions,” January 27, 2021.
<https://www.economist.com/china/2021/01/27/the-gig-economy-challenges-chinas-state-run-labour-unions>.

Tong, Jingrong. “Press Self-Censorship in China: A Case Study in the Transformation of Discourse.” *Discourse & Society* 20, no. 5 (2009): 593–612.

Tong, Qiang, and Yang Ge. “Takeout Delivery Driver Sets Self on Fire Over Withheld Pay.” *Caixin Global*, January 13, 2021.
<https://www.caixinglobal.com/2021-01-13/takeout-delivery-driver-sets-self-on-fire-over-withheld-pay-101650351.html>.

Tyson, Anna Scott. “Beijing Embraces Gig Workers’ Cause – but Not Their Activists.” *Christian Science Monitor*, May 14, 2021.
<https://www.csmonitor.com/World/Asia-Pacific/2021/0514/Beijing-embraces-gig-workers-cause-but-not-their-activists>.

Newzoo. “Top Countries/Markets by Smartphone Penetration & Users.” Accessed November 13, 2022.
<https://newzoo.com/insights/rankings/top-countries-by-smartphone-penetration-and-users>.

True Story Award. “True Story Award 2020/21 Nominees.” Accessed October 10, 2022.
<https://truestoryaward.org/story/181>.

Tuling lianbang 图灵联邦 [Turingtopia]. “Waimai qishou kunzai xitong li, suanfa shi zuikuihuoshou ma? 外卖骑手困在系统里，算法是罪魁祸首吗？ [Delivery Drivers, Stuck in the System: Are Algorithms the Main Culprit?].” Zhihu 知乎, September 9, 2020.
<https://zhuanlan.zhihu.com/p/230916865>.

“Waimaiyuan chuang shu shiyi lirun que nanfen yibei geng? Shanghai mei 2.5 tian jiuyou yiming waimaiyuan shangwang 外卖员创数十亿利润却难分一杯羹？上海每2.5天就有1名外卖员伤亡 [Delivery workers generate several billion in profits, but is it difficult to get a slice of the pie? In Shanghai, delivery worker passes away every 2.5 days].” *Diyi shijian* 《第一时间》 [First Thing]. Yangshi caijing 央视财经 [CCTV Finance and Economics], September 10, 2020.
<https://finance.sina.com.cn/chanjing/cyxw/2020-09-10/doc-iivhuipp3636472.shtml>.

Waimaiyuan de Zhenshi Shenghuo Daodi Shi Zhenmeyang de? Women Qiaoban Qu Dangle Yitian Qishou 外卖员的真实生活到底是怎么样的？我们翘班去当了一天骑手 [What’s the Life of a Delivery Worker Really like? We Skipped Work to Be a Delivery Driver for a Day]. DxChannel, 2020. https://www.youtube.com/watch?v=eew9_9zD-xc.

