Involution Nation: Passion, Place and Precarity in the Chinese Mobile Tech Industry

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Abstract

This dissertation project considers how Chinese tech workers navigate within and against the various constraints imposed by government policies, corporate institutions, and platform infrastructures in governing the mobile software industry. The current state of Sino-American relations culminating in what many pundits consider as a "tech cold war" has highlighted not just increasing divisions between divergent tech policies but also the contending interpretations of what constitutes privacy, access, and openness in the digital age. Likewise, the onset of the global pandemic coupled with growing regulatory crackdowns have exacerbate preexisting inequalities, created downturns in the tech industry, and heightened extreme forms of competition that gave rise to the involution turn in China. I am therefore especially interested in how tech workers make sense of their everyday experiences in the light of increasing precarity and austerity and how such relational processes shape their livelihoods and subjectivities in the formation of a possible common tech identity. Given the growing influence of Chinese tech on the world stage, understanding the plight of Chinese tech workers can offer important lessons in the future of work and labor activism in the global economy.

Based on a 13-month ethnography where I worked as a full-time employee in the Chinese mobile tech industry during the COVID-19 pandemic, I explicate many of the material and affective conditions rooted in the everyday that help to shape workers' understanding of their own roles within the industry and society writ large. I argue that tech workers and IT professionals occupy a contradictory position by which they are often the enablers of the same oppressive means of digital control that dictates their own working lives. In other words, the compounding issues of policy, platforms and precarity can both enable and impede the

mechanism of control where tech workers paradoxically possess the necessary technical skills to exploit and subvert the system. In doing so, my project offers an intimate perspective of tech workers' personal and professional lives as they grapple with the issues of alienation and aspiration that are often at odds with state and corporate interests.

Notes on Naming Conventions

The Chinese surnames used in this dissertation are based on randomly assigned common surnames such as Li, Hu, Zhang, Wang, etc. to maintain anonymity. Granted, almost all my interlocutors do actually have English nicknames, since most work in companies catered to the global markets and having Anglicized names is the norm for conducting cross-border exchanges. However, I opted to not assign my interlocutors with anonymous English names out of both cultural sensitivity and the risk of overly Orientalizing my subjects. Additionally, since Chinese surnames do not connote gender, I used honorifics such as Ms. and Mr. to describe each of my informants. While such binaries can be problematic, all my informants are self-identified as male or female.

Introduction

Deciphering Digital China

Figure 1.1: Signed image of the first lines of the Aliyun Health Code along with the 13 programmers who wrote it, now featured in China's National Museum.[1]

On August 31st, 2020, the first few lines of code from the Aliyun Health Code were added as part of an exhibit commemorating the COVID-19 pandemic at the National Museum of

[1] Sohu, "shishang shoulie! Ali chengxuyuan xiede zheyihang daima, bei guojia bowuguan shouchang le [First time in history! Alibaba programmer's code have been placed in the national museum]," *Sohu*, September 13, 2020, accessed June 23, 2022, https://www.sohu.com/a/418084127_752099.

China. The Aliyun Health Code, a product of the Chinese tech company Alibaba, was first implemented in the city of Hangzhou and later became the blueprint for the national health code systems used during the pandemic across the country. Notably, this is the first time a piece of programming code was added to the flagship museum in the country alongside some of the most treasured relics spanning thousands of years of Chinese history. The exhibit is made up of a screenshot from a source-code editor set to dark mode showing the first lines of code for the health code system, and below are profile pictures and signatures of the 13 programmers who first worked on the initial version of the health code (Figure 1.1). The juxtaposition of code with images of programmers underscores the importance of not just the impact of computational algorithms on social governance but also the human labor associated with producing and maintaining technological systems of control. On a broader level, the elevation of programmers into the hallowed halls of national memory underscores the importance of tech labor in contributing to a version of tech governance promoted by the Chinese state. This exhibit also brought much needed visibility to a sector of tech labor that had for the most part remained invisible, undervalued and underappreciated. Indeed, the multitudes of technological devices and services, while often presented via opaque digital interfaces, are constantly created, operated and maintained by the countless men and women in the Chinese tech industry.

This dissertation project therefore centers on the everyday lives of people working within the Chinese mobile tech industry. Through an ethnographic study of tech workers and an autoenthographic account of personal work experiences in the tech industry, I dissect the often-opaque software production process through workers' everyday lived experiences. Specifically, I look at how tech laborers work within and against the various constraints imposed by government policies, corporate institutions, societal pressures and platform infrastructures in

governing global mobile software production. I approached this project by working in the mobile tech industry, where I elected to understand the plight of Chinese tech workers by becoming a tech worker myself. Here I am able to gain first-hand insights into the various tensions within a typical tech company and the way tech workers navigate both the politics of corporate institutions but also in their everyday lives. This industry insider perspective in turn provides a leveled vantage point from which to observe and participate in tech production often hidden behind closed board meetings and corporate walls. Likewise, it allowed me to look beyond the often-monolithic depiction of the Chinese tech industry and instead dissect the quotidian practices and material struggles of workers operating within the wider circuits of global flow of digital commodities.

The consecration of the health code in the National Museum also points to the rapid adoption of disruptive technologies as part of China's digital governance that is increasingly seen as domineering and oppressive. Emerging technologies such as facial recognition, artificial intelligence and other digital apps have been deployed to monitor, control and surveil the population, particularly ethnic minorities such as the Uyghurs in the country.[2] Even the aforementioned national health code has evolved from a contact tracing tool into a system of repression used to track, contain and limit the mobility of people. Indeed, it was even reported in 2022 that there has been deliberate use of the health code to shut down protests in Henan Province by declaring protestors public health threats.[3] The development of tech and cultivation of tech workers is then inevitably tied to the instrumentalization of state power and its vision of

[2] Darren Byler, *Terror Capitalism: Uyghur Dispossession and Masculinity in a Chinese City* (Durham: Duke University Press, 2021).
[3] Phoebe Zhang, Kate Zhang and Nick Yang, "Fears of data abuse as Chinese health code turns red for financial scandal protesters," *South China Morning Post*, June 14, 2022, accessed June 23, 2022, https://www.scmp.com/news/china/science/article/3181635/chinese-health-code-turns-red-financial-victims-about-protestintelligence.

sociopolitical order. Tech workers therefore embody a paradoxical subjectivity by which they help to contribute to the very same oppressive technologies dictating people's everyday lives, that themselves are also subjected to. This in turn makes studying tech workers all the more important because they possess the inside knowledge and expertise to potentially resist and subvert these apparatuses of control, even as they participate in perpetuating them.

This is all the more critical in the context of the global tech landscape with China being accused of exporting its forms of high-tech surveillance and wanton data collection overseas.[4] Controversies such as Huawei's cybersecurity threat and issues over TikTok's data privacy have led to growing regulatory scrutiny from countries around the world.[5] Apart from extrinsic pressures, China's domestic tech landscape also witnessed significant slowdowns due to unpredictable regulatory crackdowns that exacerbate preexisting inequalities leading to further downturns in the tech industry. This in turn creates the conditions for what many in China refer to as the involution turn in society, where individuals are forced to compete for few resources in a growingly futile quest for upward attainment. Yet, accounts of China's technological rise rarely account for the individual experiences of common workers struggling to make it in the industry. My dissertation therefore comes at a critical time in global tech labor that addresses these key questions:

1. How do Chinese tech workers negotiate intersecting oppression of platforms, institutions and state policy in dictating their everyday working lives?

2. How do workers make sense of their conflicting dreams and passions in light of the increasing alienation in times of involution and extreme competition?

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[4] Paul Mozur, Jonah M. Kessel and Melissa Chan, "Made in China, Exported to the World: The Surveillance State," *The New York Times*, April 24, 2019, accessed June 23, 2022, https://www.nytimes.com/2019/04/24/technology/ecuador-surveillance-cameras-police-government.html.
[5] Emily Baker-White, "Leaked Audio From 80 Internal TikTok Meetings Shows That US User Data Has Been Repeatedly Accessed From China," *Buzzfeed News*, June 17, 2022, accessed June 23, 2022, https://www.buzzfeednews.com/article/emilybakerwhite/tiktok-tapes-us-user-data-china-bytedance-access.

3. What forms of activism and solidarity are possible in the light of persistent state, corporate and digital control?

In answering these questions, I take a bifocal perspective of the Chinese tech industry by incorporating both top-down analysis of state policy and an immersive look at the day-to-day operations on the ground. I want to explore many of the material and affective conditions rooted in the everyday that help to shape workers' understanding of their own roles within the industry and society writ large. As such, this dissertation argues that tech work in China both produces and is produced by the intersecting oppressions of policy and platforms. In other words, the contradictory priorities between the state and corporate institutions create instability and uncertainty in the tech industry that not only oppress workers but also create vulnerabilities in the system for potential resistance. In doing so, my project offers an intimate perspective of tech worker subjectivity as they grapple with the issues of alienation and aspiration that are often at odds with state and corporate interests. Indeed, the crisis caused by the global pandemic has exposed many of the latent cracks in the very foundations of the global digital economy. It imposed common predicaments of precarity and austerity around the world, which can open up possibilities for collective labor solidarity in reimagining the future of tech work.

Unboxing the Chinese Tech Industry

My interest in the Chinese tech industry stems from my previous background working as a broadcast journalist in China. I had covered my own share of breaking tech news that helped to introduce aspects of China's development to Western audiences. Yet, mainstream coverage surrounding the Chinese high-tech industry presents a contradictory mix of entrepreneurial

innovation and governmental intervention. On one hand, China is often presented as a rising tech superpower that is spearheading developments in cloud computing, AI, blockchain and other disruptive technologies. China is also seen as a nation of superlatives and hyperboles, with headlines such as "China opens world's longest high-speed rail route"[6], or "How China built the world's fastest computer without US chips".[7] Alternatively, China's tech sector has long been framed as being heavily subsidized, regulated and controlled by the state. Such dyadic views betray a narrative that is inevitably confined within the dichotomies of top-down/bottom-up paradigm that offer little analytical insights into the concrete realities of the everyday. Likewise, news related to China's tech development is often mired in misinformation and sensationalism, with issues such as China's social credit system and high-tech surveillance increasingly framed in the realm of dystopian science fiction such as *Black Mirror* or *Minority Report* (Figure 1.2).[8]

[6] BBC News, "China opens world's longest high-speed rail route," *BBC*, December 26, 2012, accessed June 23, 2022, https://www.bbc.com/news/world-asia-china-20842836.
[7] Max Lewontin, "How China built world's fastest computer without US chips," *Christian Science Monitor*, June 20, 2016, accessed June 23, 2022, https://www.csmonitor.com/Technology/2016/0620/How-China-built-world-s-fastest-computer-without-US-chips.
[8] Bernard Marr, "Chinese Social Credit Score: Utopian Big Data Bliss Or Black Mirror On Steroids?," *Forbes*, Janurary 21, 2019, accessed June 23, 2022, https://www.forbes.com/sites/bernardmarr/2019/01/21/chinese-social-credit-score-utopian-big-data-bliss-or-black-mirror-on-steroids/?sh=5f96b40c48b8; Clay Whittaker, "China Wants to Make 'Minority Report' a Reality," *The Daily Beas*t, April 13, 2017, accessed June 23, 2022, https://www.thedailybeast.com/china-wants-to-make-minority-report-a-reality.

Figure 1.2: A news story from The Daily Beast titled "China Wants to Make 'Minority Report' a Reality" with the label "Dystopia" in red.

Many of these media distortions has to do with aspects of China that are increasingly difficult to access. Having worked as a journalist I know full well the challenges of reporting in the country. The Chinese regime under Xi Jinping has also expanded ideological control in promoting nationalistic rhetoric against the intrusion of Western ideals. The sustained attacks on civil society, press freedom, and most recently English language education have led many to view China as increasingly "turning away from the world".[9] The self-isolation imposed by the Chinese government as a result of COVID-19 has also led to increasing mistrust and

[9] Vivian Wang, "How China Under Xi Jinping Is Turning Away From the World," *The New York Times*, February 23, 2022, accessed June 23, 2022, https://www.nytimes.com/2022/02/23/world/asia/china-xi-jinping-world.html.

misunderstanding with global businesses.[10] Numerous Western companies such as Amazon, Yahoo and Airbnb have left China in recent years due to regulatory pressures and competition.[11] Likewise, for foreign researchers studying China access to the country is even more challenging in the light of the pandemic and flight restrictions. For the outside observer, China is increasingly seen as a black box owing to its difficulties of access, impenetrable politics and opaque institutions.

Yet, the conceptual framing of China as a black box is not entirely new, as the West had long relied on orientalist imaginations of China as signifiers for the unknowable, especially in the context of technology. Meredith Broussard in her book *Artificial Unintelligence* for instance, gives the anecdote of John Searle's famous "Chinese Room" problem:

> ...imagining a monolingual English speaker who is locked in a room with a rule book for manipulating Chinese symbols according to computer rules. In principle he can pass the Turing test for understanding Chinese, because he can produce correct Chinese symbols in response to Chinese questions. But he does not understand a word of Chinese, because he does not know what any of the symbols mean. But if he does not understand Chinese solely by virtue of running the computer program for "understanding" Chinese, then neither does any other digital computer because no computer just by running the program has anything the man does not have.[12]

This hypothetical anecdote highlights how the very notions of Chineseness have become a proxy for the ineffable and inscrutable, and as a perennial platitude within Western AI and tech development. China is always presented as an indecipherable black box and a technological conundrum. More sinister however, is Searle's complete disregard for Chinese subjectivities by

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[10] Orange Wang, "European nations tell China 'self-isolation' is stoking 'mistrust' in plea for easing of Covid-19 curbs," *South China Morning Post*, accessed June 23, 2022, https://www.scmp.com/economy/china-economy/article/3182400/european-nations-tell-china-self-isolation-stoking-mistrust.
[11] Rebbeca Ren, "Farewell, Airbnb and Kindle, the Chinese market is as fierce as a colosseum," *PingWest*, June 9, 2022, accessed June 23, 2022, https://en.pingwest.com/a/10323.
[12] Meredith Broussard, *Artificial unintelligence: How computers misunderstand the world* (Cambridge: MIT Press, 2018), 38.

which meaning and individual agency are reduced to mere symbols. Such imaginary boundaries between the knowable and the unknowable are constructed in order to further legitimize the cultural and technological dominance of the West.

Such contentions enforce the techno-orientalist conception of Chinese tech development as something to be awed but also feared. David Roh, Betsy Huang and Greta Niu defines techno-orientalism as:

> the phenomenon of imagining Asia and Asians in hypo-or hyper-technological terms in cultural productions and political discourse…Techno-Orientalist discourse constructs Asians as the cogs of hyperproduction and maintains a prevailing sense of the inhumanity of Asian labor—the very antithesis of Western liberal humanism.[13]

An early techno-orientalist example was the 18th century hoax of the Mechanical Turk that is presented as an orientalist automaton when it was in fact operated by an actual person. Such tropes remain problematic in the context in the current global tech economy where much of the labor of production is outsourced to Asia. Mary Gray and Siddharth Suri in their book *Ghost Work* for instance, points to Amazon's Mechanical Turk (MTurk) whereby workers are made to complete a set of routine tasks while being devoid of any identifiers such as gender, race and basic personal identity. This creates a "veneer of automation" when all the tasks are in fact done by hand.[14] Many of the workers who signed up for MTurk are from India who often perform the menial tasks of data labeling to train machine learning algorithms for various on-demand platforms, and much of their work remains hidden and unacknowledged. Asian labor thus is always framed by the West as an abstracted form of labor that is tied to the mechanization of

[13] David S. Roh, Betsy Huang, and Greta A. Niu. *Techno-orientalism: Imagining Asia in speculative fiction, history, and media* (New Brunswick: Rutgers University Press, 2015), 34.
[14] Mary L. Gray and Siddharth Suri. *Ghost work: How to stop Silicon Valley from building a new global underclass*. (Boston: Houghton Mifflin Harcourt, 2019).

technology itself. At the same time, Asian labor is largely a specter, rendered invisible by the oppressive logics of global capital and offshoring. Yet, it is precisely labor that can prove to be a key entry point to dismantle the misconceptions and misrepresentations of technological development in China. By resuscitating agency back into the eyes of everyday workers, we can then strive to dismantle many of the monolithic conceptions of the tech industry in China.

The Involution Generation

My dissertation project took place between 2017 and 2022 spanning several major developments in the Chinese tech industry. Shortly after my initial foray into the tech industry working in Shanghai, China's venture capital investment peaked to over 100 billion in 2018, reaching almost parity with the US in cash flowing into the tech sector after nearly a decade of growth.[15] But just a year later in 2019, there was an overall decline of VC investment owing to increasing Chinese regulatory crackdowns and the worsening relations between US and China culminating in what many pundits consider as the Sino-US tech trade war.[16] This is followed by the dual onslaught of the COVID-19 pandemic and regulatory crackdown on China tech companies in 2020. The back-to-back internal and external crises created the conditions for a tumultuous period in the industry that witnessed significant downsizing, layoffs and precarity. The boom and subsequent bust of the tech industry in China came to define the course of my fieldwork and the general sentiment from my informants in the industry. My initial impressions

[15] Rebecca Fannin, "China Rises To 38% of Global Venture Spending In 2018," *Forbes*, January 14, 2019, accessed June 23, 2022, https://www.forbes.com/sites/rebeccafannin/2019/01/14/china-rises-to-38-of-global-venture-spending-in-2018-nears-us-levels/?sh=7e6647ab5a5c.

[16] The Sino-US trade war covers a broad range of industries and commodities, but this dissertation mainly focuses on the tariffs and bans imposed on Chinese tech companies. See Lori Ioannou, "A brewing U.S.-China tech cold war rattles the semiconductor industry", *CNBC*, September 18, 2020, accessed June 23, 2022, https://www.cnbc.com/2020/09/18/a-brewing-us-china-tech-cold-war-rattles-the-semiconductor-industry.html

of the Chinese tech industry in 2017 was largely defined by dynamism, optimism and excitement. It took place during an unprecedented moment of boom and expansion. This was quickly replaced by cynicism, despair and what is commonly referred to as involution or *neijuan* in Chinese.[17]

Figure 1.3: Tsinghua students doing homework on a laptop while riding a bike which gave rise to the meme "Tsinghua involuted king".[18]

The term involution was initially popularized in late 2020 by a viral image from Tsinghua University that shows students reading or studying using their laptops while riding their bikes on campus. The subsequent meme "Tsinghua involuted king" (清华卷王) took the internet by storm

[17] Yi-Ling Liu, "China's 'involuted' generation," *The New Yorker*, May 14, 2021, accessed June 23, 2022, https://www.newyorker.com/culture/cultural-comment/chinas-involuted-generation.
[18] Sohu, "huole qinghua chushengtu [Going viral! Amazing pictures out of Tsinghua]," *Sohu*, September 30, 2020, accessed June 23, 2022, https://www.sohu.com/a/422013768_120492816.

(Figure 1.3). Chinese Netizens expressed shock at such fighting spirit with many questioning if students from the most elite institution in the country works this hard, then what leaves them? Or in other words, for many young Chinese from modest background it would be hopeless in competing with Tsinghua students who are already at the top of their league. This term was soon adopted by people, especially the youth in China, to express frustrations at the extreme competition in their working everyday lives. Unlike many other Chinese buzzwords which are often based on informal discourse and pithy sayings, the popularity of involution is interesting because of its origins as an academic concept. The term involution was originally explicated in the book *Agricultural Involution* by Clifford Geertz to describe how the colonial Dutch plantation system in Indonesia imposed a system of monoculture that does not actually lead to economic growth but instead, the further the intensification of labor, which in turn impoverishes the local population.[19] Despite the esoteric origins of the concept, the term involution has since gained popularity in China to refer to the increasingly competitive landscape in society where despite hard work, individuals are rarely rewarded and instead, faced with progressive burnouts and exhaustion. Involution resonates with Lauren Berlant's notion of "cruel optimism" whereby the fantasies of a good life become increasingly unattainable in the neoliberal economic order marked by instability and insecurity. This in turn create an "impasse of the present" by which people are immobilized by both present realities and precarious futures.[20]

Anthropologist Biao Xiang aptly refers to involution as an "endless cycle of self-flagellation" by which people are trapped between aspirations for better living and the increasing

[19] Geertz himself attributes the term to anthropologist Alexander Goldenweiser who uses it to describe cultural patterns that never stabilize and the process by which its "inventive originality is exhausted". See Clifford Geertz, *Agricultural involution: The processes of ecological change in Indonesia*. (Oakland: University of California Press, 1963), 81.
[20] Lauren Berlant, Cruel Optimism (Durham, NC: Duke University Press, 2011), 16.

alienation in their working lives. Central to his claims is that involution is often not the result of market competition, but rather conflicting state policy and the uneven allocation of economic and social resources. Much like Geertz's articulation of plantation monoculture, China's massive investment in education, technology and urban development have created a singular market where everyone is scrambling for the same resources, leading to extreme competition toward singular goals of upward mobility. As Xiang succinctly puts it:

> Everyone in China has the same goals: Earn more money, buy a home of more than 100 square meters, own a car, start a family, and so on. This route is very well marked, and everyone is highly integrated. People are all fighting for the same things within this market.[21]

Involution in this regard is not just a simple critique of capitalism but a particular reaction against the Chinese development model of this contradictory melding of market logic with socialist policy. The term involution also shares discursive parallels with the similar meme: *jiucai*, or garlic chives. Laikwan Pang described the label garlic chives as referring to everyday people "are constantly lured to participate in all kinds of economic activities, but whose investments are destined to be consumed by the establishment."[22] As a rapidly growing monoculture plant, the term garlic chives is a metaphor for a particular biopolitical subject predisposed to chasing fool's gold. Garlic chives are therefore a parody of people who voluntarily fall victim to fraudulent practices despite fully knowing the risks of taking on such investments. Yet the proclivity towards risk is also something encouraged by state policy as part of what Pang considers as the promotion of mass entrepreneurship and financial inclusion that

[21] For full interview with Biao Xiang see Qianni Wang and Shifan Ge, "How One Obscure Word Captures Urban China's Unhappiness," *Sixtone*, November 4, 2020, accessed June 23, 2022, https://www.sixthtone.com/news/1006391/how-one-obscure-word-captures-urban-chinas-unhappiness.
[22] Laikwan, Pang, "China's Post-Socialist Governmentality and the Garlic Chives Meme: Economic Sovereignty and Biopolitical Subjects," *Theory, Culture & Society* 39, no. 1 (2022): 81-100.

also resulted in numerous banking scandals and P2P fintech scams in recent years.[23] In either case, involution and *jiucai* reflect a form of entrapment within a system by which people ultimately exhaust themselves in their dreams for material attainments and upward mobility.

The origins of involution from a Tsinghua University meme also alludes to the role education plays in fostering a hypercompetitive society. Notably, the institution of *gaokao* or the National College Entrance Examination that determines if students can get into universities.[24] For many, obtaining a higher education degree is seen as the only means to social advancement and upward mobility, especially for many rural denizens in China. The notoriously difficult *gaokao* is thus often seen as the golden ticket to one's future and students will prepare for years, often with private tutors or in cram schools. 2022 for instance was considered a record year for *gaokao* takers with 1.15 million people vying for university acceptances. Because the centers of higher learning in China are concentrated in major urban cities, it not only creates uneven allocation of educational resources but also inequalities in education access due to preferential policies given to urban test takers.[25] As I will later detail in Chapter 2, schooling is also an important site for the cultivation of *suzhi* or personal qualities deemed by the state as necessary to become productive citizens. In other words, education becomes a barometer by which people are judged that also demarcates certain access to future jobs, housing and public services in China. Involution conforms well to the education sector because despite the massive investment into universities over the past decades, it has not necessarily led to better job prospects. China

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[23] Joe Zhang, "Collapse of China's disgraced P2P sector offers important lessons," *Nikkei Asia*, February 10, 2020, accessed June 23, 2022, https://asia.nikkei.com/Opinion/Collapse-of-China-s-disgraced-P2P-sector-offers-important-lessons.

[24] Gloria Xiao Yu Liu, and Charles C. Helwig. "Autonomy, social inequality, and support in Chinese urban and rural adolescents' reasoning about the Chinese college entrance examination (Gaokao)," *Journal of Adolescent Research* (2020): 0743558420914082.

[25] Chris Hamnett, Shen Hua, and Liang Bingjie. "The reproduction of regional inequality through university access: The Gaokao in China," *Area Development and Policy* 4, no. 3 (2019): 252-270.

was reported to have produced almost 50,000 STEM PhDs in 2019 alone, more than the UK and US combined.[26] But record numbers of graduates have made the job market especially tough, which has led many to seek graduate school, which in turn further contribute to the cycle of competition within educational institutions.[27]

The popularity of involution in 2020 also coincided with the COVID-19 pandemic and the subsequent lockdowns across China. The associated immobilities imposed on people through the lockdown also created similar feelings of being trapped, not just in their respective homes but also via the increasing forms of social control via digital technologies such as the health Code. The Chinese rendition of involution or *neijuan,* also have the added meaning of "internal curling", a form of somatic stasis and the growing withdrawal from sociality owing to external pressures. During the Shanghai lockdown in 2022, the numerous conflicting quarantine policies led to endless catch-22s by which people became stuck in layers of regulation and bureaucratic red tape. Anecdotes of people being denied entry to hospitals without vaccinations only to find out they need to go into the hospital for vaccination served to demonstrate many of the absurdities of China's sociopolitical governance. The Chinese state has also reacted negatively to the use of involution in popular discourse. State propaganda outlets such as *Guangming Daily* for example, called on people to abandon involution and embrace a "fighting spirit".[28] Indeed, the adoption of involution as a popular zeitgeist also points to veiled critiques against state policy and declining economic fortunes for many. Here the involution turn directly threatens the ruling

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[26] Michael T. Nietzel, "U.S. Universities Fall Further Behind China In Production Of STEM PhDs," *Forbes*, August 7, 2021, accessed June 23, 2022, https://www.forbes.com/sites/michaeltnietzel/2021/08/07/us-universities-fall-behind-china-in-production-of-stem-phds/?sh=13f47eef4606.

[27] The Economist, "Many young Chinese choose graduate school over a grim job market," *The Economist*, May 26, 2022, accessed June 23, 2022, https://www.economist.com/china/2022/05/26/many-young-chinese-choose-graduate-school-over-a-grim-job-market

[28] Xiaofeng Yan, "shishihou diudiao neijuan zhegecile [Time to move on from the term involution]," *Guangming Daily*, January 16, 2021, accessed June 23, 2022, https://epaper.gmw.cn/wzb/html/2021-01/16/nw.D110000wzb_20210116_1-03.htm.

legitimacy of the Chinese state predicated on the sustained economic growth in the decades since reforms and market liberalization. It goes up against the much-lauded cult of the workers and the Party-state's valorization of the socialist spirit in the nation building process.[29] Involution represents a dead end, a temporal foreclosure that runs counter to the revolutionary teleology of the Chinese Communist Party.

On a broader level, the pandemic has also exposed existing issues of inequality within Chinese society that are further exacerbated from the economic downturn. China's rigid zero Covid policy along with the aforementioned tech crackdowns have upended the industry and led to mass layoffs, which only exacerbated the turn toward involution. Relevant to this dissertation, the term involution is perhaps used most widely to describe the brutal work conditions in the tech industry. The extreme volatility in China's tech economy often compels workers to work above and beyond their means in hopes of promotions which creates a culture of high turnover rates and lack of job security. This in turn gives ways to toxic work cultures such as the 996 work culture (a form of overtime working from 9am to 9pm, 6 days a week) and other egregious labor practices (see Chapter 5). At the same time, involution has also given rise to various recalcitrant tactics such as *touching fish*, *wading water* and *lying flat* that workers use to subvert the systems of power dominating their lives. Each of these concepts will be explored in detail in the later chapters. The notion of involution, therefore, looms large in the background of this dissertation. It serves as a unifying theme to bring together disparate issues such as state policy, urban citizenship, and workplace resistance in shaping the lives of workers within the tech industry and society as a whole.

[29] Rachel Funari and Bernard Mees, "Socialist emulation in China: worker heroes yesterday and today," *Labor History* 54, no. 3 (2013): 240-255.

Locating the Chinese Tech Industry

This dissertation is indebted to existing scholarship on the Chinese tech industry. Jack Qiu's book *Working-class network society* provides a great overview of increasing disjunction between those with access to information technology versus those who don't. Here Information and Communications Technology (ICT) in the form of cell phones, internet cafes and social media have allowed for disparate groups such as migrant workers, low wage laborers, youths, seniors and other disenfranchised people to form collective solidarities in the forms of the networked class.[30] The injection of class into this debate helps to highlight how class consciousness may form in radically different ways in China through the spread of ICT adoption and how the have-nots can mobilize and negotiate their everyday realities in ways that can complicate the binary perspectives in dealing with the digital divide. Lin Zhang's work on the platformization of Alibaba also provides an important context for understanding the rural-urban divide within the digital economy. I am especially drawn to her contentions of how platforms can mediate certain forms of subjectivities. Even so China's eCommerce boom has been transformational for many rural denizens, it also reinforces existing inequalities through platformized competitions that valorize the entrepreneurial subject over that of traditional social relations.[31] Finally, Silvia Lindtner's *Prototype Nation* offers a compelling look at Shenzhen's burgeoning tech scene and the maker movement. Here Shenzhen reflects a liminal space by which open-source, collaborative and participatory designers work to not just prototype new

[30] Jack Linchuan Qiu, *Working-class network society: Communication technology and the information have-less in urban China* (Cambridge: MIT press, 2009).
[31] Lin Zhang, "Platformizing family production: The contradictions of rural digital labor in China," *The Economic and Labour Relations Review* 32, no. 3 (2021): 341-359.

hardware but also new subjectivities.[32] This in turn presents possible alternative conceptions of Chinese tech development outside of the confines of Western defined notions of innovation. I hope to augment these existing studies with an immersive ethnography of working as a tech worker to make broader claims about the tech industry in China as a whole.

As with any ethnographic research, there is also a significant geographical dimension to studying the Chinese tech industry. Big tech often functions as tent pole industries for many major Chinese cities such as Hangzhou (Alibaba), Shenzhen (Tencent), Beijing (Baidu), etc. This has also led to many media pundits to label cities such as Shenzhen and Beijing as the Silicon Valley of China.[33] However, I found such classifications overly simplistic, and they create a false equivalence between US and Chinese tech industries. Instead, I advance that there are diverse hubs of innovation across China, each with its own unique developmental contexts and trajectories. Beijing, for example, possesses the legacy of being China's political center. The tech scene there is inevitably tied to state policy[34] and it is home to notable companies like Baidu and ByteDance. Whereas Shanghai with its status as a cosmopolitan center also has the benefit of a large amount of foreign capital and its status as a special economic zone. My field site Guangzhou on the other hand, is located within close proximity to other tech centers such as Shenzhen, Zhuhai and Hong Kong. My survey of Guangzhou and Shanghai, while not encompassing the totality of the overall tech industry in China, can provide snapshots of how different tech hubs might differ given divergent policies, interests and cultures.

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[32] Silvia M. Lindtner, *Prototype nation: China and the contested promise of innovation*. Vol. 30. (Princeton: Princeton University Press, 2020).

[33] See Marcelo Duhalde, Dennis Wong, Darren Long, Han Huang, "How Shenzhen became China's Silicon Valley," South China Morning Post, September 3, 2020, accessed June 23, 2022, https://multimedia.scmp.com/infographics/news/china/article/3100043/shenzhen-special-economic-zone/index.html; Xinhua, "China's "Silicon Valley" Zhongguancun posts 34 percent growth in revenue," Xinhua, July 2, 2021, accessed June 23, 2022, www.xinhuanet.com/english/2021-07/02/c_1310040130.htm.

[34] Yu Zhou, *The inside story of China's high-tech industry: Making Silicon Valley in Beijing* (Lanham: Rowman & Littlefield, 2008).

Before I dive into the specifics of my field site and methods for this dissertation, I want to first put in context the Chinese tech industry in relation to its roles in the global digital economy. There are significant similarities and differences between how the tech industry functions in China versus the West, not just in terms of its institutional policies but also the very discursive framing of how "big tech" is understood in the popular imagination. China's tech industry, much like the US, is often equated to companies with massive market capital that control entire digital sectors of the economy. Big tech companies are also highly centralized and closed off within "walled gardens" that forces users to stay within their respective digital ecosystems (see Chapter 1), which in turn perpetuates the extraction of user data that is then resold to advertisers. This shared hallmark of big tech companies is connected not only due to its monopolistic practices but also the scale by which it can extract, reproduce and sell commodifiable digital services. Like the acronym FAANG (Facebook, Apple, Amazon, Netflix, and Google), big tech in China is commonly associated with the acronym BAT, referring to the companies Baidu, Alibaba and Tencent, some of the most enduring big players in the Chinese tech scene. Like many of the critiques leveled against FAANG, these companies also do not represent the entirety of the industry and in recent years the BAT moniker has lost much of its meaning as emerging tech unicorns such as ByteDance, DiDi and Pingduoduo have all overtaken Baidu by market capitalization in recent years.

There is one significant point of difference between the US and China related to the discursive construction of "big tech" and its meaning in the public imagination. In China, big tech is colloquially known as *dachang* (大厂), or big factory. This term may seem unrefined and unsuited for describing high-tech industries, but it refers to the longstanding association of industrialized manufacturing in the country that is frequently labeled as "the factory of the

world".[35] *Dachang* is often used as a term to describe the big tech companies as opposed to small startups but has largely evolved into a catchall term for the wider tech industry. Indeed, original equipment manufacturers (OEMs) such as Foxconn continue to operate massive factory towns employing tens of thousands of people working around the clock to make devices such as iPhones and MacBooks. Likewise, contrary to many small startups, many Chinese big tech companies such as Tencent and Huawei operate with a large workforce with massive sprawling tech parks and corporate headquarters across multiple cities (see Chapters 1 and 2). On one hand the prospect of working at a *dachang* is especially attractive owing to its lucrative benefits and amenities, a sentiment shared by many of my interlocutors. In recent years however, the term *dachang* has also taken on more negative connotations associated with the rampant exploitation, anti-competitive and abusive work cultures of tech companies as a whole.

More importantly, the popular use of *dachang* as a catchall for both industrialized manufacturers and digital technology companies helps to blur the boundary of hardware manufacturing and software production. Such perspectives serve to broaden the scope of the tech industry beyond just the so-called "knowledge work" but also the physical labor on assembly lines and the plight of platform-mediated gig workers. Rather than categorizing big tech as convenient acronyms, this dissertation looks at the diversity of tech production across small and medium sized companies. This also helps to contextualize the "bigness" in big tech as not merely its size or scale but also its variegated organizational structures and labor practices. My project seeks to decenter the fixity on big tech and look to the various small startups within China's greater tech industry. Looking at startups as opposed to established players in tech, also provides me with the insights into trials and tribulations of a budding company. This in turn allows me to

[35] Bijun Wang and Xiang Li. "From world factory to world investor: the new way of China integrating into the world," *China Economic Journal* 10, no. 2 (2017): 175-193.

look beyond the “walled gardens” of the tech elite and uncover less privileged companies beset by added insecurity and volatility.

Ethnography is always bound by time and space, and it is contingent on encounters with different people in different locales. Also, ethnography is also often intended for small-scale interrogations, so my project faced the challenges of making broad claims about the Chinese tech industry. I was also limited in the number of places I could travel to given temporal and material constraints of fieldwork during COVID-19, but I believe an immersive fieldwork within corporate institutions would provide the depth of inquiry into the working logic of the industry. My ethnographic approach across multiple different tech companies allows me to trace the flow of personnel across different locales. Focusing on the lives of everyday workers provides an ideal vantage point to analyze the intersecting anxieties, risks, and societal pressures that workers have in common. One thing to note is how Chinese tech companies are also quite promiscuous in terms of hiring practices, meaning workers from competitor companies are frequently poached. The high turnover rate at Chinese tech companies also meant that workers frequently jump ship from one company to another. This in turn exposed me to colleagues who had experiences working in different companies such as NetEase and Tencent, which in turn allowed me to broaden my pool of potential interlocutors from different backgrounds and areas in China. The following are the profiles of the two companies where I conducted my fieldwork that I will name for the sake of anonymity, AppMax and LudoCo, the former in the city of Shanghai and the latter in Guangzhou.

Company 1: AppMax

AppMax is a venture capital funded mobile app company founded in 2014 based in Shanghai. Located close to Zhangjiang High-Tech Park in Pudong District, the company employs about 200 workers specializing in developing and publishing productivity apps

for the Western market. I was among the only a dozen or so foreign employees responsible for much of the backend operations of their apps and games. Despite being a budding startup, AppMax's product portfolio has received moderate success with over 500 million unique downloads across various app stores. When I arrived in 2017, the company was going through a transition to a full digital publisher as opposed to in-house development, which was seen as more lucrative and risk averse.

Company 2: LudoCo

LudoCo is a subsidiary to a major Chinese mobile game developer based in Guangzhou and was among the top 40 developers in revenue within the country at the time in 2019. The parent company is home to over 800 employees and shares significant resources, personnel and technology with LudoCo, which has about 120 employees. While its parent company mainly specialized in making games for the domestic market, LudoCo was split off to cater exclusively to the Western market. I joined the company in the midst of a hiring spree or foreign talent to cater to different language markets such as Germany, France, USA, Russia, etc. But I was one of the only two Americans working at the company during my tenure there.

Even so these two companies differ widely in terms of their products and target users, they share the similarity as being mobile software companies specifically targeting global audiences. Mobile tech companies such as app and game publishers are especially interesting because of China's domineering status as the world's largest smartphone adoption rate with over 1 billion users in 2022.[36] Such a vibrant market also gave rise to a host of successful platforms such as Tencent's ubiquitous super app WeChat, the popular fast fashion app SHEIN, and ByteDance's international hit TikTok. The case of mobile software is also interesting because of its reliance on the duopoly of Google and Apple's respective app stores as the conduit for global distribution. This brings to question the important role of digital platforms in mediating the flow of software across the globe. Finally, mobile devices such as smartphones are also deeply

[36] Statista, accessed June 23, 2022, https://www.statista.com/statistics/467160/forecast-of-smartphone-users-in-china/.

personal, haptic and emotional technologies. Cara Wallis for instance considers how mobile phones can both enable mobility but also create exclusion among Chinese migrant workers.[37] Such tensions provide the ideal vantage point to understand the increasingly individualized, personalized and compartmentalized subject-making process via mobile technologies.

Methods and Approach

My methodological approach, while primarily drawn from critical cultural studies, new media studies and media industry studies, is also informed by the field of organization studies and China studies. Following Stuart Hall's model of the encoding/decoding process I will look at the various labor stages of conceptualization, production and distribution. In other words, tech production is not merely a one-way street but rather a constant negotiation between how cultural workers (coding, graphics, operations, and marketing personnel) operate to generate meaning based on contingent institutional factors during and outside the production process. Tech work is not merely composed of computer programmers but also the backend operations, graphics, localizers, administrators, etc. that can translate abstract digital artifacts into a working product. In other words, I take a broad view of what constitutes tech work beyond just technical expertise but also the various forms of cultural work necessary in producing digital commodities in the global market. In fact, I was able to work as a tech worker at both AppMax and LudoCo despite having no real technical skills such as design or coding.

The importance of Hall's model here is that encoding/decoding is not simply a binary process (*a la* sender/receiver) but operates at every stage of the communicative process. It

[37] Cara Wallis, *Technomobility in China: young migrant women and mobile phones* (New York: New York University Press, 2013).

reflects a "determinant moment" that operates in different stages constituting "the social relations of the communicative process as a whole".[38] This is a useful model in understanding media industries especially among industry workers as they must constantly generate their own meanings and understandings in the context of their own unique roles at different stages of production. Likewise, Hall's description of the dominant, negotiated and oppositional modes of positionality also applies to tech workers in the ways that different teams and management may come into odds within the workplace, which can reveal the tensions within the cultural production process. Finally, encoding/decoding also provides a useful model to make sense of the nebulous operations that come to define black boxed systems. In other words, it serves as a useful framework melding the intersecting perspectives involving both media industry and new media studies. This is especially important in an increasingly digital workplace where the labor of production is mediated by human-machine interfacing.

Given how tech labor is increasingly governed by platforms and software, it requires novel methods of understanding work as mediated by interfaces. Emerging approaches such as the "walkthrough method"[39] and "discursive interface analysis"[40] have pointed to the importance of how the design, interface and affordances shape the intended usage of software. This in turn helps to unravel much of the hidden meanings and underlying power structures of how users come to understand their everyday digital experiences. Understanding the embedded values within software interfaces can also reveal potential points of failure that workers can actively exploit. Soenke Zehle and Ned Rossiter for instance, propose the notion of "parametric politics",

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[38] Stuart Hall, "Encoding/decoding," In *Media and cultural studies. Keyworks* (Hoboken: Blackwell Publishing, 2001), 514.
[39] Ben Light, Jean Burgess, and Stefanie Duguay. "The walkthrough method: An approach to the study of apps." *New media & society* 20, no. 3 (2018): 881-900.
[40] Mel Stanfill, "The interface as discourse: The production of norms through web design," *New media & society* 17, no. 7 (2015): 1059-1074.

or a politics of design that works to transform the rules imposed by the algorithmic apparatuses that are legitimated by the media institutions.[41] This also highlights the importance of studying tech workers, many possess the necessary skills to reverse-engineer the system of control in ways that can allow for subversion to occur. Such tactics are echoed by Finn Brunton and Helen Nissenbaum who introduce the notion of obfuscation as a deliberate attempt to hide, disrupt and mislead the process of data collection and surveillance.[42] Here the everyday modes of resistance are applied to the digital world using various means of data pollution, avoidance and recalcitrant tactics toward corporate/state control. Whether it is the use of VPNs, or the creative use of "disinformation", or outright refusal (to share data), they offer imaginative possibilities to collectively fight back against the systems of exploitation.

I also employ perspectives in critical media industry studies proposed by Timothy Havens, Amanda Lotz and Serra Tinic that attempt to consolidate the macro and micro level analysis in thinking about media industry studies. Rather than looking at the industry from a top-level or "jet plane" perspective, they propose a mid-level approach which not only looks at both the business culture of how texts circulate and also specific midlevel industry practices. In doing so, this "helicopter" perspective can work to untangle the concrete power-relations and individual agency that allows for both top-down and bottom-up interrogations.[43] Drawing from Michael de Certeau, they propose looking at both the strategies (the larger economic goals and logics of cultural industries) and the tactics (how cultural workers negotiate and subvert the constraints created by institutional factors). Observing both the macro structures of corporate

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[41] Soenke Zehle and Ned Rossiter, "Mediations of labor: algorithmic architectures, logistical media, and the rise of Black Box Politics," In *The Routledge Companion to Labor and Media* (New York: Routledge, 2015), 40-50.
[42] Finn Brunton and Helen Nissenbaum. *Obfuscation: A user's guide for privacy and protest* (Cambridge: MIT Press, 2015).
[43] Timothy Havens, Amanda D. Lotz, and Serra Tinic. "Critical media industry studies: A research approach," *Communication, culture & critique* 2, no. 2 (2009): 234-253.

domination and the everyday micro-level resistance is therefore key in providing the nuanced understanding of the roles of power and agency in the tech workplace.

Such views are also echoed by John Caldwell's approach in looking at the logics of media production. Specifically, a combined top-down/bottom-up approach integrating different levels of analysis including textual analysis of trade material, interviews with workers, field observations of production spaces, and economic/industrial analysis. Central to Caldwell's framing is the notion of deep industry texts which are artifacts and rituals generated around and within production cultures.[44] He divides deep texts into three categories: fully embedded deep texts which are professional exchanges that are accessible only to industry insiders, semi-embedded deep texts that offer limited access to the outside, and publicly disclosed deep texts that are designed for public consumption. Each stratum can provide potential different registers to analyze production logics in ways that can pierce through an otherwise opaque process. Here various forms of internal corporate documents such labor contracts, corporeal documents, internal listservs, company messaging groups, etc. can provide a small portal into the nuanced realities of everyday work cultures.

A media industry approach therefore also shares common resonance with corporate anthropology and organization studies in its approach in studying institutions from within. Particularly Karen Ho's ethnography of Wall Street and her approach in "studying up" of elite institutions that is largely inaccessible from the outside. Ho takes up the importance of "practice" per Pierre Bourdieu's articulation of habitus, which critique the subjective-objective binaries in empirical research and work to look at dispositions that is "always oriented toward practical

[44] John Thornton Caldwell, "Cultures of production: Studying industry's deep texts, reflexive rituals, and managed self-disclosures," *Media industries: History, theory, and method* (2009): 199-212.

functions".[45] Ethnographic inquiries therefore provide the immersion needed to dissect the symbolic interplay between structure, culture and agency in shaping institutions of power. Organizational ethnography has also called on the need to move away from participant observation to observant participation.[46] Understanding business practices entails not just formal interviews but also a myriad of methods (digital ethnography, textual analysis, interface analysis, etc.) that can probe the working practices within the industry. This in turn can provide important insights into both the material and embodied practices that both facilitate and limit workers in their everyday lives.

Finally, I am inspired by Kimberly Chong's ethnography of Chinese management consulting that explicates the importance of forming close partnerships and collaborations with informants. For Chong, traditional anthropological approaches of being a "detached observer" in having a critical distance between researcher and subject, is inadequate in studying institutions whose informants might be put off by outside inquiries.[47] This is especially prevalent in the tech industry where intellectual property is heavily guarded and the poaching of talent between companies is commonplace, which in turn makes it challenging to gain the trust from tech professionals. Information regarding the tech companies is often carefully curated by public relation firms and marketing tactics that constructs an aura over the supposed innovations of the industry. Here immersive ethnographic perspectives can help decenter the authoritative hold of corporate institutions of over public discourses of the industry. This approach also works to help demystify what media industry studies consider as "industry lore", or the discursive construction

[45] Karen Ho, *Liquidated: an ethnography of Wall Street* (Durham: Duke University Press, 2009), 52.
[46] Brian Moeran, "From participant observation to observant participation," In *Organizational ethnography: Studying the complexity of everyday life* (London: Sage Publishing, 2009), 139-155.
[47] Kimberly Chong, *Best practice: management consulting and the ethics of financialization in China* (Durham: Duke University Press, 2018).

of media cultures by industry insiders.[48] In other words, industry lore works to naturalize how the industry is imagined in the wider public, while simultaneously reinforcing said lore through its opaque inside practices. Ethnographic approaches can therefore provide the critical on the ground perspective that can unravel the inner logic of organizations and the dominant ideals of tech industries.

Ethnographic Framework

Taking cues from corporate and organization ethnography, I spent a total of 13 months working within the mobile tech industry in China in the cities of Shanghai and Guangzhou. This is made up of an initial fieldwork working as a backend operations intern at AppMax for 3 months in the summer 2017, followed by a full-time job working as a mobile game localizer LudoCo for 10 months from 2019 to 2020. Being a full-time employee provided me with intimate insights into the labor processes, institutional logics and corporate culture within typical tech startups in China. I was able to not only observe but also inhabit the office spaces in ways that I could not have done as an outside researcher. Additionally, being inside a company granted me access to many of the "deep industry texts" (i.e., corporate accounts, company documents, internal meetings, professional training, etc.) that are not normally open to the public. Part of my research is therefore based on autoethnography of my own experiences entering, navigating and working in the industry. Realizing my ambiguous researcher-subject position, I strived to critically reflect on my own roles as a worker and my relationship with my colleagues/interlocutors.

[48] Timothy Havens, *Black Television Travels: African American Media Around the Globe* (New York: New York University Press, 2013).

I conducted semi-structured interviews with approximately 25 of my direct coworkers from both AppMax and LudoCo. These interviews contained the individual accounts on how my informants navigate the everyday struggles in the workplace. All the conversations also contain life history interviews where I ask about their background and upbringing which provided me with insights on how and why they chose to work in the tech industry. From 2021 to 2022 after my employment, I also conducted additional follow up interviews with 5 of my former coworkers to update on their life and current status. In addition, due to the onset of COVID-19 during my fieldwork, I conducted 7 remote interviews using WeChat video calls with tech workers at other tech companies such as Tencent and NetEase across China. These interviews developed out of acquaintances and prior contacts I had in the industry and provide additional perspectives from the wider tech sector. Out of the total 32 interviews, the majority, or about 29 are Chinese locals while 3 are foreign nationals working in China. Most of my interviews thus are conducted in Mandarin Chinese with a few in English with international workers.

While these sit-down interviews generally take place in informal settings outside the office, I also took notes on the everyday banter, meetings and gossip that we engaged together as colleagues. This in turn helps me to observe much of the informal discourses within an otherwise formal and professional setting. These daily conversations often take place on messaging apps such as DingTalk and WeChat, both will play a significant role in mediating everyday office communications (see Chapter 4). Thus, I also engaged in digital ethnography in surveying the ways by which workers make use of messaging apps for not just productivity but also private interactions. Additionally, I also incorporated emergent digital methods in looking at the affordances of apps and software in controlling and surveilling user interactions. In doing so, I can probe the underlying power structures embedded in our everyday software in mediating

work in the tech industry. Finally, I employ critical analysis of secondary material such as Chinese online tech communities such as MaiMai and Zhihu along with state policy documents, industry white papers, and mainstream news coverage. It should be noted that increasing adoption of workplace software and messaging such as DingTalk (and Slack in the West) have also created numerous outlets for leakages and rumors that can provide more nuanced insights into opaque organizations.[49] Such diverse sources allow me to look at the discourses surrounding tech, the government's attempt to regulate it and the societal perceptions of the tech industry as a whole.

With any ethnography it is important to situate my own positionality as a researcher in the context of my object of study. Born in rural Hubei Province and immigrated to the United States at a young age, I have a strong cultural, social, and linguistic background for conducting fieldwork in China. Prior to academia I worked for over 5 years as a broadcast journalist for several notable European and American press agencies based out of Beijing and Shanghai. There I developed both the technical proficiency and the professional experience in doing research and interviews in China. Which in turn provided me with a large pool of contacts within the industry. My choice to work within specific tech companies also highlights my desire to inject myself within the working process as opposed to parachuting in as an outside researcher. While my participation in the tech industry brings about its own sets of power dynamics vis-a-via my position as a PhD researcher, I hope to even some of this asymmetry by becoming a tech worker where I am able to partake in not just the production of digital commodities but also experience the everyday precarity within the tech industry.

[49] Mark Di Stefano and Wayne Ma, "Apple Was the Most Secretive Company in Tech. Then it Developed a Slack Habit," *The Information*, August 26, 2021, accessed June 23, 2022, https://www.theinformation.com/articles/apple-was-the-most-secretive-company-in-tech-then-it-developed-a-slack-habit.

Another key issue of conducting research in China is obtaining the necessary access to industries. I initially targeted big tech companies such as Tencent and NetEase in an attempt to land an internship at these companies. Even though I received several warm responses to my application, I could not be hired due to the complicated hiring processes at big tech firms (i.e., work visas and residency approvals) and the various regulations imposed on recruiting foreign workers in China. Instead, I focused on applying for jobs at small to medium sized companies which were more willing to bend the rules given the need to recruit talent away from big companies. One thing to note is that I had to sign a nondisclosure agreement (NDA) related to the company products and services due to intellectual property issues, but I am however free to discuss the labor process of working in the tech industry. Therefore, this dissertation is not about the production process of game and app localization in China but rather the experiences of working in the industry itself.

I began my preliminary fieldwork initially in Shanghai at AppMax, a small mobile app publisher - in the summer 2017. I worked as a backend operations intern at AppMax in Shanghai, a job I landed through a close acquaintance who was a project manager there at the time. I joined the company at a short notice despite having no “technical” skills or prior experience working in tech. It was only later I realized that the cultural work of packaging, marketing and localizing digital commodities is arguably more important than the technical work, which also explains why I had relatively easy access to the industry. Because of my prior experience in mobile app development, gaining access to my second field site at LudoCo in Guangzhou was remarkably easy when I applied to be a game localizer. I simply submitted my resume to several major Chinese job application sites including 51job and Boss Zhipin and received a call for an interview within just a few hours. Here my position as a Chinese American PhD student made

me an especially attractive candidate for Chinese tech companies keen on expanding to the US market. During my interview with Ms. Chen, the head of human resources (HR) at LudoCo, she expressed her excitement to have a candidate with my education and professional background join the company. I was essentially hired on the spot and formally started work almost immediately the day after. My status as an outside researcher did not seem to be a concern for Ms. Chen at HR, and on the contrary, she seemed intrigued about my academic training and how it can be applied to the growth of their company especially since I also had prior experiences working in mobile app development in Shanghai. Most importantly however is my background as a native bilingual speaker that proved to be the most advantageous as Ms. Chen confided to me later:

> Since we are a company looking to expand our footprint globally, we have been hiring more foreign employees but not all of them are proficient in the Chinese language, so having a bilingual speaker such as yourself will be great in helping to bridge the communication divide between foreign and local employees.