- Wang, Kelly. “Chinese Academic Institute President Named Head of United Front Work Department.” *Caixin Global*, October 28, 2022.
<https://www.caixinglobal.com/2022-10-28/chinese-academic-institute-president-named-head-of-united-front-work-department-101957333.html>.
- Wang Lu 王路. “Eleme, Meituan Huiying ‘Waimai Qishou Kunzai Xitongli,’ Huhuan Jiqi Renxinghua 饿了么、美团回应‘外卖骑手困在系统里’, 呼唤机器人人性化 [Ele.Me, Meituan Respond to ‘Delivery Drivers, Stuck in the System,’ Calls for Humanization of the Machine].” *Meiri Shangye Ribao* 每日商业报道 [*Daily Business Report*], September 11, 2020. <https://new.qq.com/omn/20200911/20200911A037N500.html>.
- Wang, Vivian. “In a City Under Lockdown, Hope Arrives by Motorbike.” *The New York Times*, February 20, 2020, sec. Business.
<https://www.nytimes.com/2020/02/20/business/china-coronavirus-wuhan-delivery.html>.
- Wang, Yiqing. “Call for Uniform Treatment of People Irrespective of Uniform.” *China Daily*, July 14, 2020.
<https://www.chinadaily.com.cn/a/202007/14/WS5f0ce650a31083481725923b.html>.
- Wang, Zixu. “In China, Delivery Workers Struggle against a Rigged System.” *The China Project*, April 20, 2021.
<https://thechinaproject.com/2021/04/20/in-china-delivery-workers-struggle-against-a-rigged-system/>.
- Wo qu dang le jitian waimai qishou, bei qidao chaofeng maoshi quankai* 我去当了几天外卖骑手, 被气到嘲讽模式全开 [*I went to work as a delivery driver for a few days, and I was routinely mocked the entire time*], 2020.
<https://www.youtube.com/watch?v=AHlBz0LYApo>.
- Xiao Wu. “I’m a Delivery Worker in China. My Job Is Better than You Think.” *Protocol* (blog), May 28, 2021. <https://www.protocol.com/china/china-delivery-worker-first-person>.
- Xiongmo Shangye Guancha 雄墨商业观察 [Xiongmo Business Observer]. “Wuhan Waimai Qishou Ciren Shijian Zhihou, Meituan Daodi Yinggai Fanxing Shenme? 武汉外卖骑手刺人事件之后, 美团到底应该反省什么? [After the Delivery Rider Stabbing Incident in Wuhan, What Should Meituan Really Reflect On?].” December 24, 2019.
<https://www.163.com/dy/article/F15FUTJT05312XKY.html>.
- Xinhua. “Xi Focus: Xi Stresses Advancing High-Quality Development in Border Ethnic Regions.” April 27, 2021. http://www.xinhuanet.com/english/2021-04/27/c_139910639.htm.
- Xiaobeishuo 小北说 [@Little Northern talk]. “Yuan tianxia qishou douneng pingan huijia 愿天下骑手都能平安回家 [I hope drivers across the world are all able to safely return home.]” Weibo 微博 Post, September 8, 2020.
https://weibo.com/1861344752/JjJ5agzXk?refer_flag=1001030103_.

- Beijing Yilian laodong fa quanzhu yu yanjiu zhongxin 北京义联劳动法援助与研究中心 [Beijing Yilian Labor Legal Aid and Research Center]. “Xin Yetai Congye Renyuan Laodong Quanyi Baohu 2020 Niandu Tiao Yan Baogao 新业态从业人员劳动权益保护 2020年度调研报告 [2020 Labor Rights Defense Research Report on New-Industry Employees],” January 19, 2021. <http://www.yilianlabor.cn/yanjiu/2021/1909.html>.
- Yang, Yingzhi and Brenda Goh. “Meituan to Change Delivery Algorithm Rules as China Urges Labour Protection.” *Reuters*, September 13, 2021, sec. China. <https://www.reuters.com/world/china/meituan-change-delivery-algorithm-rules-china-urges-labour-protection-2021-09-13/>.
- Yang, Yuan. “China’s Food Delivery Workers Are Lifeline in Coronavirus Outbreak.” *Financial Times*, February 11, 2020. <https://www.ft.com/content/6a116998-4ca9-11ea-95a0-43d18ec715f5>.
- . “How China’s Delivery Apps Are Putting Riders at Risk.” *Financial Times*, January 26, 2021. <https://www.ft.com/content/63bf1817-91fc-4720-9d51-b79e6734d790>.
- . “China’s Food Delivery Groups Slammed after Undercover TV Exposé.” *Financial Times*. April 29, 2021.
- Yantao Sanshou 晏涛三寿. “Youmeiyou zixi xiangguo, kunzhu qishou de bushi suanfa, ershi women ziji 有没有仔细想过, 困住骑手的不是算法, 而是我们自己 [Have you carefully thought about it? What’s trapping drivers isn’t the algorithm. It’s ourselves.]” *Zhihu* 知乎 (blog), September 10, 2020. <https://zhuanlan.zhihu.com/p/234444804>.
- Yu, Zizheng, Emiliano Treré, and Tiziano Bonini. “The Emergence of Algorithmic Solidarity: Unveiling Mutual Aid Practices and Resistance among Chinese Delivery Workers.” *Media International Australia* 183, no. 1 (May 1, 2022): 107–23. <https://doi.org/10.1177/1329878X221074793>.
- Zhang, Albee, Brenda Goh, and Josh Horwitz. “China to Let Ride-Hailing Drivers, Delivery Workers Form Unions - Xinhua.” *Reuters*, December 17, 2021, sec. China. <https://www.reuters.com/world/china/china-amend-laws-allow-ride-hailing-drivers-food-delivery-workers-form-unions-2021-12-17/>.
- Zhang, Phoebe. “Chinese Food Delivery Giant Ele.Me Apologises for Setting Drivers ‘Impossible’ Targets for Lunar New Year Bonuses.” *South China Morning Post*, February 20, 2021. https://www.scmp.com/news/china/article/3122485/chinese-food-delivery-giant-eleme-apologises-setting-drivers-impossible?module=hard_link&pgtype=article.
- Zhang Sai 张赛. “Yiwei Wuhan waimaiyuan de zishu 一位武汉外卖员的自述 [The self-narration of an Wuhan delivery worker].” *Weixin Official Accounts Platform* (blog), January 29, 2020. http://mp.weixin.qq.com/s/?__biz=MzA3MzYzNjMyMA==&mid=2650193671&idx=1&sn