Indeed, throughout my year-long fieldwork at the company, and beyond my regular tasks doing localization, I functioned as sort of a liaison between the localization team made up of a few foreigners and the rest of the company being majority Chinese. Being natively bilingual I was able to bridge many of the cultural schisms associated with working in a multicultural and multilingual office, which in turn provided me with the perspective to critically reflect on the various cultural tensions within the corporate setting. Accordingly, I was also able to form close relationships with co-workers from different divisions that extended beyond just professional collaborations but also personal friendships. I remained cognizant of my relatively privileged position as a Chinese American given that I am not under the same sets of material and emotional expectations (or limitations) as a career professional trying to make a living in the

cutthroat tech industry. But by working full time as a fellow colleague, I was able gain the trust of my interlocutors in ways that provided me more intimate access to the inner workings of company culture as a whole. I found out that having strong working relationships with my interlocutors as colleagues also meant that personal ties evolved and strengthened overtime which often elicited more candid and personal responses. In fact, I remained close acquaintances with many of my former coworkers after my fieldwork and have maintained consistent contact and follow-ups throughout the process of completing this dissertation.

COVID-19 Pandemic and Adapting to Contingencies

Without a doubt the onset of the COVID-19 pandemic had a major impact on my fieldwork for this dissertation. In January 2020, just 4 months into my job in Guangzhou, COVID-19 swept through China. There I experienced firsthand the initial wave of COVID-19 outbreak and lived through the subsequent months under various forms of lockdown all the while working full time. Therefore, I am in a unique position among PhD students to not only conduct my fieldwork in the middle of the pandemic in China but also actively participate as an employee within the tech industry. As a full-time employee I was also exposed to many of the same pressures and precarity associated with working in the industry especially during a time of intense nationwide digital surveillance through the notorious health code contracting tracing app. Additionally the lockdown imposed by COVID-19 also severely limited my mobility where I was confined to one area in China which hindered my ability to conduct fieldwork and meet in-person for interviews. The first 3 month (February to April of 2020) of the pandemic were especially challenging as the scope and mortality of the disease was largely unknown and local health services were under severe duress.

My field site at the company LudoCo like nearly all tech companies across China also immediately transitioned into remote working from home. China's strict lockdown policy also restricted ease of travel between different provinces and regions in China. As a result, I had to make significant changes to the scope of the dissertation that originally envisioned travel to other cities such as Beijing and Hangzhou. However, I was able to improvise by conducting remote interviews with informants I met through acquaintances at former and current companies which allowed me to make a broader survey despite being tied to one location. I was thus, fortunately enough to actually complete my fieldwork during a difficult time when many other scholars were forced to leave China or are prevented from entering the country due to the travel ban enacted shortly after the pandemic. While the pandemic presented major challenges in doing research in China, I was able to quickly adapt to shifting contingencies by turning moments of crisis into opportunities. Ethnography after all is full of uncertainties, improvisations and my ethnographic project was made all the more unpredictable during a global health disaster. Here, the pandemic and shift to remote work exposed numerous fissures within corporate institutional practices that would otherwise be hidden. As such the lockdown in China brings to light the more intensified forms of surveillance and control that work to enforce worker productivity, a topic that I will explore in depth in Chapter 4.

The pandemic also exacerbated existing precarity within the Chinese tech industry not just within the workplace but also in people's private lives. China's draconian lockdown policy served to exacerbate latent inequalities in urban China through further austerity and immobility. Existing work on disaster anthropology has placed emphasis on the precarity of the researcher-subject relationship especially during moments of crisis.[50] Being a co-witness to the pandemic in

[50] Kaoru Miyazawa, "Becoming an insider and an outsider in post-disaster Fukushima," *Harvard Educational Review* 88, no. 3 (2018): 334-354.

China also made me more reflexive in conducting trauma-informed research in dealing with vulnerable populations. In the end, this crisis also had the result of fostering closer relationships with my coworkers and interlocutors as we kept each other informed and entertained digitally despite not being able to physically interact. While the ramifications of COVID-19 are not the core of this project's focus, its social impact cannot be ignored and operate in the background as a moment of exigency that sheds light on many of the latent tensions among state, institutions and individuals in the industry and society as a whole.

Chapter Overview

The organization of this dissertation sets out to unravel the black boxed nature of China's tech industry from the outside looking in. the structure of this dissertation first provides a macro-level overview of state policy, followed by in-depth ethnographic interviews and case studies working within the tech industry. Chapter 1 focuses on the critical role of Chinese state policy and regulations in directing the development of the tech industry. I offer a broad perspective of how policy can both enable and impede innovation in the industry in seemingly unpredictable ways. Starting with the role of tech parks in Shanghai, I divulge how the zoning of innovation also functions as sites of exclusion in demarcating access, mobility and creativity. These tech parks therefore serve as a microcosm of the paradoxical nature of China's state-directed tech development which carefully binds creativity within the confines of the state's bottom line. Building from this, I analyze the discursive construction of the "spiritual garden" where the internet is an enclosed space that must be carefully cultivated and maintained to promote a sanitized environment free from unwanted and potentially subversive content. Putting this in conversation with the concept of "walled gardens", I argue China's digital policy of walling off

from the outside, while benefiting certain aspects of tech development will ultimately constrain innovation. Instead of innovation, China's heavy-handed tech policy creates the conditions for "involution" where the industry is increasingly marked by inequality, volatility and precarity. This is rendered all the more apparent during moments of contingency and crisis brought about by the pandemic and trade war.

The next two chapters dissect both the material and affective predicament of tech work in urban China. Chapter 2 serves as the entry to my field site in Guangzhou, China with a particular focus on the everyday struggles of people as they navigate their private and working lives. Building from the themes of exclusion and innovation in Chapter 1, I paint a vivid picture of the typical life of working in urban China by introducing a host of interlocutors from diverse backgrounds from across the country. Drawing on extensive life-story ethnography, I look at how realities of working in the city function to determine both the professional and personal outlook for people working in the industry. To this end, I argue that the spatial politics of urban, office, and private spaces produce sites that can not only constrain but also be potentially reclaimed by workers. Chapter 3 problematizes the notion of "passion" and affective labor within the tech industry and how passion both sustains and perpetuates work. Rather than seeing passion as merely a personal sentiment, I divulge how passion is a critical component of the discursive framing of tech work in the industry and a conduit in promoting productivity. Through the lens of two case studies including the corporate annual party and the practices of "touching fish" (or slacking off in Chinese), I look at how affect is mobilized and manipulated in the tech industry. Specifically, passion is often leveraged for corporate interests in not only boosting worker morale but also as the means of ameliorating workplace tensions. At the same time, affect is also something workers actively employ to demonstrate their displeasure and dissent

toward corporate oppression. The physical and affective regime of work are therefore highly contested terrains by which control and resistance is played out on a regular basis in the tech industry.

Chapter 4 deals with DingTalk, a popular workplace productivity app (like Slack) that became the chief medium by which workers were surveilled at home during the pandemic-imposed lockdowns in China. As a product of the Chinese tech titan Alibaba, DingTalk is also integrated with China's notorious health code contact tracing system which points to the close relationship between workplace surveillance with existing forms of biopolitical control from the state. Combining the walkthrough method of interface analysis and ethnographic interviews, I look at the affordances within the software interface that tech workers must navigate on a regular basis. To this end, I advance that workplace software can both enable and impede the mechanism of control where tech workers paradoxically possess the necessary technical skills to exploit and subvert software-mediated regimes of work. The final chapter, Chapter 5 dovetail directly from Chapter 4 in understanding possible means of digital worker activism in times of precarity. Through close analysis of the anti-996 programmer activist movement, I look at the contentious notion of "coding publics" and how tech workers make use of coding platforms such as GitHub to voice their disapproval of excessive overtime and regimented work. While such networked public spheres can be fruitful means of imparting change, they can also potentially marginalize those without the necessary tech literacy to engage in digital activism, especially people from different class, gender and ethnic backgrounds. Resistance in the digital context therefore should not only encompass deviceful and hacktivist means of subversion but also the means of inaction, immobility and involution predicated on the refusal to partake in the cycles of exploitation. By

the end, this chapter aims to present a possible future of collective tech solidarity that takes into account the multitudes of tongues by which powerful activist voices can emerge.

Ultimately, each chapter is designed to build upon each other, starting from broad overview of tech policy to more intimate ethnographic inquiries on the ground. I believe by combining both a macro and micro-level analysis of China's tech scene, I can provide more nuanced understandings of tech work through the intersecting influence from both institutions and individuals. The aim of this dissertation is to demystify much of the contemporary account of China's tech industry in ways that takes into account the lived realities of tech workers on the ground. Such perspectives are especially important during heightened tensions in the context of the Sino-US tech trade war, where despite the calls for a tech "decoupling" from China,[51] much of global ICT production remains very much dependent on the Chinese tech industry. This project in turn works to cut through some of the antagonistic depictions of Chinese tech in ways that can resuscitate worker agency, subjectivity and empathy in the context of tech labor. The conclusion will therefore bring together some of the key themes of dealing with the everyday alienation and aspirations of tech workers and their encounters with the various limits of institutional and interpersonal constraints. Given the increasingly important roles of China's digital industries on the global stage, understanding the plight of Chinese tech workers can offer profound lessons relating to global digital labor and the future of work.

[51] Jon Bateman, "U.S.-China Technological "Decoupling": A Strategy and Policy Framework," *Carnegie Endowment for International Peace*, April 5, 2022, accessed June 23, 2022, https://carnegieendowment.org/2022/04/25/u.s.-china-technological-decoupling-strategy-and-policy-framework-pub-86897

Chapter 1

Cultivating the Digital Garden: Contradictions of Policy and Control in the Chinese Tech Industry

It was the summer of 2017 when I arrived in Shanghai to conduct my preliminary fieldwork working as a backend operations intern for a budding mobile app developer, AppMax. Located in Pudong District, AppMax is situated adjacent to Zhangjiang High-Tech Park (hereafter ZJHP), a massive scientific park catering to hundreds of tech companies, research institutes and multinational corporations. Having worked in the city for over 2 years as a journalist from 2013 to 2015, I am no stranger to Shanghai, a megacity of some 25 million inhabitants. Yet, I still became hopelessly lost the moment I exited the metro station. The massive boulevards, overpasses and gleaming skyscrapers were a far cry from the quiet tree-lined neighborhoods of the Former French Concession area in Puxi District where I once lived. Indeed, Shanghai is no ordinary city. It is in fact a state-administered municipality with equal administrative status comparable to an entire province, spanning some 2400 sq. miles and constituting the largest urban area in China. The sheer size of the city meant that I rarely ventured beyond the traditional urban core across the Huangpu River, and this was only the few times I visited Pudong, a new urban area developed over the past three decades built on partially reclaimed land from the ocean. Once I actually arrived at the tech park I was greeted with a cluster of nearly identical glass-facade buildings organized alphabetically. It was only after several calls to the front desk could I locate the actual location of AppMax to report in for my first day at work.

Founded in 1992, the Zhangjiang High-Tech Park was among the first technology parks built in China. Situated at the confluence of major highways, subway lines and close access to the airport, the park specializes in biotech, ICT industries and software development. Such

examples of scientific parks constitute a form of "technopole" intended to foster a milieu of innovation that integrates urban development, university institutions and public-private partnerships.[52] Contrary to other technopoles like Silicon Valley in California, scholars have noted how the proliferation of science parks in Asia (i.e. Japan, Taiwan and China) is predicated on the heavy handed direction of government policy in constituting the "developmental state model" of governance.[53] Fangzhu Zhang and Fulong Wu for instance argue the Shanghai municipal government plays a critical role in the governance of innovation via the urban development of ZJHP to foster market-driven entrepreneurship.[54] As such, the pooling of technologies and infrastructures is on one hand, intended to consolidate domestic resources to better integrate with global commodity chains.[55] On the other hand, ZJHP is designed to attract foreign direct investment (FDI) which in turn helps facilitate the transfer of knowledge and technologies into China. Mr. Chang, a Taiwanese American and my supervisor at AppMax explained his impressions of Shanghai's tech scene compared to other cities:

> Shanghai has always been the cosmopolitan center in China. For companies like ours that primarily does business in the West, the city has the standard of living to attract and retain multinational companies and foreign talent, which makes it easy to recruit staff who are globally minded which is critical in designing good products for markets outside China.

This global inclination can be seen the moment I arrived at ZJHP. One of the notable features of the tech park is how all the north-south oriented streets are all named after notable

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[52] Manuel Castells, *Technopoles of the world: The making of 21st century industrial complexes* (New York: Routledge, 2014).
[53] Joseph Wong, "The adaptive developmental state in East Asia," *Journal of East Asian Studies* 4, no. 3 (2004): 345-362.
[54] Fangzhu Zhang and Fulong Wu, "Fostering Indigenous Innovation Capacities: The Development of Biotechnology in Shanghai's Zhangjiang High-Tech Park," *Urban Geography* 33, no. 5 (2012): 728-755.
[55] Gang Zeng, Ingo Liefner, and Yuefang Si, "The role of high-tech parks in China's regional economy: empirical evidence from the IC industry in the Zhangjiang High-Tech Park, Shanghai," *Erdkunde* (2011): 43-53.

Western scientists such as Copernicus, Darwin, Newton, Faraday, Edison, etc. While the east-west oriented streets are named after historic Chinese inventors such as Bi Sheng (inventor of movable type printing), Cai Lun (inventor of papermaking), Chen Kuo (inventor of the compass), Zhang Heng (inventor of an early seismoscope), Zu Chongzhi (mathematician), etc. (Figure 2.1). What is interesting is how all of the Chinese scientists are ancient or dynastic figures while Western scientists are mostly modern individuals. Such alignments therefore reflect not just the intersections between the East and West but also the past and present in relation to humanity's common aspirations of scientific progress. Indeed, Shanghai had long been the crossroads between China and the world through its former status as a treaty port for various colonial powers in the 19th and early 20th century. Evidently, Shanghai had already developed into a major center of commerce and culture in what Jos Gamble considered as one of the most modern cities in Asia at the time.[56] But today the naming of streets after Western people is a rarity as only those with significant contributions to the country were bestowed with that privilege. My old neighborhood in the former French Concession in Puxi District for instance have all renamed its previous colonial era street names (i.e., Avenue Joffre and Avenue Petain) to indigenous Chinese names as part of decolonization after the communist takeover in 1949.

[56] Jos Gamble, *Shanghai in transition: Changing perspectives and social contours of a Chinese metropolis* (New York: Routledge, 2005).

Figure 2.1: Zhangjiang High-Tech Park at the intersection of Bibo Road and Zuchongzhi Road, the latter being a famous Chinese mathematician from the 5th century.[57]

Shanghai's complex legacy as a colonial outpost and an important node for global trade was especially advantageous when it became one of the first cities to open up under China's Open Door Policy and economic reforms of the 1980s. In fact, the entire Pudong New Area within Shanghai also exists as a sort of a city within a city with the privilege of being a Special Economic Zones (SEZs). The policy of SEZs is often referred to as the Shenzhen Model of development through Deng Xiaoping's highly publicized "Southern Tour" to the city, where the policy was first implemented.[58] Here SEZs acts as a conduit for gradual economic reforms

[57] Wikipedia, 2022, Zhangjiang Hi-Tech Park, accessed May 12, 2022, https://upload.wikimedia.org/wikipedia/commons/4/45/Zhangjiang_Hi-Tech_Park.jpg.
[58] Mary Ann O'Donnell, Winnie Wong, and Jonathan Bach, eds. *Learning from Shenzhen: China's post-Mao experiment from special zone to model city* (Chicago: University of Chicago Press, 2017).

through the easing of access for foreign investment and technologies. Additionally, SEZs often function as a separate enclave that allows for preferential policies for market reforms that are not enjoyed by the rest of the country. It is no surprise then, Pudong was chosen as the site of the recently constructed Tesla's Shanghai Gigafactory and Disneyland Shanghai. Likewise, ZJHP also hosts notable Western multinationals such as GE, Intel, and IBM among its tenants. In 2015, the Pudong was further designated as part of the Shanghai Pilot Free Trade Zone (SPFTZ), a furthering of reforms in easing China's entry into the global market. Unlike the initial waves of reforms through SEZs, the pilot free trade area is not predicated on preferential policies and enclave innovation but rather a "innovation of rules"[59] and regulatory reforms that can be applied across China, with Shanghai being the blueprint.

In this regard, both SEZs and FTZs function as testing grounds in the various trials associated with economic reforms. It echoes what Silvia Lindtner considered as a prototypical model of nationhood, a liminal zone for possible experimentation in economic development.[60] Such zones allow the Chinese government to enact different marketization policies in specific locales before a gradual rollout across the rest of the country. Following this line of argument, Luzhou Li's book *Zoning China*, posits how the creation of economic zones in China also implicitly hints at the creation of cultural zones. For Li, the rise of the internet in China provisioned for the rise of a digital culture free from the regulatory confines of traditional broadcast media.[61] Ostensibly, the term "pilot" in SPFTZ also signifies the speculative intent of such zones in envisioning potential alternate futures of innovation that may be different from the West. The implementation of such zones across China constitutes a form of bounded innovation

[59] Jiaxiang Hu, "A Retrospective View on the First Three Years of China (Shanghai) Pilot Free Trade Zone," *The Chinese Economy* 50, no. 4 (2017): 225-237.
[60] Lindtner. *Prototype Nation*. 41.
[61] Luzhou Li, *Zoning China: Online video, popular culture, and the state* (Cambridge: MIT Press, 2019).

whereby technological development is stewarded in ways that are deemed beneficial to state interests. At the same time, such zones also imply the demarcation of enclaves whereby technology and access are simultaneously promoted and denied. Thus, the creation of SEZs as part of national policy while allowing for the pooling of capital and talent for innovation also creates increasing exclusion and inequality in urban environs. Consequently, instead of innovation, the Chinese tech scene in 2020 was rife with the term "involution" or *neijuan*, where the state's massive investment into higher education, technological infrastructures and labor did little to actually spur innovation and production. Instead, the concentration of capital and talent into the tech sector created the condition of extreme competition among workers with little hopes of actually attaining the upward mobility promised by the tech industry. Instead of the euphoria associated with the tech boom, working in tech was marked by feelings of despair and disillusion.

This chapter outlines the Chinese state's promotion of innovation by looking at the often conflicting and contradictory roles tech policy plays in directing governance, work and social life. Strong-handed government intervention has long been the hallmark of Chinese developmental policy and the active regulation of the tech sector is no different. Yet, much of Western scholarly and media coverage of China's contemporary tech scene often fails to adequately contextualize the ways by which technology is envisioned and enacted as a part of the nation-building process. As such, technology does not exist in a vacuum and it is always instrumentalized by various human actors (i.e., policymakers, industry professionals, academics, etc.) that guide its developmental trajectory. What roles does tech innovation play in shaping national policy and social development? How do regulatory policies both enable and enfeeble the development of the tech sector? How do we make sense of tech innovation and the increasing

turn to involution owing to regulatory and market forces? In answering these questions, this chapter will put in context the rise of the Chinese tech industry through the optics of state policy and regulations. In doing so I will first situate the importance of the tech industry and its associated policies in the wider context of the studies in creative and cultural industries. Second, I elucidate the state-patron model of Chinese governance by which the extent of corporate influence is highly dependent on the concurrence of the state. The promotion of innovation zones in the form of SEZs helped centralize resources in ways that spurred the growth of high-tech industries, but at the same time, it also created the conditions for growing inequality between the haves and have-nots in urban China. Drawing from case studies dealing with the notions of "spiritual gardens" and "walled gardens" in the context of tech regulations, I look at the often-contradictory ways by which policy is employed by the Chinese state to promote innovation in the tech industry. More specifically, Chinese tech policy creates an environment that can both help and hinder innovation in seemingly unpredictable ways. Compounded by external factors such as the pandemic, the instrumentalization of policy and regulation in turn begets a highly volatile and precarious predicament for workers in the tech industry.

Contextualizing Chinese Cultural, Creative and Tech Industries

Developments such as ZJHP are just one of many technological parks across China and are indicative of the importance placed on these experimental zones in fulfilling the national priorities that are conducive to innovation. The zoning of innovation across Chinese cities implicitly points to the demarcation of difference in how tech policy is used to promote a form of techno-social governance. As such, it also brings into contention the varying interpretations of how creative practices are envisioned and enacted in China. Indeed, there are numerous

contending fields in analyzing the rise of creative and cultural industries in the global economy. Raúl Rodríguez-Ferrándiz for instance looks at the evolution of the term cultural industries and works to demystify the discursive construction of this concept that has been gradually diluted over time. Contrary to emerging terms such as creative industry and entertainment industry which implies "cultural excellence", he contends, cultural industry was a term emerging out of "disillusionment and apprehension" of the Frankfurt School.[62] Dovetailing this, Stuart Cunningham argues how the initial critical understandings of the term cultural industry have increasingly been co-opted as part of national cultural policy. Creative industries on the other hand, emerged from the new economy that increasingly caters to service industries as opposed to promoting a specific cultural policy.[63] Likewise, Terry Flew describes the challenges in defining creative industries in the global context because it intersects with many other novel forms of creative labor.[64] Here the term creative industry makes it hard to distinguish what is deemed creative work and which industries are included under this catch-all term. This is all the more apparent, as labor dynamics have become increasingly fluid and precarious with the reconfiguration of the global knowledge economy. In other words, what defines creative or cultural work in the era of globalization is highly contentious as different regions can have profoundly different work cultures and labor dynamics. Thus, it is important to distinguish how cultural production operates in China in ways that are different from the totalizing conceptions from the West.

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[62] Raúl Rodríguez-Ferrándiz, "Culture industries in a postindustrial age: Entertainment, leisure, creativity, design," *Critical Studies in Media Communication* 31, no. 4 (2014): 328.
[63] Stuart Cunningham, "From cultural to creative industries: theory, industry and policy implications," *Media International Australia* 102, no. 1 (2002): 54-65.
[64] Terry Flew, *The creative industries: Culture and policy* (London: Sage, 2011).

Michael Keane for instance, put into context the roles of creative industries and cultural policy in China that is heavily controlled and promoted by the state.[65] In this regard, the notions of creativity and innovation may not be the same as Western notions of what constitute creative industries. Contrary to the neoliberal perspective of creative industries where innovation lies within the hands of the individual, the Chinese government operates as a "patron state" by which cultural industries are heavily managed and subsidized in promoting the national line. Keane argues there is a discursive bias toward the use of cultural industries because creative industries can be problematic in China, especially given its connotation with freedom of expression, individualism, and above all, originality. All of which potentially conflict with Chinese government notions of governance and what constitutes Chinese "innovation". Thus, cultural policy in China here includes both cultural and creative industries, granted cultural industry is generally used as the umbrella term. The key difference being that cultural industries are promoted as a form of soft power (i.e., the patron of Chinese arts, media, culture, language, etc.), while creative industries are intended to boost industrial, economic and scientific innovation. In sum, creative work in the case of China is very much aligned with the interest of the state and the leveraging of state policies in promoting creative industries is instrumental for national advancement. At the same time Chinese policymakers must also juggle with the careful balancing act of promoting creativity and free expression without fully losing control over it.

Laikwan Pang's book *Creativity and its Discontents* offers a compelling explanation of creative industries in China in addressing the tensions between intellectual property and innovations.[66] Pang wants to move away from the conventional notions of how creative

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[65] Michael Kean, *Creative industries in China: Art, design and media* (Hoboken: John Wiley & Sons, 2013).
[66] Laikwan Pang, *Creativity and its discontents: China's creative industries and intellectual property rights offenses* (Durham: Duke University Press, 2012).

industries are predicated on bottom-up impulses from creatives and individuals. Rather she wants to look at the important role that state/corporate institutions play in driving the creative industries. Here the creative and cultural industries are inherently politicized and are exercised as national policy. For example, China has advocated for the preservation of "cultural security" in the face of encroaching Western cultural imperialism, where the support of domestic cultural industries is seen as paramount to ward off Western influence that is deemed to threaten national security. The on-going tech trade war between the US and China also accelerated the need to reduce reliance on foreign technology which in turn requires local innovations. Creative industries here serve several purposes. First, it is used to foster indigenous innovation that can help China breakaway from its reliance on foreign technology. Second, it can be used to promote "cultural nationalism"[67] or the means to spread Chinese cultural influence abroad. Such strong-arm state intervention also presents new forms of precarity by which their creativity is often restricted via the censorship process.

My focus on the Chinese tech industry here is not intended to further complicate the existing debate regarding creative and cultural industries but rather articulate points of connection between them. The tech industry is both creative and cultural but also deeply rooted in global circuits of material commodity exchange. The tech industry relies not just on knowledge workers but also factory work on assembly lines, it involves the production of not just electronic gadgets but also the extraction of rare earth elements that serves as the base raw material supplying global ICT production. In fact, scholars have long noted how global logistics are often predicated on violence and exploitation in directing the flow of goods and people.[68] The

[67] Pang, *Creativity*, 57.
[68] Deborah Cowen, *The deadly life of logistics: Mapping violence in global trade* (Minneapolis: University of Minnesota Press, 2014).

tech industry is also both digital and material, it encompasses different distribution systems and labor processes across different institutions and markets. Therefore, my focus on the tech industry also problematizes the longstanding distinction of tech labor as knowledge work which valorizes cerebral labor over that of manual labor. Yet the precarity associated with platform-mediated work is often applicable to both white-collar workers in cubicles and gig workers doing menial tasks alike. Especially since high tech industries are increasingly reliant on the work of low-end "code farmers"[69] resulting from the deskilling process of capitalist production. Emerging works in media industry studies have called for the consolidation of different industry-related perspectives in order to dissect "how individuals, institutions and industries produce and circulate cultural forms in historically and geographically contextualized ways".[70] Therefore, it is crucial to offer an inclusive look at the tech industry beyond the disciplinary silos of industry-related studies with a particular focus on the mutually constitutive interplay among official policy, institutions, and everyday workers.

Technocratic Dreams, State Control and the Limits of Innovation

The state promotion of scientific parks and innovation zones also points to the scientifically or technologically determinist policymaking that comes to define Chinese development. Indeed, science and technology was one of the pillars among the "Four Modernizations" declared by Premier Deng Xiaoping as the key to China's economic growth.[71] Following Deng, China's leadership under Hu Jintao heavily promoted the policy of "Scientific

[69] Ping Sun. "Programming Practices of Chinese Code Farmers. Articulations, Technology, and Alternatives," *China Perspectives* 2017, no. 2017/4 (2017): 19-27.
[70] Daniel Herbert, Amanda D. Lotz, and Aswin Punathambekar, *Media industry studies* (Hoboken: John Wiley & Sons, 2020), 7.
[71] Michael Dillon, *Deng Xiaoping: the man who made modern China* (London: Bloomsbury Publishing, 2014).

Development" that espoused a technocratic governance in driving sustainable economic growth.[72] The direct ramification of these developmental models has led to massive investment in the export-oriented economy that made China the "factory of the world". Much of the insatiable global demand for ICT products also comes at the cost of increasing extractive production within China that often results in rampant abuses within the tech labor sector. From the widely reported worker suicides at Foxconn factories producing iPhones under stressful conditions,[73] to the extreme work hours at Chinese tech companies, to the health hazards associated with industrial pollution, the tech industry in China is increasingly marked by associations to exploitation, oppression and injustice. This brings to light the often-invisible labor of global tech outsourcing predicated extractive capitalist production that is increasingly unsustainable both in terms of its human and material costs. In recent years, there has been increasing pressure to seek alternate modes of development in light of these socioeconomic challenges. Richard Appelbaum et al. for instance points to how China has promoted the transition from being the world's factory to a homemade innovator.[74] Initiatives such as the policy of "Made in China 2025"[75] aims to foster indigenous innovation while also moving away from low-cost, export-oriented manufacturing toward high-tech industries and domestic consumption.

This shift toward self-made innovation is also undergirded by a discursive construction of technology framed within techno-nationalistic ideologies. Chinese leadership under Xi Jinping

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[72] Joseph Fewsmith, "Promoting the scientific development concept," *China Leadership Monitor* 11, no. 30 (2004): 1-10.
[73] Jenny Chan, Mark Selden, and Ngai Pun. *Dying for an IPhone: Apple, Foxconn, and the Lives of China's Workers* (Chicago: Haymarket Books, 2020).
[74] Richard P. Appelbaum, Cong Cao, Xueying Han, Rachel Parker, and Denis Simon. *Innovation in China: Challenging the global science and technology system* (Hoboken: John Wiley & Sons, 2018).
[75] Godfrey Yeung, "'Made in China 2025': the development of a new energy vehicle industry in China," *Area Development and Policy* 4, no. 1 (2019): 39-59.

promoted a new state mantra of the "Chinese Dream of National Rejuvenation" that encapsulates China's rising ascendance on the global stage.[76] It serves as the legitimization force for the Chinese Communist Party (CCP) to take reign over its supposed historical mission to lead China into future prosperity. Undoubtedly, the dream metaphor has long been associated with the spirit of the Silicon Valley that is often referred to as the "Valley of Dreams".[77] The tech companies are often framed as places where dreams are made that not only entail lucrative remuneration but also the hopes of being part of a future-making collective driven by disruptive and potential life-changing technologies. Even my field site AppMax proudly claims on its corporate introduction that they are made up of a team of "dreamers, designers, and developers" working collectively to connect people around the world using digital technologies. The techno-utopian milieu in the tech sector is also embedded in what Richard Barbrook and Andy Cameron term as the "Californian Ideology", a scion from a "primordial American Dream" and its inherent contradictions of New Left ideals and right-wing libertarianism.[78] The Chinese Dream in this context shares some similarities with the Californian Ideology in its paradoxical combination of market capitalism and socialist utopianism. But unlike Barbrook and Cameron's articulation of a communal, freewheeling, and libertarian vision of a high-tech collective, the Chinese Dream is heavily driven by centralized state policy and the narratives of Chinese nationalism. What this suggests, according to Michael Peters, is that the Chinese Dream differs from rhetorical uses of the American Dream in its fixation on past humiliations and grievances as a means of envisioning the future national body.[79] Rather than purely a dream of the future, the Chinese

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[76] Zheng Wang, "The Chinese dream: Concept and context," *Journal of Chinese Political Science* 19, no. 1 (2014): 1-13.
[77] David Pellow and Lisa Sun-Hee Park, *The Silicon Valley of dreams: Environmental injustice, immigrant workers, and the high-tech global economy* (New York: NYU Press, 2002), 1.
[78] Richard Barbrook and Andy Cameron, "The Californian Ideology," *Science as culture* 6, no. 1 (1996): 44-72.
[79] Michael A. Peters. "The Chinese Dream: Xi Jinping thought on Socialism with Chinese characteristics for a new era," *Educational Philosophy and Theory* 49, no. 14 (2017): 1299-1304.

Dream of National Rejuvenation recall on former glories that can be resurrected via technological innovations. In this regard, the Chinese Dream serves as a dominant ideology whereby technology becomes instruments of power that further extends the Party-state's interests and forms of social governance.

Indeed, missing from many of the scholarly interpretations of the Chinese Dream is its close connection to scientific innovation which posits technological advancement as an important part of the collective national imagination. China's investment in disruptive technologies in the field of AI, big data and mass surveillance also points to the technologically determinist use of technological systems as means of governance. In another vein, Michael Keane and Ying Chen consider the aspirational policies of the Chinese Dream as contributing to the intensification of cluster developments across the cultural industries whether through real estate developments, cultural districts such as "dream towns" and the aforementioned sprawling tech parks across the country.[80] The fulfillment of this dream takes not just top-down policy but also the mobilization of entrepreneurship among the professional class in driving innovation. In many ways technology is presented as a possible panacea to the pressing problems of governance, economic inequality and other social ills seen as threatening to the stability and legitimacy of the regime. At the same time, the increasing reliance on tech also begets compounding problems associated with access, privacy and freedom in people's everyday lives. For the Chinese state, tech innovation is not only something to be harnessed and promoted but also carefully controlled and maintained.

Here it is important to point out Chinese tech governance is not a simple dichotomy between control and resistance, but rather a mutually constitutive relationship among the Chinese

[80] Michael Keane and Ying Chen, "Entrepreneurial solutionism, characteristic cultural industries and the Chinese dream," *International Journal of Cultural Policy* 25, no. 6 (2019): 743-755.

state, the market economy, and society.[81] Chin-Chuan Lee et al. Contends how media systems in China function as a form of "Party-market corporatism" where private enterprises enter into a sort of patron-client relationship with the state.[82] The state provides various policy incentives (in this case, economic zones and tech parks) that create mutually beneficial dependencies for companies and regional governments alike. Indeed, the meteoric rise of the Chinese tech industry through companies such as Tencent and Alibaba have shown the strengths of such arrangements in the rapid expansion of tech development. But China's tech crackdown in 2020 also highlights how the state can just as quickly curtail the growth of private capital if it grows in ways that are counter to state interests. In fact, many scholars have noted that central to meeting the social challenges brought about by China's economic reforms is the CCP's ability to adapt. Bruce Dickson for instance introduces the notions of cooptation and corporatism - the former being elites co-opted into the party system and the latter being corporatist shifts in the political economy of the country.[83] This shares a similar line of argument to Hoffman's notion of the "patriotic professional" who are expected to be loyal workers for the state. The cultivation of self-enterprising individuals based on the neoliberal logic of choice and freedom but in reality, offload governance and national duty onto the shoulders of the professional class.[84] For Dickson, "China's technocrats and entrepreneurs, drawn from the noncritical realm of civil society, are unlikely to initiate democratizing reforms"[85] and that economic liberalization is not necessarily the same as democratization. Hence, the recruitment of emerging elites such as tech workers and

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[81] Zhao, Yuezhi, *Communication in China: Political economy, power, and conflict* (Lanham: Rowman & Littlefield Publishers, 2008).
[82] Chin-Chuan Lee, Zhou He, and Yu Huang, "Party-market corporatism, clientelism, and media in Shanghai," *Harvard International Journal of Press/Politics* 12, no. 3 (2007): 21-42.
[83] Bruce J. Dickson, "Cooptation and corporatism in China: The logic of party adaptation," In *Critical Readings on the Communist Party of China* (Leiden: Brill, 2017).
[84] Lisa M. Hoffman, *Patriotic professionalism in urban China: Fostering talent* (Philadelphia: Temple University Press, 2010).
[85] Dickson, 532

other skilled professionals into party structure, while may seem threatening due to conflicting priorities, can actually foster a new technocratic class that serves the ruling party.

Rongbin Han offers a similar account of the co-optation mechanisms online. He questions the state adaptation model of internet control, instead he advances the view that online pluralization leads not only to more regime critics but also regime defenders (*wumao* or paid commentators, moderators, web police, etc.). The Internet thus becomes a highly contested terrain by which "multiple discourses as netizens with distinct political orientations coexist or compete".[86] Yet, much of the rhetoric surrounding the Internet as a liberating medium and potential catalyst for democratic change has not been realized. In a broader sense, Guobin Yang introduces the notion of "state-sponsored platformization" as the means by which the state imparts its own political logic onto how social media platforms can operate, which directly shapes and controls the types of affordances, content and digital interactions available to the end user.[87] This in turn creates room for negotiation, contestation and innovation within the digital sphere that may not necessarily be commensurate with state interests but must also tread carefully to not cross the Party-state's bottom line.

Finally, Zhongdang Pan cautioned against the view that media reforms in China will create a public sphere facilitating the formation of a robust civil society. Nor is it the mode of state corporatist control of a one-way street, but rather a negotiated process between the party state and media organizations. Here the top-down impact of state policies are met by localization from media organization practitioners in ways that might not be commensurate with the policy,

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[86] Rongbin Han, *Contesting Cyberspace in China: Online Expression and Authoritarian Resilience* (New York: Columbia University Press, 2018), 32.
[87] Guobin Yang, "Social media and state-sponsored platformization in China." In *Engaging Social Media in China: Platforms, Publics, and Production*. Guobin Yang and Wei Wang, eds. (East Lansing: Michigan State University Press, 2021).

or a form of "bounded innovation" from both levels of communicative process, which creates the "periodical swings between 'liberalizing' and 'tightening of control'" of media institutions.[88] Likewise, institutional change is predicated on the tacit game between state and practitioners that allows for flexibility of media practices that remain "observant" of the rules and norms of policy. Pan's contribution helps contextualize the limits of innovation in the case of state control that is unique to the state-corporatist system. Here innovation is always bounded by the tensions between market and state-directed forces. While mundane, small-scale innovations can exist in fostering emancipatory moments, the process of "bounded innovation" actually works to de-fang the potency of any radical change. For Pan, such innovation is not so much a means of resistance but rather the "observance of, or at least acquiescence to, the legitimacy of the party-state".[89] Contrary to enclave innovation such as SEZs that reflect top-down policies, bounded innovation points to the micro-level interplay among individuals, institutions and policy. The tech industry therefore must also cope with the balancing act of conforming to state directives while catering to market-driven needs and individual aspirations. In looking at the cases of the Great Firewall and the increasing turn toward involution, I dissect both the promises and pitfalls of state policy and its contradictory impacts on technological innovation in China.

[88] Zhongdang Pan, "Bounded innovations in the media," In *Reclaiming Chinese Society*, You-tien Hsing and Ching Kwan Lee, eds. (London: Routledge, 2009), 185.
[89] Pan, 192.

Spiritual Garden, Walled Garden and the Great Firewall: Controlling and Cultivating Creativity

Chinese leader Xi Jinping in a speech at the Cybersecurity and Informatization Work Conference in 2016 referred to the internet as a "spiritual garden" that needs to be cultivated and maintained:[90]

> Cyberspace is a common spiritual garden for hundreds of millions of people. Having a clear sky and crisp air, having a good ecology in cyberspace conforms to the people's interests. A pestilent atmosphere and a deteriorating ecology in cyberspace do not conform to the people's interest. No one would be willing to live in a space that is full of falsehoods, fraud, attacks, jeering, terror, sex and violence. The Internet is not a land outside the law.

The metaphor of the spiritual garden is an interesting one because it points to an alternate version of the Internet as envisioned by the Chinese state. Instead of seeing the Internet as a boundless, open and decentralized medium of communication, it is viewed as something that should be contained, cultivated, and controlled. The meteoric rise of Chinese internet companies over the past decades also led to what many media pundits consider as "barbarous growth" (野蛮生长) that not only led to innovative products but also anti-competitive practices.[91] Notable examples such as Baidu's deceptive advertising practices[92] and the peer-to-peer (P2P) lending scams from fintech companies have brought negative light on the exploitative aspect of the tech industry that

[90] Xinhua, "Xi Jinping: Rang Hulianwang Genhao Zhaofu Guojia he Renmin [Xi Jinping: Let the internet better serve the nation and people]," *Xinhua*, April 19, 2016, accessed June 23, 2022, http://www.xinhuanet.com//politics/2016-04/19/c_1118672059.htm.
[91] NetEase, "Li Yumeng: Hulianwang de yeman shengzhang yu guifan zhili [Li Yumeng: Internet's barbarous growth and regulatory measures]", *Netease*, April 14, 2022, accessed June 23, 2022, https://www.163.com/dy/article/H4UA7RRP05534KO1.html.
[92] Paul Carsten, "China curbs Baidu healthcare ads business after student's death," *Reuters*. May 9, 2016, accessed June 23, 2022, https://www.reuters.com/article/us-baidu-regulations-idUSKCN0Y014U.

is seen as becoming chaotic and out of control.[93] The notion of barbarous growth presents the digital garden as an untamed space that poses a threat to the wider health of the social ecosystem. The state's promotion of a spiritual garden on the other hand is both an artificial ecosystem but also one that conforms to what the CCP view as safe, clean and wholesome digital spaces. Likewise, a garden has to be constantly maintained for upkeep which brings to question one of the biggest elephants in the room regarding China's digital policy - the evermore sophisticated means of internet control through the so-called Great Firewall of China (hereafter GFW).

Part of China's Golden Shield Project, the GFW functions to censor sensitive key terms and block off access to foreign sites deemed pernicious, obscene and above all, threatening to state power. This in turn forces outside companies to abide by certain regulations to self-censor or leave the Chinese market all together. Unsurprisingly, there exists a large body of scholarship on the GFW focusing on the issues of censorship, regulation and surveillance.[94] Likewise, a significant amount of attention is also focused on the various means of circumvention, subversion and struggle against the systems of control.[95] Hence many contentions remain rooted in the dichotomy between top-down control and bottom-up resistance. There is also the tendency of looking at the GFW from a macro perspective in its policy and technological infrastructure as opposed to quotidian understandings of its effects on the individual level. Recent works have however shed light on the affective experiences of living behind the wall. Jinying Li for one,

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[93] Yujing Liu, "Investors left to rue losses as fraudulent Chinese P2P lenders collapse in tighter regulatory environment." *South China Morning Post*. July 16, 2018, accessed June 23, 2022, https://www.scmp.com/business/companies/article/2155357/investors-left-rue-losses-fraudulent-chinese-p2p-lenders-collapse.

[94] See Jyh-An Lee and Ching-U. Liu, "Forbidden City enclosed by the Great Firewall: The law and power of Internet filtering in China," *Minn. JL Sci. & Tech.* 13 (2012): 125. Zixue Tai, "Casting the ubiquitous net of information control: Internet surveillance in China from golden shield to green dam," *International Journal of Advanced Pervasive and Ubiquitous Computing (IJAPUC)* 2, no. 1 (2010): 53-70.

[95] See Chong Zhang, "Who bypasses the Great Firewall in China?," *First Monday* (2020); Griffiths, James. *The great firewall of China: How to build and control an alternative version of the internet* (London: Bloomsbury Publishing, 2021).

points to not just the technical but also the discursive construction of the GFW among netizens who must contend with internet censorship in their everyday life.[96] For Li, the wall and the various attempts in crossing the wall (via VPNs and other circumvention tools) enables visible politics based on blockages, disconnection and absence. As Ramon Lobato's work on geo-blocking has shown, digital spaces are not as seamless as it may appear and it is instead fraught with obstacles, blockages and impediments due to regulatory and licensing limitations.[97] While the GFW works to directly cut off access to certain digital content, there are also VPN providers, reposters/content movers (*banyungong*), pirates and other grey-zone intermediaries by which digital content can move in and out of the country. All of which entail a human cost to the process by which digital commodities are circulated and reproduced from within and outside China's firewall.

To take this argument further, the GFW is not just a technological barrier but an ideological one as well. Indeed, many of my interlocutors who were born in the late 1990s or early 2000s often refer to Western sites as *waiwang* (foreign web) to contrast to the domestic internet they are accustomed to using regularly. Much like going to a foreign country, one must make a deliberate effort in surfing foreign sites. In addition, the GFW does not just block certain websites that result in the infamous "404: Not Found" message, but also drastically slows down traffic to foreign sites to a crawl. During the course of my fieldwork, I frequently encountered instances when trying to access foreign sites only to give up because it took forever to load, which often dissuaded me from further attempts. Here the very idea of having to navigate the GWF is enough to deter users from actively using foreign sites. Moreover, some Western pundits

[96] Jinying Li, "China: The techno-politics of the wall," In *Geoblocking and global video culture*, Ramon Lobato ed. (Amsterdam: Institute of Network Cultures. 2016), 110.
[97] Ramon Lobato, "Introduction: The new video geography," In *Geoblocking and global video culture*, Ramon Lobato ed. Amsterdam: Institute of Network Cultures. (Amsterdam: Institute of Network Cultures, 2016), 10.

even go as far as claiming China as operating under an intranet, a system blocked behind a wall and closed off to the world.[98] Such assertions, however, are technically false as China remains connected to the World Wide Web, with only access to certain foreign sites are heavily restricted. Such views are compounded by the rhetoric of the increasing digital divide where China is accused of promoting a splinternet to further insulate itself from the rest of the world.[99] These perspectives however do little to explain the actual intent and effects of the GFW and China's digital policies as a whole. In recent years, several countries including India and Russia have, just like China, advanced the notion of "digital sovereignty" in providing the legal basis for the regulation over the internet and the protection of domestic user data.[100] The growing influence of big tech and along with it the propagation of misinformation, surveillance, and wanton data collection have also reflected a departure away from the tenants of the early web built upon decentralization and openness. In fact, the calls for more internet regulation particularly dealing with issues of privacy and content moderation have increasingly become the norm among regulatory agencies around the world.[101]

The term spiritual garden also resonates with the notion of "walled gardens" popularized in the era of big tech where digital services are exclusively contained within a closed ecosystem.[102] The concept of the walled garden first pioneered by like of AOL (American

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[98] Beibei Bao, "How Internet Censorship Is Curbing Innovation in China," *The Atlantic*. April 23, 2013, accessed June 23, 2022, https://www.theatlantic.com/china/archive/2013/04/how-internet-censorship-is-curbing-innovation-in-china/275188/.
[99] Flavia Kenyon, "China's 'splinternet' will create a state-controlled alternative cyberspace," *The Guardian*. June 3, 2021, accessed June 23, 2022, https://www.theguardian.com/global-development/2021/jun/03/chinas-splinternet-blockchain-state-control-of-cyberspace.
[100] Stanislav Budnitsky and Lianrui Jia, "Branding Internet sovereignty: Digital media and the Chinese–Russian cyberalliance," *European Journal of Cultural Studies* 21, no. 5 (2018): 594-613.
[101] Rishi Iyengar, "The worldwide web as we know it may be ending." *CNN*, accessed June 23, 2022, https://edition.cnn.com/2021/02/23/tech/splinternet-tech-regulation-facebook/index.html.
[102] John Cox, "Tim Berners-Lee Warns of 'Walled Gardens' for Mobile Internet," *The New York Times*, November 15, 2007, accessed June 23, 2022, https://archive.nytimes.com/www.nytimes.com/idg/IDG_002570DE00740E1800257394004818F5.html.

Online),[103] functions as a model that discourages users from accessing competitor services which in turn limits openness, access and affordability. The walled garden, much like China's own internet regulations, serves to cordon off certain aspects of the digital sphere for domestic use. Yet, there are two fundamental tensions regarding notions of walled gardens and spiritual gardens, particularly the paradoxical ways it both limits and promotes innovation. On one hand, the so-called barbarous growth of big tech and social media platforms globally (i.e., Facebook, Google, Tencent, ByteDance, etc.) have led to increasing anti-competitive practices whereby digital content became siloed within respective platforms. At the same time, China's cultivation of spiritual gardens through the GFW also indirectly benefits Chinese domestic tech companies by keeping out foreign tech firms. Google's infamous exit from China's search engine market in 2010, marked one of the first in a slew of Western tech firms to leave the country owing to strong regulatory pressures and censorship that made doing business evermore challenging.[104] This in turn gave domestic Chinese search companies such as Baidu room to grow and flourish without any major outside competitor. Additionally, the banning of Western platforms indirectly makes Chinese tech companies less accountable to norms and practices used globally which further contributes to the "barbarous growth" without any consumer oversight. Chinese tech firms such as Tencent and Alibaba owe much of its meteoric rise to the walling off of potential external foreign rivals. Accordingly, Cynthia Liu considers China's internet censorship in fostering a form of "firewall protectionism" that benefits domestic firms much like the institution of trade barriers.[105] The garden metaphors therefore present a vision where China's internet

[103] Dwayne Winseck, "Netscapes of power: Convergence, consolidation and power in the Canadian mediascape," *Media, Culture & Society* 24, no. 6 (2002): 795-819.
[104] Matt Sheehan, "How Google took on China—and lost," *MIT Technology Review*. December 19, 2018, accessed June 23, 2022, https://www.technologyreview.com/2018/12/19/138307/how-google-took-on-china-and-lost.
[105] Cynthia Liu, "Internet Censorship as a Trade Barrier: A Look at the WTO Consistency of the Great Firewall in the Wake of the China-Google Dispute," *Geo. J. Int'l L.* 42 (2010): 1199.

sphere should be both cultivated but also contained to prevent the growth of supposed "invasive foreign species" such as Western internet companies. In this regard the spiritual garden also shares some parallel with SEZs in that it is zoning of a specific form of innovative environment that is deemed beneficial to state development, while excluding unwanted outside elements from gaining full access.

The paradoxical intersection between promoting and limiting innovation is apparent in the thriving tech startup scene in the country. The GFW in effect created a parallel ecosystem by which Chinese digital firms can take advantage of the latest digital trends and disruptive innovations in the West and adapt their business model to China, all doing so without any foreign competition.[106] If there is a popular platform in the West there is also likely a direct equivalent in China. One of the project managers at AppMax, Mr. Du who had spent several years working in Silicon Valley before moving back to China, explained the reasons for Chinese tech companies' success:

> In looking at recent trends, the common strategy is for Chinese startups to copy a successful model from the US to China, it is a simple and low-cost way to start a business. Having worked in the US, I was also exposed to a lot of the latest trends and business practices that are especially valuable here.

Du, in his early 40s, was originally from Anhui Province in China but immigrated to the US after attending business school. He eventually ended up working for several failed tech startups before returning to China. According to Du, China's tech scene in the early days is a bit of a wild west with little in the way of regulations that often led to competitive copying practices between companies. Indeed, companies such as Baidu and Alibaba have all done extremely well in

[106] Christopher Walker and Sarah Cook, "China's Parallel Online Universe," *The Diplomat*. December 27, 2011, accessed June 23, 2022, https://thediplomat.com/2011/12/chinas-parallel-online-universe.

imitating the successes from the likes Google and Amazon. Yet, although Chinese tech firms have long been accused of copying from the West, in recent years there are trends of a reversal in the export of Chinese platforms abroad. The rapid adoption of mobile payment and fintech innovations in the form of Alipay in China was seen by many as forms of indigenous innovation that are spearheading technological changes. Likewise, the global successes of Chinese apps such as TikTok proved that Chinese tech companies can innovate upon existing ideas in ways that can be both popular and profitable.[107] In another vein, scholars have also made notes of how the use of imitation, mimicry and *shanzhai* in Chinese creative and cultural industries constitute its own forms of innovation where it works to subvert intellectual property laws long dominated by Western countries.[108]

The ways innovation is both mobilized and curtailed also manifest within tech industries that I encountered throughout my fieldwork. This is made all the more apparent as both of the companies AppMax and LudoCo are Chinese mobile companies catering specifically to Western markets. This presents several major logistical challenges involved in transnational business exchanges. Because the global app economy is largely dominated by the Google and Apple duopoly, the respective app stores manifest as the sole outlets for developers across the world to distribute and market their apps. This, however, poses a major problem for Chinese companies because most of the Google ecosystem including the Google Play Store is blocked by the GFW. This issue goes beyond Google as much of global mobile app production, advertising and distribution also relies on US platforms such as Facebook, GitHub, Amazon Cloud, etc., all of

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[107] Chris Stokel-Walker, "How China could shape the future of technology," *BBC*. November 19, 2020, accessed June 23, 2022, https://www.bbc.com/future/article/20201117-how-china-social-media-apps-are-changing-technology.

[108] See Andrew Chubb, "China's Shanzhai Culture:'Grabism'and the politics of hybridity," *Journal of Contemporary China* 24, no. 92 (2015): 260-279; Bianca Bosker, "Original copies," In *Original Copies: Architectural Mimicry in Contemporary China* (Mānoa: University of Hawaii Press, 2013).

which are currently blocked in China. Virtual private networks (VPNs) are therefore essential in maintaining connection to the global app marketplace and Chinese companies often rely on commercial VPNs that, while technically illegal in China, remain largely tolerated for business use. However, since VPNs work by rerouting traffic to servers in countries outside China, it is also notorious for disconnections, slowdowns and latency issues. AppMax's IT specialist Mr. Li explained that a significant portion of his work is trying to optimize the company VPN so that connection to foreign web (*waiwang*) remains stable and downtime is minimized (Figure 2.2). Despite this, notices such as the one below posted by him on the company DingTalk are a regular affair.