=aa17c2c03190c9735ccc75999ad00952&chksm=870e1f88b079969e358b12424b0c6abe1c9f8b70dba4639400bb202925a1ad8a6f33e2c2c5e7#rd.

Zhang, Wanqing. “Fancy Beijing Mall Denies Discriminating Against Delivery Drivers.” *Sixth Tone*, July 13, 2020.
<https://www.sixthtone.com/news/1005921/https%3A%2F%2Fwww.sixthtone.com%2Fnews%2F1005921%2Ffancy-beijing-mall-denies-discriminating-against-delivery-drivers>.

Zhao Jiajia 赵佳佳. “Jingcheng qi xia chuan 京城骑侠传 [The Capital’s Heroic Driver Spreads].” *Nan fengchuan* 南风窗 [*South Reviews*], November 30, 2020.
<http://posts.careerengine.us/p/5fc4ba00ecfd7a4d9f5930fd>.

Wangyi xinwen 网易新闻 [NetEase News]. “Zhejiang: Eleme Qishou Zhaoji Cizhi, Bei Kou Yiian Hou Qingxu Bengkui, Liantong Ziji San Dao 浙江:饿了么骑手着急辞职, 被扣一千后情绪崩溃, 连捅自己三刀 [Zhejiang: Ele.Me Driver, Anxious to Resign, Emotionally Breaks down, Stabs Himself Three Times after Pay Docked 1,000 Yuan].” August 26, 2022.
<https://www.163.com/dy/article/HFNAATV0553EMFJ.html>.

“Zhen Qishi — Xiayi Pojie Pingtai Taolu 真骑士—侠义破解平台套路 [A Real Delivery Knight — a Chivalrous Explanation of Platform’s Methods].” 打工谈 [Work Chat]. Accessed October 2, 2022. <https://open.spotify.com/episode/0XBqU9wyLxDnsVW9zIDfgf>.

“Zhongyang Guangbo Dianshi Zongtai 2022 Nian Chunjie Lianhuan Wanhui 中央广播电视总台2022年春节联欢晚会 [China Central Television 2022 Spring Festival Gala].” Zhongyang guangbo dianshi zongtai 中央广播电视总台 [China Media Group], February 2, 2022.
<https://www.youtube.com/watch?v=q9TbIpOOXxY>.

Zhou, Irene. “Digital Labour Platforms and Labour Protection in China.” ILO Working Paper 11. Geneva: International Labour Organization, October 13, 2020.
https://www.ilo.org/global/publications/working-papers/WCMS_757923/lang--en/index.ht