Figure 2.2: "@Everyone: Right now, the company's "foreign web" (*waiwang*) access has encountered a problem, some sites are inaccessiblef. We are currently troubleshooting the issue, please be aware."

In an era where Chinese digital companies are increasingly turning outward to overseas markets (*a la* TikTok), the GFW remains problematic in acting as a barrier for tech workers in their daily work routines. While the use of VPNs has ameliorated some of the issues of accessibility, the persistence of downtime and outages remain a major problem in getting work done in a timely way. As I will explain later in this dissertation, the GFW and the issues of connectivity would be one of the contributing factors in the culture of overwork in the Chinese tech industry where impediment in accessing foreign sites needlessly prolongs time spent on simple tasks. So, while the GFW can benefit certain tech development and incubate domestic companies, it also makes it

challenging for them to connect to global markets, at least not without additional investment in circumvention tools and its associated issues with downtime. Here the contradictions of China's digital policy and the GFW is apparent as it both bolsters and binds innovation in ways that affect institutions and individuals in different ways.

Tech Policy and its Contradictions, Discontents and Involution

One of the biggest pieces of Chinese tech news making headlines in 2020 was arguably the slew of crackdowns on Chinese big tech companies.[109] Whether it is the suspension of DiDi Chuxing's IPO, or advocacy for Meituan delivery worker protection, the record fines imposed on Alibaba and restructuring of its ANT Group subsidiary, the Chinese government has taken drastic steps in imposing regulations covering wide swaths of industries spanning financial technology (fintech), education technology (edtech), eCommerce, social media and many others. The rationale for this crackdown varies from data sovereignty in the case of DiDi, to labor rights involving Meituan delivery riders, to the various antitrust violations related to Tencent, Alibaba and BiliBili.[110] China's big tech crackdown comes at a curious time given how tech companies such as Huawei and ByteDance were already under increasing regulatory scrutiny from the Trump administration in the US and elsewhere across the world. In the case of ByteDance's wildly popular short video app TikTok, much of the global backlash can be attributed to many of

[109] Tracy Qu and Jane Zhang, "A year into China's tech crackdown, the sky is no longer the limit for China's Big Tech," *South China Morning Post,* December 23, 2021, accessed June 23, 2022, https://www.scmp.com/tech/big-tech/article/3160705/year-chinas-tech-crackdown-sky-no-longer-limit-chinas-big-tech.
[110] Rebecca Davis, "Alibaba, Tencent and Chinese Tech Stocks Roiled by New Anti-Trust Fines," *Variety*. July 8, 2021, accessed June 23, 2022, https://variety.com/2021/digital/news/alibaba-tencent-anti-trust-fines-1235014863.

its questionable practices surrounding data collection, censorship and algorithmic control.[111] More broadly however, the case of TikTok reveals the varying contentions around the issues of privacy, access and freedom between China and the West. Here, the dual pronged attack against Chinese big tech both domestically and internationally, while based on different rationale and motivations can be again explained by the contradictory notions of the digital garden.

As mentioned in the introduction, Chinese big tech firms or *dachang* are notorious for anti-competitive and monopolistic practices. The respective digital ecosystems of companies such as Tencent and Alibaba are often not interoperable and do not share content (e.g., Tencent's WeChat messaging app bans hyperlinks to Alibaba's services). The proliferation of "barbarous growth" in the Chinese digital landscape also creates a hypercompetitive environment where the consumer ultimately loses. This enactment of artificial barriers between digital services can be even more prominently seen in the bifurcated regimes of China's health code that caused problems during the early phase of the COVID-19 pandemic, an issue that will be detailed in Chapter 4. In fact, much of the regulatory ire from the state is directed at Chinese big tech in lowering barriers and promoting a more equitable digital ecosystem where content is not siloed under different companies. Another main issue for Chinese regulators is the civilizing aims of the digital garden to clean up elements deemed pernicious and threatening to the state's bottom line. The boom in live-streaming and short video apps such as Douyin (Chinese version of TikTok) and Kuaishou have led to crackdowns against the "chaos" associated with online scams, cyberbullying and fake news.[112] Of course there are also significant political economic

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[111] Jyoti Mann, "China says it will send government officials to inspect Big Tech firms over their use of algorithms," *Business Insider*, April 9, 2022, accessed June 23, 2022, https://www.businessinsider.com/china-launches-crackdown-on-big-tech-algorithms-2022-4.

[112] Coco Feng, "China's internet watchdog vows to target 'chaos' in short videos and live streaming in 2022," *South China Morning Post*, March 17, 2022, accessed June 23, 2022, https://www.scmp.com/tech/policy/article/3170861/chinas-internet-watchdog-vows-target-chaos-short-videos-and-live.

dimensions to the tech crackdown. Because much of China's tech growth is driven by private venture capital, industry regulation is also seen as a means of curbing the influence of capital in ways that might threaten state power. The scrutiny over Alibaba's Ant Group including services such as Alipay provide the clear signal for intervention in the financial sector that have grown outside state oversight.[113] State policy in this regard manifests as a double-edged sword where forms of digital protectionism are promoted to foster domestic innovation but at the same time, policy can also be used to curtail the influence of Big Tech. The tendency for the Chinese state to micromanage many aspects of tech policy often creates needless impediments that harms innovation as opposed to promoting it.

In 2021, for instance, the Chinese government introduced regulations to limit minors under 18 years of age from gaming for more than 3 hours during the weekend. Much of this can be attributed to the longstanding views of video games as "spiritual opium" that contributes to game addiction and other social ills.[114] Mobile games are frequently accused of utilizing predatory monetization mechanics that exploit young people. Yet, this blanket ban directly affected some of the largest Chinese tech companies such as Tencent and NetEase where a large portion of their revenue comes from its respective game divisions. This policy coupled with a lull in the approval of new games due to the strict quota imposed each year that limit the number of titles that can be released to market. This in turn led to an overall decline in the game sector, especially during a time of significant expansion for Chinese companies both at home and abroad. While the regulation on new game approvals was lifted in 2022, the damage was already

[113] Sun Yu and Ryan McMorrow, "Beijing to break up Ant's Alipay and force creation of separate loans app," *Financial Times*, September 14, 2021, accessed June 23, 2022, https://www.ft.com/content/01b7c7ca-71ad-4baa-bddf-a4d5e65c5d79.
[114] Marcella Szablewicz, "The ill effects of "opium for the spirit": a critical cultural analysis of China's Internet addiction moral panic," *Chinese Journal of Communication* 3, no. 4 (2010): 453-470.

done. It was reported that over 14,000 Chinese game companies have gone out of business during this regulatory crackdown with significant downsizing at large companies such as ByteDance and BiliBili.[115] My own field site LudoCo was also not immune to such policies as they have endured significant layoffs due to the inability to release new games for the domestic market. Because some of the biggest tech companies in China including NetEase and Tencent are also gaming companies, such policies created widespread impact on the tech industry as a whole.

In fact, about a dozen of my former coworkers had left the industry entirely by 2021 when I conducted follow up interviews at both LudoCo and AppMax. One of the supervising directors at LudoCo, Mr. Sheng wrote a formal announcement in our team WeChat group stating his own feelings and why there is such a high turnover rate:

> The various black swan events [referring to the pandemic and economic downturn] over the past year have made working in tech untenable for many of us. The impact of lockdown and remote working have caused significant delays to our ability to meet deadlines and quality control for our products. Many of us were also made to work above our means through overtime to make up for the shortfall and I think we all deserve a break.

The shifting sentiment of my interlocutors from when I first started my fieldwork parallels the initial euphoria of the tech boom in 2017 and the subsequent ennui from the tech crackdown in 2020. This is also further compounded by the direct impact of the pandemic and its associated economic hardships also instilled a prevailing sense of pessimism among many tech workers as

[115] Owen S. Good, "China's gaming crackdown puts 14,000 companies out of business," *Polygon*. January 5, 2022, accessed June 23, 2022, https://www.polygon.com/22869159/china-video-games-crackdown-restrictions-super-buckyball-tournament.

to the direction of where the industry is heading.[116] The popularization of the term involution comes during this time of heightened precarity associated with not just problems intrinsic to the tech industry (i.e. labor issues, mental health, overtime, etc.) but also increasing contingencies from outside factors such as the trade war and the pandemic. This means the term involution has been taken up by different actors, institutions and even the state to mean different things under different sets of circumstances. It has in many ways become a catch all to refer to the pessimism associated with economic decline along with the challenges and pressures faced by everyday people. More pertinently however, the term involution despite its negative connotation has also evolved into a sort of a cause célèbre for workers who refuse to partake in this cycle of exploitation. Many of my interlocutors who had since left the companies they worked for frequently used the term *taijuanle* (too involuted) to describe the state of the industry and as a veiled critique of state policy.

As mentioned, China's significant investment in economic development for the last three decades have created the conditions for not just rapid growth but also the uneven distribution of resources. For one, the Chinese state has made significant investment in higher education in producing the necessary talent for an expanding knowledge economy. Most of my colleagues at the tech companies I worked for are all young college graduates fresh out of college in their first job. But the abundance of a highly educated workforce also makes the job market extremely competitive, and the term involution is frequently used in this context to refer to the challenges of making it in the industry. Not surprisingly, the past few years have been hailed as having the

[116] Yuan Li, "As Beijing Takes Control, Chinese Tech Companies Lose Jobs and Hope," *The New York Times*. January 5, 2022, accessed June 23, 2022, https://www.nytimes.com/2022/01/05/technology/china-tech-internet-crackdown-layoffs.html.

bleakest job prospects for young graduates,[117] especially during a time of massive downsizing and layoffs within the tech industry. Thus, the relationship between schooling and work is an important aspect of China's involution turn, where young people are herded from one regimented institution to another, while all at the same time, competing for the few of the same opportunities. Indeed, at many Chinese tech companies, employees frequently refer to each other as "classmates" (同学) not just as a way of leveling hierarchies in the workplace but also the means of extending the sociality of the schooling experience that many young employees have just graduated from. These parallels are clearly seen in the recent tech industry layoffs when companies began to refer to firings by other terms such as personnel optimization and "graduation". In 2022, the eCommerce company Jingdong (JD.com) for instance, instead of handing out termination of work slips, sent congratulatory letters to laid off employees that said: "congratulations, you have graduated".[118] This led to widespread outrage among tech workers who felt devalued and patronized by companies that do not take them seriously as employees. But on the broader level, it reflects the corporate rebranding of downsizing as a self-actualizing project, in which workers are not *fired* but rather advanced to other opportunities. This in turn offloads precarity and risk onto the shoulders of the individual.

The nimiety created by state policy that led to the "barbarous growth" within the tech industry also manifested in a toxic cutthroat work culture. Another significant challenge for Chinese tech companies in recent years is the prevailing issues dealing with labor abuses and overwork, both issues I will revisit later in this dissertation. In this context, involution is often

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[117] Lori Kawate, "China's very crowded class of 2022 fights for fewer jobs," *Nikkei Asia*, May 7, 2022, accessed June 23, 2022, https://asia.nikkei.com/Economy/China-s-very-crowded-class-of-2022-fights-for-fewer-jobs.
[118] Coco Feng, "JD.com, Bilibili trigger outcry after dismissals rebranded as 'graduations' amid wave of job cuts," *South China Morning Post*, March 19, 2022, accessed June 23, 2022, https://www.scmp.com/tech/big-tech/article/3172266/jdcom-bilibili-trigger-outcry-after-dismissals-rebranded-graduations?module=perpetual_scroll_0&pgtype=article&campaign=3172266.

used to describe both the ruthless work culture and the endless rat race in chasing career advances that often fail to materialize. But on a broad level, the wide usage of the term involution is an interesting one in part due to its academic origins that was taken up within the popular zeitgeist. More importantly it is the co-optation of the term beyond purely its scholarly definition into everyday popular discourse. Involution in this context is not just material, as in the scrambling for ever fewer resources available to individuals, but also affective, particularly through the disillusionment in attaining upward mobility that is increasingly seen as out of reach for many.

Conclusion:

In 2019, Wang Xing, the CEO of Meituan, the most popular food delivery platform in China, portended the state of the Chinese tech industry on Sina Weibo by posting: "I heard a saying: 2019 might be the worst year of the past decade, but it might also be the best year of the next decade".[119] Wang alluded to the fact that 2019 represented a significant downturn in the overall mood surrounding the industry that is under increasing pressure from both within and without. This ominous message comes during the backdrop of both a declining Chinese economy and the rising tensions associated with the Sino-US tech trade war. Indeed, the succeeding years following 2019 manifested in a global pandemic and the subsequent Chinese tech crackdown that had significantly impacted multitudes of industries across the global economy. For many within the tech industry it was a general sentiment that the good days are possibly over. Instead,

[119] Sohu, "Meituan chuangshiren wangxin: 2019 nian keneng huishi guoqu shinianli zuicha deyinian, na 2020 ne? [Meituan founder Wang Xin: 2019 might be the worst year of the past decade, but what about 2020?]", *Sohu*, December 26, 2019, accessed June 23, 2022, https://www.sohu.com/a/362994596_658197.

the meteoric growth of tech companies buoyed by unchecked venture capital has largely passed and with it, an increasingly uncertain future. Evidently, Meituan was soon to be placed under investigation in 2021 for monopolistic practices which led to fines and significant drops in its market value. Other tech companies were also not spared from the onslaught of the regulatory ire of the state as notable corporations such as BiliBili and Tencent announcing massive layoffs in underperforming divisions to weather declining revenues in the light of challenging economic conditions brought about by domestic policies and unexpected contingencies of the COVID-19 pandemic.[120] The significant investment in the tech industry has also created a turbulent period that gave rise to increasingly anti-competitive and protectionist policies that led to "barbarous growth" within the industry as a whole. At the same time, the pouring of resources into the tech sector in distinct technopoles also created vast inequalities that resulted in intensified competition in the labor market as people and capital are so highly concentrated in certain areas. The popularization of the term involution is therefore the culmination of not just the shifting material conditions resulting from state regulatory policies but also the affective response to the dashed aspirations of investors and tech workers alike. The onset of global crises and unpredictable contingencies only served to exacerbate many of the preexisting issues facing the Chinese tech industry writ large.

Such tensions transpired during the resurgent Omicron variant of COVID-19 in spring 2022 where cities such as Shanghai and Shenzhen underwent strict lockdowns in what was the worst outbreak since early 2020. With this new round of lockdown came the shutdown of major tech manufacturing centers such as Foxconn which caused significant supply chain disruptions in

[120] Kyle Mullin, "China's tech workers face layoff bloodbath amid crackdown, losses," *Aljazeera*, May 13, 2022, accessed June 23, 2022, https://www.aljazeera.com/economy/2022/5/13/as-beijing-cracks-down-tech-workers-face-layoffs-bloodbath.

global ICT production. Images emerged online of workers in Shanghai being trapped in office buildings and tech parks during the lockdown and having to spend the night at work.[121] Even Tesla's famed Gigafactory in Shanghai suffered prolonged shutdowns and only resumed production through the so-called "closed-loop" manufacturing where its workers had to live and sleep within the factory to prevent the spread of the virus.[122] The Chinese government's stubborn adherence to a zero Covid policy also created sustained lockdowns and quarantine practices that severely limited the mobility of people across the country. But because much of global high-tech manufacturing is predicated on the movement of capital, people and goods, its induced stasis would have a profound impact on the working lives of people across the sector. The draconian lockdown policy as demonstrated by workers sleeping in offices further perpetuated the already toxic culture of overwork and abuse within the tech industry (see Chapter 5), where the lines between labor/leisure and office/home become increasingly ambiguous as workers are stuck within the confines of their offices.

The double bind of state policy in both promoting and limiting innovation creates conflicting sets of priorities that leads to increasing uncertainty within the industry. The periodic swings between tightening and loosening of regulations also function to upend the labor sector that only exacerbate precarity for the most vulnerable workers. More broadly speaking, the promotion of tech parks like ZJHP reflect a sort of a microcosm of Chinese technological development since the market reforms of the 1980s. Behind the facade of glass-sheathed skyscrapers are not just zones of innovation but also zones of exclusion. The pooling of

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[121] Jane Li, "Sleep at work is the new work from home in China's financial hub," *Quartz*. April 1, 2022, accessed June 23, 2022, https://qz.com/2148103/shanghai-factories-embrace-winter-olympics-style-bubbles.
[122] James Vincent, "Tesla workers in Shanghai will reportedly sleep and eat in the factory after COVID shutdowns," *The Verge*. accessed June 23, 2022, https://www.theverge.com/2022/4/20/23033394/tesla-shanghai-factory-sleep-eat-factory-closed-loop-covid

resources into tech hubs created economic disparities that contributed to the further marginalization of migrant workers in the city. This in turn divulges both the challenges and contradictions in the state's implementation of tech policy in the nation-building process. The tech industry is often framed as a place where dreams and aspirations come true and for many people in the country it remains the ideal career choice for attaining upward mobility. But like how tech workers were locked down in their offices during the pandemic, the corporate workplace has shown itself to be a site of contestation and control over the meaning of work, agency and activism. In the following chapters 2 and 3, I will provide an intimate account of both the material and affective dimensions of work in the Chinese high-tech industry. Building from the demarcation of innovation zones, I center my analysis within the confines of the workplace to look at how workers navigate the quotidian pressures of a work-life regime that is ever more precarious in times of crisis and corporate intrusion.

Chapter 2
Placing Precarity: Spatial Politics of Tech Workers in Urban China

> In the early dawn, the city folded and collapsed. The skyscrapers bowed submissively like the humblest servants until their heads touched their feet; then they broke again, folded again, and twisted their necks and arms, stuffing them into the gaps. The compacted blocks that used to be the skyscrapers shuffled and assembled into dense, gigantic Rubik's Cubes that fell into a deep slumber.
>
> Jingfang Hao, *Folding Beijing* [123]

The above excerpt comes from the popular Chinese science fiction short story *Folding Beijing*, set in a future dystopian version of Beijing where different classes of people live in a folding city that are separated by different planes of time and space. The story follows a waste collector living the lowest "third space"[124] who makes his way to the first and second spaces to run errands despite the fact it's illegal to traverse different spaces. This short story in many ways reflects the alienating urban conditions in modern China. Even as a science fiction story, it shares uncanny resemblance to the living realities of many migrant workers who reside and work in the city. Such sentiments are also echoed in a viral meme (Figure 3.1) made of 4 collated images that started to spread among my WeChat friend circles and across Chinese social media sites in 2020, particularly among the white-collar workers within the tech industries in my social network. The first image titled "where I work" shows gleaming skyscrapers in city center, the second image titled "where I live" shows an old, dilapidated back alley, the third image titled "where I eat" shows a rickety hole-in-the-wall eatery, and the final image titled "where I sleep" shows a filthy

[123] Jingfang Hao, "Folding Beijing", In *Invisible Planets: Contemporary Chinese Science Fiction in Translation*, Ken Liu, ed. (New York: Macmillan, 2016).
[124] Unlike Homi Bhabha's theory of third space which signifies liminal or hybrid spaces, third space in *Folding Beijing* is just where the lowest class resides. See Homi K. Bhabha, *The location of culture* (London: Routledge, 2012).

room with cramped quarters. These snapshots, much like the story in *Folding Beijing*, highlight the contrasting predicament facing many workers in navigating the social and material pressures associated with everyday living. One comment left on Sina Weibo jokingly said: "working in the most luxurious office building, and eating the cheapest take out, the truth really hurts", while another comment said, "this is really a reflection of working in the big city".[125] Such sentiments especially resonate with many tech workers because the tech industry jobs have long been seen as lucrative positions with ample benefits and perks. At the same time, the tech industry is also fraught with precarity with high turnover rates and excessive working hours. This is further compounded by the everyday material pressures such as housing, food, healthcare, education, etc., as part of living in urban China. The consolidation of industries, talent and capital in cities such as Beijing and Shanghai created increasing inequalities where the cost of housing became out of reach for many. Here the spatial politics of urban China is apparent as high-end office buildings often command premium locales at city centers while workers are relegated to living in urban enclaves or the city's edge. The prevalence of spatial ordering follows a similar pattern across multitudes of Chinese cities such as Beijing, Shanghai and Guangzhou despite being geographically and culturally distant from one another.

[125] Sina Weibo, accessed June 23, 2022, https://weibo.com/2832482174/J48aizKyi?type=comment

Figure 3.1: Viral meme describing the spatial predicament of workers in urban China. From left to right: “Where I live, where I live, where I sleep, where I work”.[126]

The Chinese capital Beijing for instance is notorious for its “ant tribe” dwellings[127] where sprawling enclaves of dense urban housing are situated around the edge of the city, catering to thousands recent university graduates from across China working in the city. Many of these young migrants work in the bustling Haidian District, centered at Zhongguancun, a place often labeled (among many) as the Silicon Valley of China. Hence ant tribe dwellings are often situated along the axis close to the subway system in outlying districts that facilitate easy access to the commercial centers. Because its shoddy construction, ant tribe dwellings are relatively

[126] Sina, "woshangbandedifang vs wozhudedifang vs wochifandedifang vs wosuijiaodedifang [where I work vs where I live vs where I eat vs where I sleep],” Sina, May 29, 2020, accessed June 23, 2022, http://k.sina.com.cn/article_1956700750_74a0e24e04000o1sq.html?from=mood#/.
[127] Gu, Chao-lin, and Ming-jie Sheng, “Beijing’s ant tribe: A case study of Tangjialing,” *Human Geography* 27, no. 5 (2012): 20-24.

affordable compared to average rent in Beijing which makes it popular among migrant workers coming to the city. With dark winding alleys, these makeshift buildings are often constructed without official permits resulting in frequent demolition and evictions. Indeed, when I returned to Beijing in 2017, the ant tribe village I once visited in Changping District located north of Zhongguancun was demolished and residents pushed even further out to the city's edge in search of cheap accommodations. On the flip side, my primary fieldwork site in Guangzhou revealed slightly different spatial dynamics oriented on the numerous "urban villages" that are encircled by the persistent expansion of the city into former rural lands. Accordingly, state policy would play a key role in this organization of space, as You-tien Hsing's work on Chinese urban development points to the importance of both the urban core and the urban fringe as contested terrains by which governance is excised through space,[128] and the ways urban villages gain leverage and relative autonomy over the metropolitan government. Indeed, these urban villages would become, in effect, mini oases of relatively affordable housing allowing for people to live and commute to work. In either case, the persistent spatial exclusion is a key aspect of Chinese urban development that shapes people's working and private lives.

Influential works in spatial theory and urban geography have worked to elucidate the myriads of ways by which spaces are produced and co-produced through the process of territorialization and deterritorialization.[129] Henri Lefebvre for instance sees space as not a passive domain but active areas of social consumption and production. It is a domain where state power is often made legible through the clear biopolitical demarcation of housing, health care, and education. Space thus serves as an important discursive site of struggle between hegemonic

[128] You-tien Hsing, *The great urban transformation: Politics of land and property in China* (Oxford: Oxford University Press, 2010), 12.
[129] Henri Lefebvre and Donald Nicholson-Smith, *The production of space Vol. 142* (Hoboken: Blackwell, 1991), 11; David Harvey, *Social justice and the city* Vol. 1 (Athens: University of Georgia Press, 2010).

forces of control, domination and commodification but also places of deliberation, re-appropriation and creative resistance. The idea of space is also an important concept used by Michel de Certeau where he wants to define space as relational as opposed to absolute or in de Certeau's term "proper" notions of space. Space is deeply tied to our own perception and orientation to that of other subjects/objects. More importantly space is a process that is produced and practiced within our everyday life discourses. Our very pedestrian actions such as utterances, walks, and imaginations are precisely how we as individuals situate and locate ourselves from the spaces around us. This is especially salient in the tech industry as the accumulation of capital and talent at major technopoles as a result of state policy creates heightened inequalities among the haves and have-nots. China's longstanding *hukou* policy and its associated urban development plans also creates significant barriers for migrant workers to not just have access to material necessities such as housing, education and healthcare but their very own claims to urban citizenship itself.

The instrumentalization of urban policies underscores both the collective alienation and aspirations of migrant workers and is crucial to understanding the formation of working-class subjectivities. Space is thus not merely a container that can limit workers but also outlets for them to engage in productive action. For de Certeau "everyday life invents itself by poaching in countless ways on the property of others".[130] Here the spatial metaphor of housing and ownership is apparent as it signifies the process of appropriation. The term appropriation is interesting here because it can mean different things under different contexts. For one appropriation refers to the direct occupation and consumption spaces as a form of resistance against the imposed structural order. At the same time, appropriation also denotes what is

[130] Michel De Certeau, "The practice of everyday life, trans." Steven Rendall transl. (Berkeley: University of California Press, 1984), xxi.

deemed “appropriate” (or inappropriate) dictated by the power structures of dominance and how people navigate its limits. In other words, appropriation can encompass both the cultural and spatial conceptions of the assimilation and adoption of meaning/knowledge. This follows de Certeau’s analogy of the “renter” in describing textual readings, and in turn enables the spaces for the consumption, production, and distribution of ideas and subject formations. For de Certeau, appropriation “makes the text habitable, like a rented apartment. It transforms another person’s property into a space borrowed for a moment by a transient”.[131] In this regard, I argue the everyday precarity of working in the Chinese tech industry is inevitably shaped by the embedded spatial politics of living and working in urban China. The increasing compartmentalization of urban space, office space and personal space contributes to the making of increasingly atomized individuals, which in turn shapes their professional outlook and personal dreams.

There exists a large body of research dealing with the spatial politics of corporate institutions. Existing works in organization studies have also paid special attention to the important roles the workplace plays in not just the office but increasingly other public and private spaces.[132] Office spaces delineate a certain discursive order that manifest in physical spaces and bureaucratic systems which in turn exercise power on workers’ bodies. Organizational spaces reinforce preexisting hierarchies and social structures or in other words, how work is organized is reflexive of how society is organized writ large. In fact, scholars have also long equated the notion of the cubicle to cybernetic spaces, where workers sit in identical spaces connected via phones and digital technologies, much like a networked computer that can

[131] De Certeau, "The practice of everyday life,” xxi.
[132] Karen Dale and Gibson Burrell. *The spaces of organisation and the organisation of space: Power, identity and materiality at work* (London: Macmillan International Higher Education, 2007).

facilitate productivity and information exchange.[133] Here the cubicle with its uniformity is intended to break down hierarchies and allow for the egalitarian exchange of ideas without walled offices.[134] On the other hand, Jennifer Kaufmann-Buhler in her book, *Open Plan: A Design History of the American Office*, argues how the shift to the open office plan is predicated on the shifting culture of work from Fordist manufacturing to the "knowledge economy" that necessitated close interaction and sharing of ideas. Yet, the open office is discursively constructed by corporate management as an open and egalitarian space when it is in fact the means for further surveillance and cost-cutting. This chapter thus chronicles the lives of tech workers as they negotiate their everyday lives from urban spaces to office spaces and to their personal spaces of interaction. I document the often-intersecting conditions of alienation by which workers are boxed-in within the confines of the home/office and how in spite of such limitations, they find ways to co-produce and reclaim spaces for themselves.

This chapter is based on 20 ethnographic interviews with Chinese tech workers in Guangzhou at the mobile game company LudoCo. All of the interviews were conducted short before the COVID-19 and the lockdown when my interlocutors and I could still travel around with ease. I use a mix of semi-structured and life history interviews that can help contextualize much of the personal and professional experiences that can make sense of their past experiences that led them to join the tech industry. These life histories also provide the much-needed context into one's lives outside work and also their upbringing, schooling and leisure experiences in shaping their own personal and professional outlook. This also helps to contextualize how my informants navigate their everyday lives across private spaces, office spaces and digital spaces.

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[133] Ananda Mitra and Rae Lynn Schwartz, "From cyber space to cybernetic space: Rethinking the relationship between real and virtual spaces," *Journal of Computer-Mediated Communication* 7, no. 1 (2001): JCMC713.
[134] David Franz, "The Moral Life of Cubicles: The Utopian Origins of Dilbert's Workspace," *The New Atlantis* 19 (2008): 132-139.

Likewise, I also utilize close participant observation through my own "insider" participation within the workplace which allows me to peer into the inner industry logic of global app production. Because my interlocutors hail from all over the country, understanding their life stories can provide a broad mapping of working lives from different socioeconomic backgrounds and across different regions in China, which in turn provides me with a diverse data pool. This in turn offers a grounded perspective of young and mobile urbanites, many of whom are transplants in a new city. Additionally, since my interlocutors are also co-workers that I interacted with on a daily basis, my inquiries go far beyond just interviews but also everyday office banter, lunch gossip, along with formal and informal social interactions both inside and outside the corporate setting. As such most of my interviews take place in informal settings such as coffee shops and restaurants away from the watchful eye of corporate managers which in turn makes workers more comfortable in talking about their experiences. This also allowed me to observe the spatial organization of workers not just within office spaces but also the surrounding urban areas and personal spaces of interaction around the city.

Living in boxes

Guangzhou, the primary site of my fieldwork research, is a city home to a population of over 13 million and functions as the provincial seat of Guangdong Province. Formerly known as Canton City, Guangzhou was also among the first ports opened to Western imperialist powers, where it facilitated flows of commodities such as porcelain, tea and silk across different trade routes and cementing its role as one of the key nodes in the development of the global capitalist

economy since the 18th century.[135] More broadly, Canton also refers to the entire province of Guangdong where many of its cities were among the first Special Economic Zones (SEZs) as explicated in the last chapter designed for the purpose of market experimentation following the reforms and opening-up in the 1980s.[136] Today, Guangzhou is located within close proximity to other cities such as Hong Kong, Macau, Zhuhai, Shenzhen and Dongguan constitute the Greater Bay Area mega-region in China with a population of over 86 million.[137] The city is also able to preserve much of its local dialect that allows for more autonomy both in terms of policy and culture and allows for a more diverse ”representation of Chinese urbanity”.[138] Moreover, Guangzhou also hosts many major centers of higher learning centered at the massive Guangzhou University City which produces thousands of highly educated young people each year, many of whom would choose to join the growing high-tech industries in the city. Guangzhou's long-standing association for its open, cosmopolitan, and entrepreneurial dispositions made it particularly suited for globally minded companies. In fact, among the top echelon of the Chinese tech scene including giants like NetEase's game division along with Tencent's famed WeChat team are all based in Guangzhou. There is also a decidedly laid-back attitude in Guangzhou compared to the common suit-and-tie formality of Shanghai's financial district. The average working age is also younger in the Greater Bay Area compared to say Shanghai and Beijing

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[135] Paul A. Van Dyke, *Merchants of Canton and Macao: Politics and strategies in eighteenth-century Chinese trade*. Vol. 1 (Hong Kong: Hong Kong University Press, 2011).
[136] Xiangming Chen and Tomas de'Medici. “Research Note—The" Instant City" Coming of Age: Production of Spaces in China's Shenzhen Special Economic Zone,” *Urban Geography* 31, no. 8 (2010): 1141-1147.
[137] Jane Cai, Guo Rui and Phoebe Zhang, "Greater Bay Area: can China 'integrate' Hong Kong into its southern economic powerhouse?", South China Morning Post, June 18, 2022, accessed June 23, 2022, https://www.scmp.com/news/china/politics/article/3182172/greater-bay-area-can-china-integrate-its-southern-economic.
[138] Wilfred Yang Wang, *Digital media in urban China: Locating Guangzhou* (Lanham: Rowman & Littlefield, 2019).

which made the impression on me during my interviews where many of my interlocutors seem fairly open to discussing personal details of their working lives.

Practically all of the tech workers I encountered during the course of my fieldwork at LodoCo in Guangzhou are not local to the city itself. About a third of my interlocutors came from the surrounding Guangdong Province while the rest hail from all across China with most originating from other 2nd or 3rd tier cities around the country. This is not unique to LudoCo as my experiences in Shanghai also reveal a largely migrant working population within the Chinese tech industry, many who either came to work or stayed in the city after university. Likewise, given how Chinese hiring practices are heavily predicated on personal relationships there is also a large contingent of employees from Sichuan, a province where the CEO of LudoCo, Mr. Li is a hometown native. The gender breakdown of the company is approximately 60% male and 40% female, which is surprising given the long-standing dominance of men within the tech industry. Yet, this ratio belies the inherent inequalities associated with types of jobs where men generally occupy technical roles such as coders, designers and managerial positions, while more women tend to be in marketing, advertising and human resource teams. The gendered division of labor as this chapter will show will also be a major factor in the material struggles within the tech industry. Finally, LudoCo is also very young with the average age in the company, according to company promotion materials, to be just 25 years old. For the company having a young work force is a matter of pride as a budding startup as many are fresh college graduates who are just entering the workforce. Due to the highly regimented nature of university life and dormitory living, for many of these young graduates, this would be the first time they possess some sort of financial and spatial independence living in the city. Even so most of the workers are from other

regions outside Guangzhou, having a college education is still one of the prerequisites for entering the company.

Past research dealing with urban laborers in China fixated on migrant workers such as *nongmingong* from the Chinese countryside doing construction and other forms of manual labor.[139] Li Zhang for instance sees these workers uprooted from their traditional villages and remolded by the state into new working subjects that constitute a floating population in the city. The massive internal migration of people to the cities is also the direct result of state policy by which economic capital, manufacturing, infrastructure and technology, etc., are increasingly centered in these affluent urban centers, notably the so-called first tier cities such as Guangzhou, Beijing and Shanghai. Migrant workers thus also became the primary engineering driving much of China's economic growth in the past four decades.[140] However, the discourses around *nongmingong* also center on rural-urban contentions instead of other urban areas. Indeed, most of my interlocutors self-identify as from townships or urban backgrounds as opposed to rural areas. The fixation of migrant worker research on largely blue-collar work, ignores how much of white-collar labor also draws on people who are new to the city. This is compounded by the fact that tech industries are not merely made up of white-collar knowledge workers but also menial laborers on the assembly lines like those working in Foxconn factories making iPhones. The intersectional oppression faced by both blue-collar and white-collar labor points to how migrants often face similar issues associated with urban living. Most notably is the PRC's long standing *hukou*, or urban household registration system, that limits social status between rural and urban

[139] Minhua Ling, ""Bad students go to vocational schools!": Education, social reproduction and migrant youth in urban China," *The China Journal* 73 (2015): 108-131. Li Zhang, *Strangers in the city: Reconfigurations of space, power, and social networks within China's floating population*. (Stanford: Stanford University Press, 2001).
[140] Keung Wong, Daniel Fu, Chang Ying Li, and He Xue Song, "Rural migrant workers in urban China: living a marginalised life," *International Journal of Social Welfare* 16, no. 1 (2007): 32-40.

areas while also denies public services such as healthcare, education and housing access to rural migrants.[141]

The *hukou* system functions as a form of biopolitical governance that maintains different forms of social citizenship between rural and urban people.[142] As the previous chapter has shown, China's export-led economy had the paradoxical effect of pooling capital and resources into first tier cities such as Shanghai and Shenzhen that simultaneously required massive influx of rural migrants to sustain economic growth in these areas. This in turn created vast inequalities in the access to public services that are demarcated between urban and migrant denizens. Such contentions are not immune to tech workers from outside the city, who are also bounded by same limitations of *hukou* as any other migrant worker. Possessing an urban hukou therefore becomes a sign of privilege that provide not just material access to services but the elevating social status of being a true urban citizen. The *hukou* policy also related to the social distinction of *suzhi*, or "person of quality" that is often ascribed to migrant workers, who are often devalued in society.[143] Beijing's dismantling of ant tribe villages and eviction of rural migrants in recent years can be seen as ways of displacing so-called "low quality" (*di suzhi)*, uneducated and uncivilized rural migrants.[144] Like the *hukou* system*,* s*uzhi* therefore becomes the barometer by which migrants are judged as fitting to live in the city. The primary ways to elevate one's *suzhi* is through education and as a matter of fact, numerous cities in China often offer preferential *hukou* policies for highly educated talent to attract them to migrate to the city. *Suzhi* imparts a certain

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[141] See Tiejun Cheng and Mark Selden, "The origins and social consequences of China's hukou system," *The China Quarterly*139 (1994): 644-668; Kam Wing Chan, "The Chinese hukou system at 50," *Eurasian geography and economics* 50, no. 2 (2009): 197-221; Hairong Yan, *New Masters, New Servants*. (Durham: Duke University Press, 2008).
[142] Chenchen Zhang, "Governing neoliberal authoritarian citizenship: theorizing hukou and the changing mobility regime in China," *Citizenship Studies* 22, no. 8 (2018): 855-881.
[143] Ann Anagnost, "The corporeal politics of quality (suzhi)," *Public culture* 16, no. 2 (2004): 189-208.
[144] Youqin Huang and Chengdong Yi, "Invisible migrant enclaves in Chinese cities: Underground living in Beijing, China," *Urban Studies* 52, no. 15 (2015): 2948-2973.

set of values on the individual where higher status can be attainable via self-improvement. This dovetails with what Lisa Hoffman consider as the "patriotic professional" by which measures of quality (*suzhi*) and culture (*wenhua*) are instilled within the professionalization process that help contribute to the national project.[145] Here the effort of cultivating self-enterprising individuals based on the neoliberal logic of choice and freedom but in reality, offload governance and national duty onto the shoulders of the professional class.

One of my cubicle mates and close acquaintances, Ms. Xiao, at only 24, is from the mid-tier coastal city of Chaoshan about a 4-hour drive to the city of Guangzhou. Ms. Xiao is unique among my interlocutors as someone who spoke nearly fluent English despite having never studied or traveled outside of China. She is a huge fan of American TV shows and music which she credits as perhaps one reason for her proficiency in the language, this in turn also made her an ideal talent for companies such as LudoCo where she was hired as part of the global localization team. Having just joined the company she was quite new to the industry and explained:

> I came to Guangzhou 5 years ago when I attended university here and after graduation there were a lot more opportunities here compared to my hometown. I stayed in Guangzhou because the city government offered incentives for recent graduates such as a *hukou* residency, so I ended up working here.

Indeed, numerous Chinese cities have implemented incentives to attract talent through the offer of incentives such as *hukou*, stipends, and housing allowances for new graduates and other critical skilled laborers. Guangzhou, for instance, allows for an expedited process of obtaining *hukou* for university graduates who pay 12-months of social insurance, which are often covered

[145] Lisa M. Hoffman, *Patriotic professionalism in urban China,* 11.

by their employers.[146] Meaning that as long as one is able to secure a job after graduation, they are eligible for *hukou* residency to stay in the city, buy housing and enjoy its privileges. Therefore, while the *hukou* system presents barriers for people to work and live in the city, for those with the necessary background and talent, there are also express lanes by which they can obtain it. This shows how the discriminatory use of the *hukou* system is further exacerbated by its implementation that only functions to maintain the institutions of inequality. Here the *hukou* system not only maintains a bifurcated regime between rural and urban denizens but also among those with the prerequisite *suzhi* or quality to become urban residents.

Having a *hukou* however is only the first step and actually having the wherewithal to live and survive in the city is another matter entirely, most notably of which is the housing issue. Having a place to live in this regard is not just a material need but a symbol for upward mobility in China. Zhang for instance contends there is an important spatial element within the Chinese class-making that goes beyond economic and cultural means of class formation. Here the allures of urban living and home ownership are critical elements of how individuals see themselves within the wider "cultural milieu" in postsocialist China.[147] Yet in cities like Guangzhou the cost of owning a home has become largely out of reach for most, and expectedly the majority of my interlocutors rent as opposed to buying a place. Despite the promises of the tech industry as highly lucrative and attractive places to work, many workers, even those in high-ranking positions could not afford to own property. Take for instance Mr. Lu, who like Xiao, is also a native of Guangdong province having grown up in the northernmost part of the province in the city of Shaoguan, a region often considered remote compared to the highly developed cities in

[146] China Daily, "Nanjing relaxes hukou rules as cities strive to attract talents," *China Daily*, February 23, 2021, accessed June 23, 2022, https://www.chinadailyhk.com/article/158456
[147] Li Zhang, *In search of paradise: Middle-class living in a Chinese metropolis* (Ithaca: Cornell University Press, 2012), 15.

the pearl river delta. In his late-20s, Lu was one of the earliest employees at the company and has since been promoted to team leader overseeing localization work in the company and is also my direct supervisor at LudoCo. Lu graduated from a technical college in Guangzhou and joined the mobile game industry shortly after graduation. He credits his good command of English to his college years where he worked on a campus bar and frequently socialized with other international students, which also inadvertently made him a habitual smoker. Unlike many other workers I met, Lu seems the most content compared to everyone else working at the company. With a heavy Southern Mandarin accent, Lu explained his personal outlook when asked about his long-term plans in Guangzhou:

> Since I don't plan on buying a house in Guangzhou, I don't feel too pressured about living in the city. My girlfriend and I live together so we can share the burden of rent even if it costs a good portion of our salary. Although it's an old place far from the office, it's on the bus line so my daily commute isn't so bad. Who knows, I might move back to my hometown eventually where the cost of living is low and start my own company one day.

Here Lu essentially resigned to the fact he will never own a house in Guangzhou and his only aspiration is to make enough money to return to his hometown. Lu later confided to me that he wanted to get married and that his future in-laws have been pressuring him to buy a house to settle down. Because traditionally having a house is the prerequisite to marriage, Lu has no real choice but to eventually move to his hometown where housing is cheaper than Guangzhou. When I asked the same question to Xiao, she couldn't even think of an answer as she could hardly afford rent given her entry-level salary, let alone dream of having a place for herself. Such lack of belonging shows how many workers are relegated to perpetual transplants where their

rights to urban citizenship are denied not just via the *hukou* system but the dreams of home ownership that are out of reach.

Figure 3.2: Guangzhou Metro's "Line 5 of Death" during rush hour.

The spatial organizations of corporate offices in city centers therefore created unaffordable housing that directly pushes rental living outwards to the city's edge which makes daily commutes challenging. So bad is the commute to work, human resources at the company would frequently warn new employees to avoid living along the "5th line of death" in reference to line 5 on the subway map often considered the busiest in that entire network that runs through the major commercial districts in Guangzhou. I personally experienced the crowds during rush hour as my commute relies on the interchange on this particular line where I often have to wait two full trains before being able to board during rush hour each morning (Figure 3.2). Mr. Han, a 35-year-old senior UX designer from Hebei Province whose commute takes more than 1.5 hours to work each day. Han, a married man with a newborn baby, is one of the few people in the office who owns an apartment in the city. Despite this, he gave an account of his commute while shaking his head:

> I live almost next to the airport; can you imagine that! Due to the cost of housing in Guangzhou, I can only afford to buy an apartment in the outskirts of the city. So, I need to get up at 7am each morning to take the subway to work and I often get home after 10pm due to overtime.

Thus, Han has to easily spend 3 hours each day just getting in and out of work, which as this dissertation will later demonstrate (in Chapter 4 and 5) prove to be extremely taxing for the general well-being of workers in an industry where excessive work is already commonplace. Han added: "I am actually lucky I even got a place within the city limits; I have a friend who had to commute from nearby Foshan [an adjoining city] into Guangzhou from another city just for work!" He would go on to reveal he is also heavily in debt after taking out his mortgage and must work overtime to make ends meet. Of course, line 5 is not unique to Guangzhou, as other cities such as Beijing and Shanghai also share similar predicament of nightmare commutes along

subway lines connecting the various tech parks and business districts dotted around the city. Those who do not want to deal with the long commute such as Ms. Xiao resorted to spending large portions of her income on renting closer to the office. “Being able to walk or bike to work really spoiled me and I can’t imagine living hours away but then again, I am very much in financial debt because of this”, she confessed. So bad are the issues of housing, company employees formed a private WeChat group dedicated to discussing rental guides, apartment hunting tips and prospective roommates for new employees.

The lack of housing and access to *hukou* also contributes to what Ngai-Ling Sum considers as a form of marginalized subjectivity popularly known as *diaosi*, or loser, which is often used in a self-mocking way to describe the loneliness, frustrations and hardships in life.[148] For Sum, *diaosi* is a subaltern identity stemming from both the exclusionary policy of *hukou* and the discursive construction of *suzhi* that works to devalue urban migrants, who then internalize the feelings of inferiority and sub-citizenship. Mr. Shan a programmer in his late-30s and one of the older employees at the company confessed to me:

> I admit I’m a bit of a *diaosi*, I don’t have much of a social life outside of work. I prefer to stay home and play video games or binge TV shows instead. It is not that I don’t want to be social but I neither have the energy nor money to go out and meet people.

Because owning a house in China is often the condition for getting married, the *diaosi* identity is also marked by romantic frustration and loneliness. It reflects a particular type of affective predicament by which people are increasingly withdrawn from social life owing to the atomizing effects of urban life in China. While the popularity of the term *diaosi* predates involution, both terms share many discursive parallels in its inward looking, downtrodden predicament where the

[148] Sum, Ngai-Ling, “The makings of subaltern subjects: Embodiment, contradictory consciousness, and re-hegemonization of the diaosi in China,” *Globalizations* 14, no. 2 (2017): 298-312.

competition for affection is predicated on material gains that are out of reach. But for many like Cui who is also single, *diaosi* is an identity they actively embrace not just as a form of self-deprecating irony but also a hopeful dream they can somehow improve their material conditions and elevate their *suzhi* to become successful in the future. The urban city is hence paradoxically both a site of aspiration by which workers flock to in search of advancement and privileges but also a place of exclusion. The precarious conditions of urban living are often produced and reproduced through state policies that continue to create further social divisions, isolation and alienation.

Working in boxes

The spatial ordering in the city and its spatial politics can also be extended to the workplace itself. Located in the heart of Tianhe District, the central business district (CBD) of Guangzhou and perched on the top floors of a gleaming high-rise skyscraper is LudoCo, a small Chinese mobile game company that worked as a full-time employee specializing the game localization. As a company with the aspirations to expand its footprint in the global mobile game market, its presence in a global city like Guangzhou offers it distinct advantages in drawing from a cosmopolitan and diverse workforce. Such a premium location in the city center also comes with a wide range of nearby amenities including high-end shopping malls, restaurants, and luxury hotels, along with close access to subway lines and a high-speech rail station. The building is also professionally managed and off limits to outside personnel. Entry to the building for instance requires facial recognition scans to unlock the gates to the elevators for the upper floors. Among the other occupants of the building are fintech, blockchain, mobile software, and

bioscience companies, all constituting but a small fraction of the burgeoning high-tech industries in the city.

Figure 3.3: The view of Guangzhou Tianhe Business District from close to my office at LudoCo.

The sizable office occupies an entire floor of the high-rise that can accommodate over 150 employees. Being a young company, LudoCo's office also contains ample room for future

expansion given the perennial startup dreams of growth and venture investment. The open office floor plan is laid out in a roughly “L” shape with one wing being the publishing division made up of marketing and operations teams while the other wing is composed of the technical teams including coders, UX designers and graphics teams. This artificial division demarcates the fine line between technical work and creative work that make up a typical mobile game company in China. Such schism also implicitly creates a gender division within the company as the technical division is overwhelmingly male compared to the other side of the building, where different work routines also meant the two sides of the office rarely physically interacted with one another. The main floor space despite its open layout is further subdivided into specific zones for different teams to sit together in largely identical tables that can be rearranged and expanded if there are changes in personnel. On a prominent side wall adjoining the “L” is a large written mission statement that reads in English: “Mission: win the hearts of players worldwide with lovingly crafted games”, below is a space containing the signature of every employee and an important rite of passage for new employees to sign when first joining the company. Spread around the office are 8 conference rooms which are labeled with the names of international cities such as Cape Town, Seoul, New York, London, Tokyo, etc. that are indicative of the global ambitions of this budding startup.

Figure 3.4: open office layout at LudoCo with identical and interchangeable furniture.

There are also dedicated areas such as fitness areas, foosball tables, video game stalls, and dining tables to provide different amenities to workers throughout the day. These rooms are filled with comfy sofas, bean bags, and plush upholstery so give off a sense of comfort surroundings and homey decor. Renyi Hong for instance, posits that the sensorial experiences (textures, contours and aesthetics of the workplace) promoted by tech companies functions as ways of imbuing work with pleasure which in turn further attach workers to the culture of work.[149] Unsurprisingly, public press and academic discourses have frequently noted the predominance of such perks within Silicon Valley where tech companies in the US have

[149] Renyi Hong, "Office interiors and the fantasy of information work," *tripleC: Communication, Capitalism & Critique.* 15, no. 2 (2017): 540-562.

consistently made the list among “the best companies to work for”. Google and Facebook, for instance, both occupy massive campuses that are self-contained with every service imaginable while Apple’s 5 billion dollar corporate campus in Cupertino resembles something out of a science fiction film.[150] Reinhold Martin has considered the rise of the modern glass-sheathed corporate architecture as reflexive of the need to construct a corporate identity that workers themselves can identify with as belonging to a collective social organization, as opposed to cogs in a machine as part of standardized industrial labor.[151] Indeed, Chinese tech companies have imitated Western office complexes by investing in extravagant corporate headquarters occupying luxury skyscrapers or sprawling tech parks. The Chinese tech giant Huawei’s massive corporate headquarters in the city of Dongguan just a short drive from Guangzhou, for instance, can accommodate over 25,000 employees and features a theme park-esq campus filled with imitation architecture of European palaces, castles, and chateaus, complete with its own people-mover tram system for shuttling workers across its vast footprint.[152] But unlike the Googleplex at Mountain View, which have areas open to the public, the Huawei campus remains largely off-limits to outsiders. While the startups I worked for in China, despite being much smaller operations and lacking the resources to build large corporate campuses, still aspire to provide amenities in a bid to compete for workers with attractive comforts and benefits. Having a prominent office in premium real estate therefore became not just the facade for corporate success but also as recruitment tools to attract potential talent.

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[150] Rowan Moore, “The billion-dollar palaces of Apple, Facebook and Google", *The Guardian*, July 23, 2017, accessed June 23, 2022, https://www.theguardian.com/artanddesign/2017/jul/23/inside-billion-dollar-palaces-of-tech-giants-facebook-apple-google-london-california-wealth-power.

[151] Reinhold Martin, "The Organizational Complex: Cybernetics, Space, Discourse." *Assemblage* 37 (1998): 103-127.

[152] Alan Taylor, “Photos of Huawei’s European-Themed Campus in China,” *The Atlantic*, May 13, 2019, accessed June 23, 2022, https://www.theatlantic.com/photo/2019/05/photos-of-huaweis-european-themed-campus-in-china/589342/.

More importantly, the abundance of amenities and perks that is intended to provide the material incentives to mold workers into self-actualizing subjects necessary in creative work. LudoCo's company promotion and recruitment ads for instance, often boast its special game room decked out with game consoles, arcade machines, Smart TV and other forms of digital entertainment that workers can use to relax and unwind. But in reality, in my year-long fieldwork, I rarely witnessed employees actually taking advantage of these perks to the extent the arcade machines sit unplugged and gather dust in a corner. When asked why this is the case, Mr. Shan, a programmer on my project team, quipped "the PlayStation consoles in the game area are really just for show, no one would dare intentionally use it because they would be seen as slacking off at work". In fact, because the game room is enclosed in glass walls offering little to no privacy, it is also within plain view of company management which alone is enough to dissuade many workers from actually using such amenities. The deployment of such frivolous perks as an excuse for worker well-being is of course not unique to just Chinese tech companies. For instance, in 2021, Amazon came under fire for installing the so-called "AmaZen" wellness chambers at Amazon Warehouses.[153] While promoted as spaces for workers to decompress and relieve their workday stresses, it is in reality just a glorified booth with a TV screen that loops relaxing videos. By creating spaces of leisure in the corporate setting, tech companies are effectively offloading much of the affective labor onto its workers, where mental and physical well-being are framed as a personal responsibility. Moreover, as the next chapter will show, the instrumentalization of benefits and perks is also a deliberate corporate strategy in sustaining workers' passion and productivity in times of increasing precarity.

[153] Sam Tonkin, "Amazon is ridiculed on social media after revealing plans to offer warehouse workers time in a coffin-like 'wellness chamber' to focus on their mental health," *Dailymail*. June 1, 2021, accessed June 23, 2022, https://www.dailymail.co.uk/sciencetech/article-9639389/Amazon-offer-workers-time-coffin-like-wellness-chamber-focus-mental-health.html

In another vein, the homey decor and comfy surroundings produces a facade of domesticity that serves to reframe work as something normalized as a routine in one's everyday life. Many employees would spend the effort to decorate and personalize their workstations with cushions and blankets to make it even more comfortable. Mr. Cui, a senior coder on the development team for instance, often spends long hours doing overtime. Wen, who is from Beijing and possesses an urban *hukou*, making him fairly well off compared to many of my other informants. He even went as far as bringing an electric back massager seat to the office so that he can relax a bit during breaks. He sighed while lamenting to me:

> I feel like I practically live in the office working 996 all the time, especially during crunch time before game releases where I easily work for 48 hours straight at times. I do my best to make my work comfortable by sitting for hours for the sake of my poor back.

Thus, workers are actively encouraged to personalize their individual workstation with their own homey comforts, which in turn promotes workers to envision the office as their private space despite the publicness of an open office design. The inherent contradictions of leisure and labor is apparent here, as the open office in reality is predicated on standardized furniture where the intended design requires modularity, flexibility, and adaptability for an increasingly fluid workforce. This in turn leaves little actual room for customization and personalization beyond one's immediate workstations. Standard workstations are also fully modular, and tables can be arranged and rearranged in multiple ways, which is reflexive of a highly flexible startup culture with high turnover rates and personnel changes. More importantly, the various amenities provided in the office, while on the surface may follow the discourse of promoting creativity and productivity, have the added effect of making workers stay and work in the office longer, which became the real barometer for worker productivity (see Chapter 5). This also highlights the

spatial melding of home offices and office homes where the boundaries of labor and leisure become indistinguishable, which perpetuates work into one's personal time and space.

Recent research involving Chinese organizational spaces have noted how a given office layout produces specific sets of spatial power relations in the workplace.[154] Unlike traditional corporations and government offices in China where power is highly visible through office layouts, cubicles and private offices,[155] the open space design of startups functions to level the hierarchy in the workplace. Inspired by the Silicon Valley mantra of openness and collaboration, the desks are placed in rows facing one another with low-profile dividers intended to facilitate worker interaction. Apart from the division of technical and creative teams, there are no discernable aspects of the office that can denote any form of seniority. In fact, the CEO Mr. Li does not have a personal office and sits in a corner with a project team like any other worker. Yet, despite such use of open floor plans, my observation of everyday work interactions suggests that workers seldom ever leave their desks or interact with other teams from across the office. Instead, most of inter-office communication is conducted using DingTalk, a super app similar to Slack, which as I will document in Chapter 4, provides the foundational infrastructure for digital surveillance in the workplace. In one memorable instance, the HR assistant Ms. Gan would often only communicate to me using DingTalk despite literally sitting next to me, and I basically had to turn around and speak to her in person. On a broader note, the spatial and discursive construction of openness in the tech scene belies the neoliberal valorization of openness and office design and planning as a means of fostering co-creation and innovation also ironically

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[154] Alfons Van Marrewijk and Dvora Yanow, eds. *Organizational spaces: Rematerializing the workaday world*. (Cheltenham: Edward Elgar Publishing, 2010); Tyler, Melissa, and Laurie Cohen. "Spaces that matter: Gender performativity and organizational space," *Organization Studies* 31, no. 2 (2010): 175-198.

[155] Zhongyuan Zhang and André Spicer. "'Leader, you first': The everyday production of hierarchical space in a Chinese bureaucracy," *Human Relations* 67, no. 6 (2014): 739-762.

made it easier to survey and watch over workers as the managers have clear sightlines across the entirety of the office floor. At the same time, it also inadvertently allows for sustained means by which the company management can easily see who is working or not working. The supposed decentralization of hierarchies thus actually renders existing tensions and inequalities more visible to everyone in the office.

Figure 3.5: Smart food lockers located at the center of the office where food is kept warm for lunch and dinner time.

Eating from boxes

The most important aspect of daily office life apart from its layout and physical amenities is arguably the food. Unlike large tech companies such as Tencent or Alibaba, which have large complimentary buffet-style dining areas for lunch with every option imaginable, smaller startup such as LudoCo must make do with downsized and *a la cart* options. Scholars have also long associated the development of "fast food" with "fast capitalism" and the inevitable link between working and eating.[156] However, in the case of corporate dining, food is framed as not just a form of convenience such as being able to eat without leaving the office, but also a way to boost office atmosphere and morale. Located at the fulcrum of the "L" shaped office is the "smart food lockers" (Figure 3.5) where workers can pick up their lunch boxes to eat. The smart food lockers are basically digital food storage cubbies where workers can pick up lunch boxes at lunchtime or dinnertime. Each morning, workers using a mini app in WeChat, will first order their preferred food from a set menu from various fast food outlets which will then be delivered and stored in the lockers. Each locker can then be unlocked via the mini app to be picked up at the designated time of 12:00pm noon so that no one cannot pick up their meals and eat early. There are four lockers numbered from D1 to D4 and are allocated to different sections in the office. These lockers are heated so that lunch or dinner can remain hot while workers wait until it is their turn to go and pick up food.

The digital food storage lockers here echoes Craig Robertson's analysis of the roles of filing cabinets. As such, the physical filing cabinet connote a discursive bias of verticality that just like the skyscraper for which it is housed in, is intended to maximize efficiency in the

[156] Ben Agger, *Speeding up fast capitalism: Cultures, jobs, families, schools, bodies*. (London: Routledge, 2015), 123.

workplace.[157] Much like the remediation of physical files, tabs and folders in the ways information is organized on our computers, the smart food locker is also a skeuomorphic representation that workers must interface with in an app to open their respective lockers (Figure 3.6). This is intended to provide a highly efficient, seamless, and personalized food access experience for workers over say traditional catering services and lunch lines. While on the surface, the use of app-mediated smart lockers may seem like a high-tech and efficient means of distributing food to a large workforce, in reality, it mainly relies on analogue and menial labor. Each lunchbox had to be personally delivered and placed in each cubbie by food delivery workers according to the locker number assigned by the app. Manual input also meant that mistakes are common, and workers frequently find misplaced or wrong meals placed in their own cubby which often result in chaotic long lines during lunch time which defeats the purpose of a digitalized system to begin with. There are also times when the app or the smart locker, for whatever reason, breaks down which renders the whole system inaccessible, and HR has to manually hand out lunch to each employee.

[157] Craig Robertson, *The Filing Cabinet: A Vertical History of Information* (Minneapolis: University of Minnesota Press, 2021), 35.

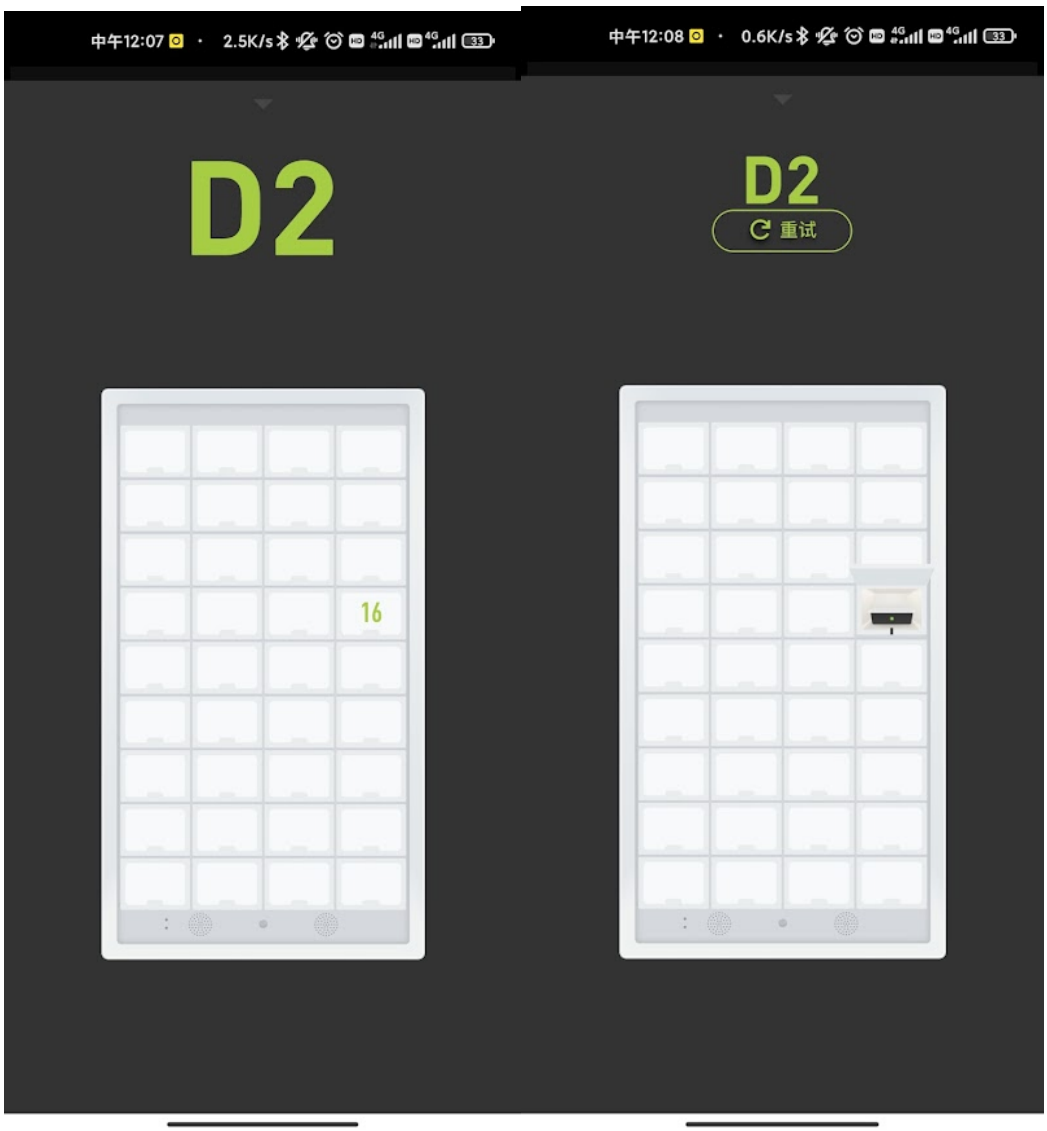

Figure 3.6: The WeChat mini app for unlocking and picking up one's meals from the smart locker as represented by a virtual skeuomorph of a digital locker cabinet (compared to actual picture in Figure 3.5).

Adjacent to the lockers are also smart vending machines where workers can pay for different drinks using their smartphones by scanning a QR code, however the items in the vending machine are not included in the free meal credits provided by the company. So, it mostly goes unused, and workers instead just use the freely provided water dispenser in the corner. Lacking a proper office cantina, the central location of the food locker functions as the *water cooler* of the company and provides a rare opportunity for workers from different teams to come

together and briefly mingle and fraternize before returning to their cubicles to eat. At LudoCo for instance, food is heavily subsidized with 600 RMB ($90)[158] in allowance each month with additional 2,000 RMB in meal stipends for team building activities outside the office. Food in this regard is leveraged by many tech companies as an important source of office morale[159] and is something the company actively promotes as a perk for employees. At the same time, the app-mediated food lockers also point to the further compartmentalization of the work experience as implicitly individualistic, personalized and alienated. The offer of free food implicitly meant workers were discouraged from eating out and because the small office does not have a proper dining area, workers must then eat alone in front of their computers and unable to actually socialize with each other during the lunch break. This in effect forces workers to spend their lunch breaks in the office which allows them to return to work at their workstations faster. Many of my colleagues also made note of the dystopian nature of eating lunch boxes from boxes sitting in front of their cubicles. "This honestly feels like prison, eat out of an electric cabinet and don't even get me started with how bad the food is", complained Mr. Long, a marketing specialist who joined the company from NetEase. Food in this regard is much less a form of reward but a further means of enforcing and sustaining productivity and performance.

[158] The average meal cost about 25RMB so 600RMB can cover 24 meals, not enough for a whole month so workers generally still have to pay out of pocket to cover the rest.
[159] Justin Parkinson and Luke Jones, "Does free food make for a happier office?", *BBC News Magazine*, November 20, 2014, accessed June 23, 2022, https://www.bbc.com/news/magazine-30113648

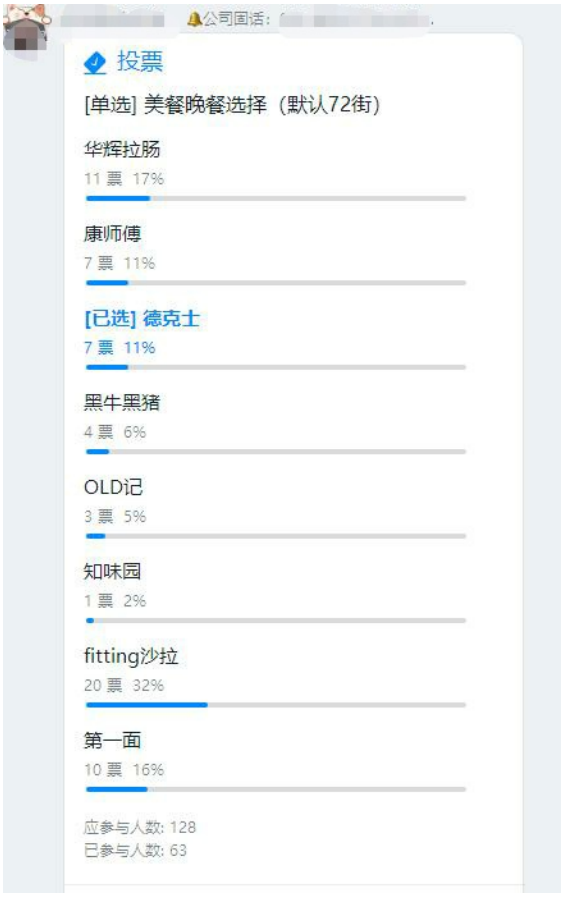

Figure 3.7: Poll issued by HR on DingTalk calling for vote for food options from mostly fast food outlets.

The use of digital food cubbies also highlights the increasing platformization of corporate life where many material services are outsourced onto other providers. In fact, most of the set lunches are from premade meal packs made in standardized "ghost kitchens"[160] designed to be quickly heated, produced in volume for hundreds of workers and then delivered by gig workers from Meituan or Ele.me (two main food delivery platforms in China) within short periods of time. This in turn creates intersecting modes of oppression that relies on invisible labor which is both sustained and produced by other tech companies. In addition, because food is heavily

[160] Aaron Shapiro, "Platform urbanism in a pandemic: Dark stores, ghost kitchens, and the logistical-urban frontier," *Journal of Consumer Culture* (2022): 14695405211069983.

subsidized, it is also the area where the company tends to be stingy about quality and generally relies on cheap fast food options as opposed to gourmet meals offered at other big tech companies. It is therefore not surprising that the quality of food at the company is frequently the source of grievances from workers. There were several instances where someone found bugs or hair in their meals and posted pictures to complain on DingTalk's company-wide group, with another coworker sarcastically quipped, "at least you got some protein, I don't even have any meat in my lunch!" Likewise, the reliance on cheap, pre-made food also meant limited varieties of food which made it difficult to accommodate foreign workers and those with specific dietary requirements. Maria, a Russian localizer at LudoCo, who studied in China and chose to stay after settling down with her boyfriend who work at another tech company in the city, complained to me: "I'm vegetarian and there are hardly any options for me to eat here, I basically have to bring my own food each day". Other colleagues, especially those on a higher pay grade simply refuse to eat at the office and chose to go outside the office to dine on the myriads of options available in the bustling city center. Such sentiments are echoed by numerous employees who felt the lackluster food offerings betrays the lofty promises from the company when they first signed their contracts. This in turn makes it hard to retain and recruit diverse and international workers when the company management desperately seeks a cosmopolitan staff for marketing to a global market.

The promotion of perks such as "free lunches" as its name suggests operates on several contradictory levels. On one hand, food is seen as an important morale boosters and quality of life improvement for the workforce, but at the same time, it is a significant expense that with cost-cutting often fails to accomplish its intended goals. As a matter of fact, food during lunch break is also one of the few moments during the workday by which workers can relax and enjoy

themselves without the pressures of work. Realizing how food can be such a contested site affecting worker morale, the company does attempt to address some of the gripes associated with poor selections. For instance, each week LudoCo will often host afternoon tea using more upscale catering featuring cakes, pastries and other desserts. Another ritual surrounding mealtime is the weekly company vote, one of the few times where company decisions seem to rest with the employees. At the end of each week the HR assistant Ms. Gan will post a poll on DingTalk asking all the employees to vote on next week's dining options (Figure 3.7). Since taste varies widely by personal preference, workers often campaign for votes in DingTalk groups to get the prospective lunch options they want. Messages such as "let's vote for McDonalds this week, please", or "restaurant A is awful please don't let it win!" will frequently pop up in the DingTalk group chat for workers to voice their respective options while others will write up reviews and menu guides in the group as a way of helping colleagues in deciding their prospective food options. Previous poor experiences and subpar food will get immediately flagged and forward to HR, so it does not appear as a possible option for future votes. Food choices in this regard became a rare instance of collective participation where employees actually have a say during the course of the workday.

Placemaking in the Workplace

From living in enclaves, to working in towers, to sitting in cubicles, and eating out of lockers and lunch boxes, the everyday routine of workers in the modern Chinese tech office seemingly revolved around being constantly boxed-in and constrained by spaces around them. The alienation associated with precarious urban living and the working conditions of the corporate hierarchy speaks to the increasingly atomized experiences of workers writ large. But

this is not to say workers do not engage in tactics to find their own space and community. Placemaking here reflects an important part of working life where employees actively try to carve out spaces of their own to socialize and interact. Like I mentioned, the L-shaped office is already demarcated by gender roles between the technical and publishing arm of the company. But there are also different approaches to placemaking in the office that further gendered divisions in the workplace.

My male coworkers for example, would take several smoking breaks throughout the working day, usually one in the morning, one during lunch and one in the late afternoon. This is not to say every male office worker smoked but they significantly outnumber female smokers, particularly with programmers and the project managers in the company. Because the office is a no-smoking area, smoking breaks normally take place near the service stairs that are out-of-sight, it provides a private space for workers to chat and converse outside the watchful eyes of the managers. These short breaks not only provide reprieve from long sessions sitting in the cubicle but also opportunities to catch up with co-workers from other teams. Scholars like Chakrabarty have noted how traditional practices of *adda* as a form of idle talk and informal sociality can be "oblivious of the materiality of labor in capitalism".[161] Indeed, scholars have noted how the office floor impart a certain gendered division of labor along discursive, physical and emotional lines.[162] Male dominated spaces such as the tech industry often contributes to further marginalization for women in the workplace. Ms. Xiao, one of the only two female members in my project team, would frequently complain about being in a "boys club" with little to talk about beyond work responsibilities. She instead organizes WeChat groups with other women in the

[161] Dipesh Chakrabarty, *Provincializing Europe* (Princeton: Princeton University Press, 2009), 181.
[162] Varda Wasserman and Michal Frenkel. "Spatial work in between glass ceilings and glass walls: Gender-class intersectionality and organizational aesthetics," *Organization Studies* 36, no. 11 (2015): 1485-1505.

office for special interest groups (i.e., hiking and pet sitting) and informal gatherings during the weekend or holidays.

Indeed, my other female informants, despite rarely being smokers in the company, also engage in their own respective modes of gossip such as taking coffee breaks across the street away from the office. In other words, these short breaks outside the confines of the office, can provide nuanced subversion of the oppressive regimes of the workplace, it breaks the cadence of the normal work routine allowing workers to socialize in their own time and space. This is especially important as workers are increasingly under the scrutiny of workplace monitoring and digital surveillance. Mr. Wen, one of the backend operations specialists and from the northern city of Harbin, confided to me:

> During our smoking breaks we mainly talk about current events, popular culture, or just random chitchat, but it is also an opportunity to talk about office gossip especially in dealing with rivalries, grievances and employee turnovers.

The latter point is particularly interesting because gossip relating to office politics, personnel hiring/firing, and work performances are actively discouraged by HR and the management. On the very first day of employee orientation, I was explicitly told by the head of HR Ms. Chen to "not discuss salary and compensation with other colleagues", due to the fear that it might cause tensions and rivalries in the office. James C. Scott consider such tactics as a form of "backstage discourse"[163] whereby the subordinate can reclaim power over what can and cannot be said. Accordingly, the tacit defiance against company policies is not just intended to vent everyday frustration but also a way to obtain insider knowledge in order to better navigate the office politics and institutional bureaucracies within the company. Due to the high rate of turnovers,

[163] James C. Scott, *Domination and the Arts of Resistance*. (New Haven: Yale University Press, 2008).

small talk became an important survival strategy that allows workers to gauge their position and performance with the corporate hierarchy.

Finally, the most important site of office sociality is through the use of digital platforms or what Germaine Halegoua and Erika Polson consider as forms of digital placemaking where people can come together using digital technologies to form communities and connected spaces.[164] This is all the more salient in mobile tech companies where many aspects of work experiences are mediated by digital software. Cara Wallis for instance has noted the important role of mobile phones in providing a form of "immobile mobility" for Chinese migrant workers who are otherwise confined to the mundane and solitary conditions of work.[165] It points to the notions of software platforms as important infrastructures and spaces by which digital placemaking is rendered possible. In the context of the tech industry, software functions as not just productivity tools but outlets for social and leisure activities. Office software such as DingTalk is mandatory for not just everyday office communication but also logging work hours and other administrative tasks. While I will have a more detailed analysis of DingTalk in Chapter 4, the importance of DingTalk in office relations cannot be understated and is a fixture in the working lives in the tech industry. However, DingTalk is also not the only software worker used and apart from productivity tools related to software development, platforms such as Tencent's WeChat and QQ are also regularly used for personal communication. The variegated use of software at the workplace presents a dilemma for many companies as social platforms are seen as distractions that can hinder worker productivity. Indeed, workers are specifically discouraged from putting company-related content on social messaging platforms. Despite this, apps like

[164] Germaine Halegoua and Erika Polson, "Exploring 'digital placemaking'," *Convergence* 27, no. 3 (2021): 573-578.
[165] Wallis, *Technomobility in China*. 6.

WeChat have become important alternate outlets for workers to gossip and vent their frustrations about their experiences. Because DingTalk is heavily monitored, my colleagues would form their own team groups in WeChat or QQ for any informal talk and banter they have regarding the office. My localization team would for example maintain both a DingTalk group and a separate QQ group at work, with the latter devoted to work tasks while the QQ group for goofing around. Mr. Lu, our team leader specifically warned us: "be careful what you post in DingTalk and make sure everything is professional since the backend can see what we say!" He then proceeds to trash talk his direct manager on QQ complaining about work assignments. The process of code switching thus requires the switching of platforms as well, which belies how platforms serve as important spaces of worker sociality.

Conclusion:

In early 2022 during the resurgent pandemic from the Omicron variant of COVID-19, a headline story emerged about the different lives of two COVID patients made visible through surveillance from China's health code contact tracing system. The daily itinerary of these two individuals revealed how one lived a lavish life shopping at luxury malls and dining in upscale restaurants while the other spent all day working in construction and other menial gigs. Many Chinese netizens made connections to the story *Folding Beijing*, where two people despite residing in the same city, live in essentially alternate temporal and spatial realities. Indeed, workers in the story *Folding Beijing* sleep in cocoon beds much like real life workers toiling in cubicles and living in ant tribes. This seemingly dystopian story can also be reflected during Beijing's renewed COVID wave in 2022 when the city was divided into "control zones" (管控区) for quarantine management, many of these zones just happen to fall in Haidian District

where the main tech hub Zhongguancun is located (Figure 3.8). Just like in *Folding Beijing*, people are strictly regulated by various health code apps in where they can or cannot go, with those within the zones isolated from the rest of the city. On a broader level, such extremes are compounded by contradictory state policies that simultaneously promote talents to move into major cities and exclusionary innovation zones, while at the same time exclude them from basic material benefits via the *Hukou* systems. Likewise, as this chapter has shown the flow of capital to first tier cities also created the spread of urban sprawl and demarcation of worker dwellings which not only pushes newcomers further to the urban periphery but also alludes to the increasing inequality between the haves and have-nots. This in turn creates an urban living space that is marked by isolation, segregation and atomization of individuals.

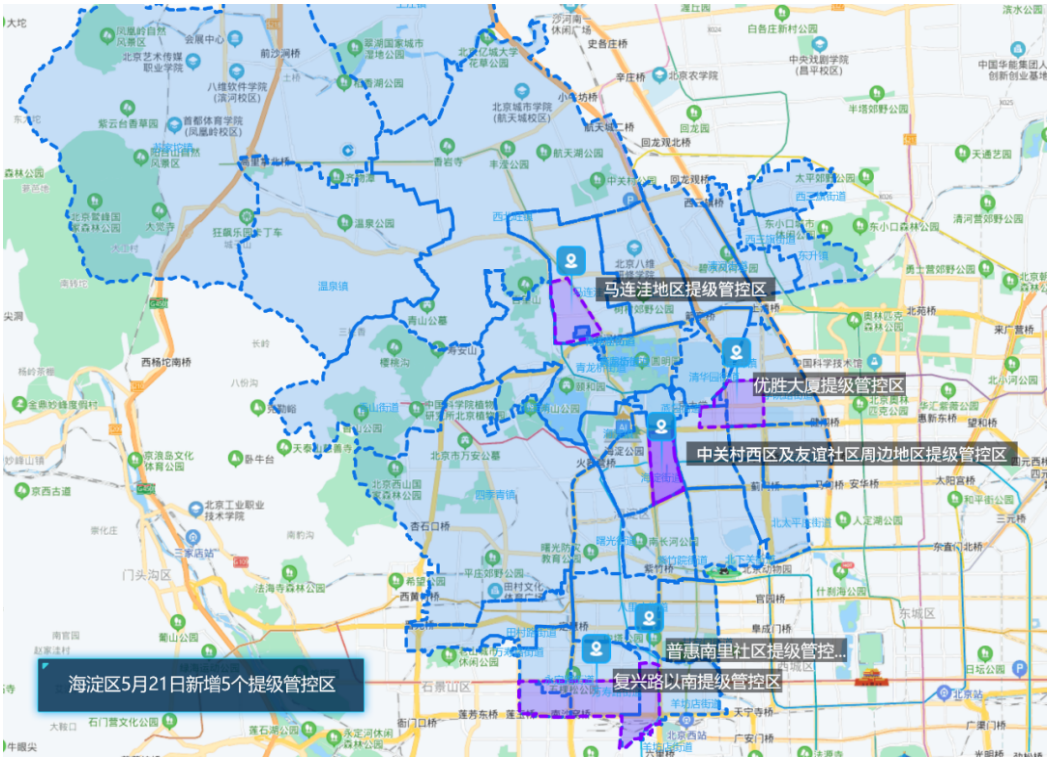

Figure 3.8: The city of Beijing under lockdown and quarantine by districts in May, 2022.[166]

[166] Sina, "haidianqu quanyu shixing tiji guankong, xinzheng 5 ge tiji guankongqu, ditulaile [Haidian district going under elevated management, added 5 new elevated management zone, the map is here]", *Sina*, May 21, 2022, accessed June 23, 2022, https://news.sina.com.cn/o/2022-05-21/doc-imizmscu2584736.shtml

This chapter illustrates a micro-level account of the lives of workers and their encounters with their urban environs across different scales whether it is commuting in the city or working in offices. Working in urban China exposes how spatial politics can both enfranchise and immure individuals in seemingly conflicting ways. The wealth and privilege of urban centers offer little to people living in the margins, while office spaces despite its intended design of openness and equality only further divisions and exclusion. The COVID-related lockdowns in China only made more obvious many of these forms of social exclusions imposed on people's everyday lives. Workers are subjected to increasingly draconian forms of digital surveillance during remote working that necessitates new methods of monitoring and maintaining worker productivity (see Chapter 4). The shift to remote work also brings to light the dual contentions of work/home, public/private, and labor/leisure. Scholars have used the notion of "boundary work" as the means by which people separate home and work in order to preserve that clear distinction. Yet, boundary work is replicated on the ability for workers to recognize such boundaries made increasingly difficult as the lines between work and home are blurred.[167] The age-old distinction between work-life balances is increasingly questioned under the regimes of affective labor by which one's domestic and private sphere are commodified and marketized. While this chapter mainly looks at the physical manifestations of work, the following chapter will detail its affective implications and the roles passion plays in both sustaining and suspending work.

[167] Christena Nippert-Eng, *Home and work: Negotiating Boundaries through Everyday Life* (Chicago: University of Chicago Press, 2008).

Chapter 3

Perpetuating Passion: Performative Productivity among Chinese Tech Workers

In fall of 2019, HR at LudoCo organized a company retreat at a local scenic park with a weekend long itinerary filled with hiking, sightseeing, camping, and other group activities. While this outing is only optional for most of the senior employees, having recently just joined the company, I was required to attend as a way of getting to know other coworkers. But contrary to the company's promotion of a fun and engaging weekend, the actual event was filled with team building activities and productivity seminars that was capped off at the end by rousing speeches from company management laying out the company's annual successes and goals while encouraging employees to work harder as a team. "We have just hit 5 million dollars in revenue this quarter! During our last product launch, the project team worked continuously for 32 hours straight to ensure our success, it just goes to show Chinese developers' tenacity and hard work is undeniable!" The company director Mr. Sheng proudly proclaimed to a rather unengaged crowd standing in front of a picnic table full of enticing drinks and desserts. Things only lightened up once he gave the go ahead to eat and people started to coalesce and mingle. Ms. Xiao who also attended the event lamented to me in private: "I'm really tired of these stupid teambuilding trips, going to work is tiring as it is now, they have to also take up my valuable weekend as well". My initial fieldwork site at AppMax, takes these events to a new level where every month there will be a motivational meeting by which workers are forced to shout slogans in unison with promises to hit the quarterly goals. Many of the slogans have to be recited by rote to demonstrate workers' devotion to the company's bottom-line. In so far as team building events go, these exercises felt more like boot camp to brainwash workers than anything. Such vignettes highlight how tech companies often actively work to promote a corporate culture through a sense of passion and

collective unity. But such specious gestures are often met by the angst from workers who felt forced to partake in an otherwise pointless formality.

Fitting to the themes of these events is how it embody the corporate practice colloquially known in China as *huabin* (画饼), or drawing pie, where company leadership often conjure fantastic stories of the company's success and how that will benefit workers in that everyone can eventually get a piece of the "pie". On a practical level, such motivational practices are necessary due to the extremely high turnover rates within tech startups often as a result of burnouts from excessive overtime. The notorious 996 work culture which I will detail later in Chapter 5 is frequently cited as the main issues contributing to overwork within the tech industry. In fact, one year after my fieldwork at AppMac concluded, nearly 50% of my project team had left the company for opportunities elsewhere. The "pie in the sky" strategy used by companies is therefore an important part of talent retention in the context of perpetual burnout. On a broader level, *huabin* is reflective of the rapid growth of Chinese tech startups in recent years that produced highly profitable "unicorns".[168] For many startups including AppMax and LudoCo, the dream is to somehow become the next tech superstar like DiDi or Meituan and make fortunes in the process. These fantasies are in turn sold to everyday workers often through the mandatory participation in company training, teambuilding, and other corporate events where workers are motivated with promises of eventual promotions, higher salary and even possible shares in the company. But as this chapter thesis will demonstrate, the various initiatives to mobilize affective labor for the purpose of sustaining passion divulge a form of entrapment that perpetuates the regimes of exploitation within the corporation.

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[168] Michael Schuman, "Venture communism: How China is building a start-up boom," *The New York Times*, September 3, 2016, accessed June 23, 2022, https://www.nytimes.com/2016/09/04/business/international/venture-communism-how-china-is-building-a-start-up-boom.html

As the previous chapter has detailed, the typical Chinese tech company comes with many amenities that are intended to inspire a relaxed, homey and playful work setting. The corporate mantra of openness also frames work as something that is interactive, collaborative and fun. While there are numerous material rewards that come with tech jobs and associated perks within office settings, there also exist various affective practices that encourage and regulate productivity in the context of the neoliberal workplace in China. Indeed, Raymond Williams' articulation of the "structure of feelings" points to the ideological importance of affect in directing the lived experiences of social subjects vis-a-vis dominant institutions.[169] Similarly, Bruno Latour and Vincent Lepinay in drawing from the work of Gabriel Tarde, point to the importance of "passionate interests" in understanding political economy not just through quantifiable values but the affective relations between people and society.[170] Echoing this, Lisa Rofel considers a key aspect of the formation of Chinese neoliberal subjectivity is through the "proper balance between interest and passion".[171] For the Chinese state, passion must be curbed for its excesses but also be (re)directed for productive purposes. For Rofel however, the attempts to reconcile such inherent contradictions of passionate excesses and rational interests remain a challenge in postsocialist China.[172]

In this regard, this chapter seeks to re-interrogate the notions of passion which are often presented as intrinsic to workers, but instead, look at the various ways by which passion can be co-opted and mobilized as a way of sustaining work. Likewise, I also look at workers' response to such spurious gestures and how they perform passion in ways that can both appease and

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[169] Raymond Williams. *Marxism and literature*. Vol. 392. (Oxford: Oxford Paperbacks, 1977), 128.
[170] Bruno Latour and Vincent Antonin Lépinay. *The science of passionate interests: An introduction to Gabriel Tarde's economic anthropology* (Chicago: Prickly Paradigm Press, 2009).
[171] Rofel is drawing from Hirschman's contentions of passion and interests in the development of liberal capitalism. See Albert O. Hirschman, *The passions and the interests*, (Princeton: Princeton University Press, 2013).
[172] Lisa Rofel, *Desiring China: Experiments in Neoliberalism, Sexuality, and Public Culture* (Durham: Duke University Press, 2007), 14.

exploit company management for their own benefit. Such tensions are especially prevalent within the global mobile tech industry whereby the day-to-day work is predicated on constant maintenance, updates and operations, which in turn require constant labor - both physical and affective. While there exists a significant body of scholarship on passion within the field of cultural and creative industries, there remains a lack of concrete empirical studies of how the affective regimes of work are mobilized and manipulated within the corporate workforce. My research is based on personal experiences working in the Chinese mobile tech industry incorporating extensive participant observation and ethnographic interviews at both AppMax and LudoCo. Outlining this chapter, I provide an overview of the existing body of literature surrounding passion and its relationship with workplace exploitation. I then analyze two case studies in tracing how passion is taken advantage of by both corporate and individuals. The first case scrutinizes the important roles company events such as the annual party play in the marshalling of workers' affect via monetary digital gifts and rewards. The second case looks to the practices of *touching fish,* a form of slacking off, in dissecting the mundane ways by which tech workers resist the regimes of work through affective performances. Through these ethnographic insights I seek to present an intimate look into the often-conflicting way by which passion, desire and aspiration intersect with notions of productivity and performance as dictated by the prevailing culture of overtime and exploitation in the Chinese tech industry.

Passion, Crunch and Burnout in Mobile App Development

The extent by which Chinese tech companies go to make the office as homey and comfortable as possible highlights the importance of looking at both the formal and informal sites of labor highlights and increasing blurring of the boundaries between personal and professional life. Yet, the melding of the home/office as demonstrated in the last chapter also reflects the conflicting and contradictory ways of how labor is framed in the tech industry. Providing comforting amenities in the bid to promote productivity also simultaneously promotes leisure and relaxation at the workplace. Work and leisure thus become increasingly indistinguishable as workers are prescribed with the self-actualizing notions of work as fundamental to their own social, material and affective betterment. Such contentions relate to what many within the tech industry refer to as "passion" that is often cited as one of the primary reasons people chose to work and stay in the tech industry. Numerous scholars have noted the significance of passion in motivating and sustaining work within the changing labor regimes in capitalist production.[173] Concepts such as "immaterial labor" and "affective labor" have been increasingly taken up to describe the shifting regime of work based on the production of cultural commodities, which in turn necessitate work that is increasingly seen as immaterial (i.e. the production of culture, values, tastes, etc.) as opposed to purely menial work.

The digital economy furthered this shifting conceptions of work in what Tiziana Terranova references as a form of "social factory" where work becomes embedded within society itself, which is in turn predicated on the exploitation of free labor.[174] In a similar vein, Michael Hardt noted how, unlike the production of durable commodities in the Fordist regime of

[173] Toby Bennett, ""Essential—Passion for Music": Affirming, Critiquing, and Practising Passionate Work in Creative Industries," *The Palgrave Handbook of Creativity at Work* (2018): 431-459.
[174] Tiziana Terranova, "Free labor: Producing culture for the digital economy," *Social text* 18, no. 2 (2000): 33-58.

manufacturing, the informational economy is increasingly reliant on "affective labor" in producing services, knowledge and information.[175] In other words, affective labor is increasingly predicated on the networks of social relations where its products are increasingly determined by "a feeling of ease, well-being, satisfaction, excitement or passion".[176] Specific to my case study, the mobile game sector as an important subset of the wider tech industry, in particular, falls neatly under the affective, immaterial and free regimes of work because of the process of game production that embodies elements of both leisure and labor in what many scholars considered forms of "playbour".[177] Workers in the game industry often embody significant emotional and affective investment in the making of gamic artifacts not just at work but also through quotidian play.

For instance, at LudoCo, passion appears in corporate promotions and mottos where even the job advertisement specifically lists one of the qualifications as "you must be passionate about games", a common tagline within many tech industries in general. Such characterizations also implicitly imagine the ideal prospective job candidate as already invested in games in their private lives. Indeed, during my own job interview I was grilled by my interviewer and then project team manager, Mr. Lu with various game-related trivia that was completely unrelated to my actual capacity in meeting the job requirements. According to Aphra Kerr, passion as a criteria for the industry reflect how informal knowledge and skills accrued through play is ingrained in players' identity which is in turn co-opted for corporate interests.[178] The notion of

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[175] Michael Hardt, "Affective Labor," *Boundary* 2. 26 (2)." (1999). p. 94

[176] Michael Hardt and Antonio Negri. *Multitude: War and democracy in the age of empire* (London: Penguin, 2005), 96.

[177] See Lin Zhang and Anthony YH Fung, "Working as playing? Consumer labor, guild and the secondary industry of online gaming in China," *New Media & Society* 16, no. 1 (2014): 38-54; Raul Ferrer-Conill, "Playbour and the gamification of work: Empowerment, exploitation and fun as labour dynamics," *Technologies of Labour and the Politics of Contradiction* (2018): 193-210.

[178] Aphra Kerr, "Recruitment, work, and identity in community management: Passion, precarity, and play," In *Virtual workers and the global labour market* (London: Palgrave Macmillan, 2016), 117-135.

passion as endemic to work itself also conveniently conforms to the longstanding construction of the tech industry in China as "dream jobs" and aspirational work.[179] Being hired at tech companies is seen as a sign of privilege with its often promised high pay and lucrative benefits. Lindtner for instance, considers such forms of affective mobilizations "happiness labor" that provide the organizational infrastructure to sustain an otherwise high-risk, high-tension venture capital driven work environment.[180] However, I take this argument further by looking at the means by which passion also involves the imbrication of traditional *guanxi* relations and social games of deception that works to sustain toxic work cultures in the Chinese tech industry. Indeed, the promotion of passion within job advertisements can also be misleading and creates a facade of gratification that opens workers to potential future exploitation.[181] In fact, passion was frequently cited among media, creative and game industry scholars as one of the key reasons for sustaining long work hours in the tech industry.

Mia Consalvo for instance frames passion as an ideological construct that not only perpetuates labor exploitation but also simultaneously normalizes it. Or more specifically, the notion of crunch time which is enforced through strict deadlines workers must meet for a given project. Forcing workers to work overtime in order to fulfill those obligations often at the cost of personal time.[182] Scholars also notes how overwork is a form of "cruel optimism" whereby crunch is framed as tolerable in the hopes of attaining workers' aspirations but in reality only

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[179] Brooke Erin Duffy, *(Not) Getting Paid to Do what You Love: Gender, Social Media, and Aspirational Work.* (New Haven: Yale University Press, 2017).
[180] Lindtner, *Prototype Nation*, 166.
[181] Renyi Hong, "Finding passion in work: Media, passion and career guides," *European Journal of Cultural Studies* 18, no. 2 (2015): 190-206.
[182] Mia Consalvo, "Crunched by passion: Women game developers and workplace challenges," *Beyond Barbie and Mortal Kombat: New perspectives on gender and gaming* (2008): 177-93.

functions to perpetuate exploitation.[183] More importantly, passion also points to the gender dynamics of labor related to "emotional labor" that is often feminized and in turn devalued, particularly within the often male-dominated tech industry.[184] Ms. Tsai, one of the only two women on the project team of 10 people at LudoCo described her experiences: “I do feel like I have to act like the boys to fit in here...like making the same dumb jokes and talking about games and such. I’m fine with it but it can be a bit off putting at times and I wish there are more girls at the company to be friends with.” A sentiment echoed by Angela McRobbie in describing how “passionate work” serves to sustain female conformity whereby success in the workplace is determined by normative performances of gender roles.[185] Tsai also described how male colleagues would often, despite their best intentions, over-explain things to her at the office, which in turn made her feel “infanticized” when she is perfectly capable of completing tasks by herself. Such experiences of sexism and marginalization are well documented in game industries due to its associations with certain skills, knowledge and “gaming capital” that consistently devalue female participation in gaming.[186] At the same time, the gendered conception of passion reflects how the mobilization of affect manifests not just in the attachment to one’s own work but also the intersecting issues of identity, subjectivity and belonging.

The affective regimes of work requires the constitution of self-enterprising individuals in what many scholars have considered as forms of “neoliberal subjectivity”.[187] Nicole Cohen for

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[183] See Lauren Berlant, *Cruel Optimism,* (Durham, NC: Duke University Press, 2011); Amanda C. Cote and Brandon C. Harris, "The cruel optimism of “good crunch”: How game industry discourses perpetuate unsustainable labor practices," *New Media & Society* (2021): 14614448211014213.
[184] Brooke Erin Duffy and Becca Schwartz, "Digital “women’s work?”: Job recruitment ads and the feminization of social media employment," *New media & society* 20, no. 8 (2018): 2972-2989.
[185] Angela McRobbie, *Be creative: Making a living in the new culture industries* (Hoboken: John Wiley & Sons, 2018).
[186] Alison Harvey and Tamara Shepherd, "When passion isn’t enough: gender, affect and credibility in digital games design," *International Journal of Cultural Studies* 20, no. 5 (2017): 492-508.
[187] See Nandini Gooptu, "Neoliberal subjectivity, enterprise culture and new workplaces: Organised retail and shopping malls in India," *Economic and Political Weekly* (2009): 45-54; Rosalind Gill and Akane Kanai. "Mediating neoliberal capitalism: Affect, subjectivity and inequality," *Journal of Communication* 68, no. 2 (2018): 318-326.

one posits how creative workers differ from traditional wage laborers in the sense that they are highly attached to the product of their labor and are relatively autonomous in operations.[188] Here the promises of autonomy also offload work responsibility onto the individual where they must provide their own time and resources to complete their work, and to do so voluntarily. Much of the risk and personal responsibility has been offloaded onto the workers themselves, where they must provide their own time and resources to complete their work in what Gina Neff considers as a form of "venture labor".[189] Productivity and performance within the workplace is thereby reframed as promoting a personal form of gratification often conducted voluntarily out of passion. This also conforms to the neoliberal logic of making work a personal responsibility that is supposed to be a liberating experience as opposed to an oppressive one. Work therefore becomes internalized as a labor of love by which people are impelled to take ownership over work they technically do not own. As Ms. Ling, a technical graphics designer explained to me, "It's not like I'm at an indie game company where I am actively involved in the production, there is no sense of ownership in working for a big mobile game company, I don't even get credited in the final game, so there is no real attachment to the products I make". Despite the lengths companies go to foster a corporate culture and camaraderie, Ling's response shows how the industrialized means of mobile game production contrary to the autonomous and self-enterprising promises of the creative industry, actually contributes to further alienation.

The feeling of estrangement within the tech industry also manifests in increasing impersonalization of the production process of digital commodities and as apps and games. The global game industry has long been associated with work intensification due to the "project-

[188] Nicole S. Cohen, "Cultural work as a site of struggle: Freelancers and exploitation," In *Marx and the Political Economy of the Media* (Leiden: Brill, 2015), 36-64.
[189] Gina Neff, *Venture labor: Work and the burden of risk in innovative industries* (Cambridge: MIT press, 2012).

based" nature of the industry dictated by stringent release cycles and product launches.[190] Workers often have to invest significant amounts of time and resources to meet the necessary deadlines, usually at a cost to their own mental and emotional wellbeing. Despite this, tech laborers are also detached from the products of their labor because contrary to promises of being creative workers, the production of mobile apps and games are increasingly standardized via the global app platforms from Google and Apple. According to Hardt, the shift to immaterial labor is also predicated on human-computer interactions that require the performance of affect to engender social bonds and market interactions.[191] In other words, the relationship between producers and consumers is increasingly reliant on non-physical interactions driven by digital infrastructures. This is especially apparent in the global app economy where unlike traditional software, apps act more like an interface to the actual software where it actually resides in a data server elsewhere. Thus, the very nature of the app ecosystem requires perpetual updates that are always synced to a backend, which also implies a perpetual work culture based on the constant maintenance and release of updates. In the context of mobile games, a product is not finished upon release, instead vast amounts of resources are devoted to the daily operations of the game to progressively add more new content (i.e., new skins, events, characters, etc.) to further monetize the game over its lifetime. Thus, crunch time is not merely brief moments of work intensification but a sustained cycle of updates, where overtime becomes routineized as part of the ongoing labor process.

Working in China for tech companies that cater primarily to Western markets also brings about additional challenges and implications for crunch time. Work in this regard is not just

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[190] Amanda Peticca-Harris, Johanna Weststar, and Steve McKenna, "The perils of project-based work: Attempting resistance to extreme work practices in video game development," *Organization* 22, no. 4 (2015): 570-587.
[191] Hardt. *Boundary,* 97.

contained in one region but also must cater to other time zones. For instance, much of the operations, marketing and customer service at LudoCo involve dedicated presence during US time zones which required workers to stay late in the office due to the 12-hour time difference between the two regions. The different temporal regime of work is manifested during Chinese national holidays that do not align with the Western calendar. The weeks preceding the 2-week Lunar New Year for instance, is often considered the busiest in the year where workers have to work extra hours in advance of the holiday lull. For many companies in China, the Fordist model of a 9 to 5 workday remain unattainable and many instead opt for 996 (working from 9am to 9am, 6 says a week) and other extreme overtime practices (see Chapter 5). Such issues are further compounded by the various institutional factors that directly or indirectly promote overtime. John Vanderhoef and Michael Curtin, for instance, note how the offshoring of game labor globally brings about increasing precarity because of uneven labor laws that make it difficult for workers to organize and resist crunch time.[192] The direct ramifications of crunch time are burnout that contributes to high turnover rates within companies which questions the limits of the affective mobilizations to sustain work. When asked about whether there is passion in his work, Mr. Wei, a 3D graphics design specialist at LudoCo got a bit emotional and said:

> You know what, I used to be when I first started here. I really wanted to make a difference and make better games but they [the development teams] never listen nor do they take my inputs seriously. Rather than making games fun and enjoyable, the project manager just sees it as a tool for monetization. As a designer I am not incentivized to make 'good' games, just whatever that suits the company's bottom line.

Wei later confided to me that he is planning on leaving the company in pursuit of other opportunities. Like many others, passion for Wei is closely tied to the emotional investment in

[192] John Vanderhoef and Michael Curtin, "The crunch heard round the world: the global era of digital game labor," In *Production studies, the sequel!*. (London: Routledge, 2015), 216-230.

one's own products. Yet, unlike the promises of creative industry, work in Chinese mobile tech is increasingly standardized and mass produced on a scale not dissimilar to traditional industrial labor. Wei's account also implies a distinct temporality to passion that not only diminishes over time but also *crunched* through oppressive overtime. The bulk of research surrounding passion reminds us how commitment and engagement with one's work is dependent on one's affective proclivities that are often exploited for the benefit of the corporate regime. As the following case studies will show, passion as a form of emotional investment represents an important cultural currency that is manipulated not just by companies but also workers' alike.

The Corporate Carnival: between Gifts and Games

In early January 2020, shortly before the start of the COVID-19 pandemic, LudoCo held its annual party in a small 3-star hotel reception room a few streets down from the office. My colleagues and I were able to take a rare half day-off to partake in the festivities. For the uninitiated, the annual party normally coincides with Chinese Lunar New Year and takes place shortly before workers go home for vacation. It also marked the de facto end of the fiscal year where companies announce their annual profits and future outlook to its workers and shareholders during the event. While annual parties are standard practices held by many Chinese companies across different industries, the tech industry in particular, has frequently made headlines for its extravagance and decadence. Chinese company Alibaba for instance is known to host massive galas featuring celebrities and entertainers, where even its founder Jack Ma would frequently take stage dressed in flamboyant attire to perform in front of his employees.[193] On top

[193] Josh Horwitz, "Tearful Ma bids Alibaba farewell with rock star show," *Reuters*, September 9, 2019, accessed June 23, 2022, https://www.reuters.com/article/us-alibaba-jackma-idUKKCN1VU0VY.

of entertainment, workers are provided with a banquet where they can feast on food and indulge in a steady supply of alcohol. But what really sets annual parties apart from other corporate events is lavish giveaways in the form of annual bonuses, prizes and awards. Examples of big tech corporations handing out wads of cash, expensive gadgets and even luxury cars frequently appear in news media each year,[194] contributing to the reputation of the tech industries as lucrative and enticing places to work. For many of the top Chinese tech companies such as Tencent and ByteDance, the nominal annual bonus can amount to equivalent to 3 to 5 months' salary alone, a significant lump sum for many workers. Mr. Lu even casually joked to me "I feel like the annual party is just intended to hold our actual salary hostage, so we don't leave the company at year's end." This basically implies how the annual party is often the most highly anticipated event of the year, with companies devoting a large amount of time and resources, as well as extensive rehearsals and preparation, to the occasion.

While as a small startup, LudoCo cannot match the same level of spectacle as big tech companies, it spared no expense (to the limits of its capacity) when it came to its annual party. Weeks of preparations were also made in advance of the annual party with each project team tasked with putting on a show in the form of a skit, music performance, or dance routine. The annual party has developed into an essential part of the corporate fabric among many tech companies, and not holding annual parties would be a detriment to a company's perceived reputation and likelihood of attracting and retaining workers. During LudoCo's 2019 annual party for instance, prizes including MacBooks, iPhones, PlayStations, etc. were given away as part of a random drawing broadcasted on a screen live to a cheering crowd. While employees

[194] Isabella Farr, "Chinese Companies Hold Insanely Extravagant CNY Parties," *That's Mags*, January 28, 2016, accessed June 23, 2022, https://www.thatsmags.com/china/post/12205/major-chinese-companies-hold-extravagant-cny-parties

who performed well in their yearly KPI's (key performance indicators) were given awards in the forms of plaques, trophies and cash prizes. As a new employee, I was even bestowed with a "new employee appreciation award" amounting to 1,000 RMB (approx. $150 at the time). These often come in *hongbao*, or red packets traditionally given as gifts during Chinese holidays and special occasions such as weddings. Gifts in the form of money are often related to the notion of *guanxi*, one of the primary means by which reciprocity and personal relationships are cultivated in China.[195] Mayfair Yang has argued *guanxi* constitute a significant part of the informal gift economy within Chinese society that lies outside the formal state-directed economy.[196] Unsurprisingly, *guanxi* gift-giving is also prevalent as the means of currying favors and cultivating relationships in the business community, often associated with acts of corruption and bribery in hopes of reciprocal rewards.[197] In the case of corporate parties, gifting is an important way of fostering engagement, commitment and a sense of common identity for workers as being a part of a team.

[195] See Alan Smart, "Gifts, bribes, and *guanxi*: A reconsideration of Bourdieu's social capital," *Cultural anthropology* 8, no. 3 (1993): 388-408; Thomas B. Gold, Doug Guthrie, and David Wank, eds. *Social connections in China: Institutions, culture, and the changing nature of guanxi*. No. 21. (Cambridge: Cambridge University Press, 2002).
[196] Mayfair Mei-hui Yang, *Gifts, favors, and banquets: The art of social relationships in China* (Ithaca: Cornell University Press, 2016).
[197] Ling Li, "Performing bribery in China: Guanxi-practice, corruption with a human face," *Journal of contemporary China* 20, no. 68 (2011): 1-20.

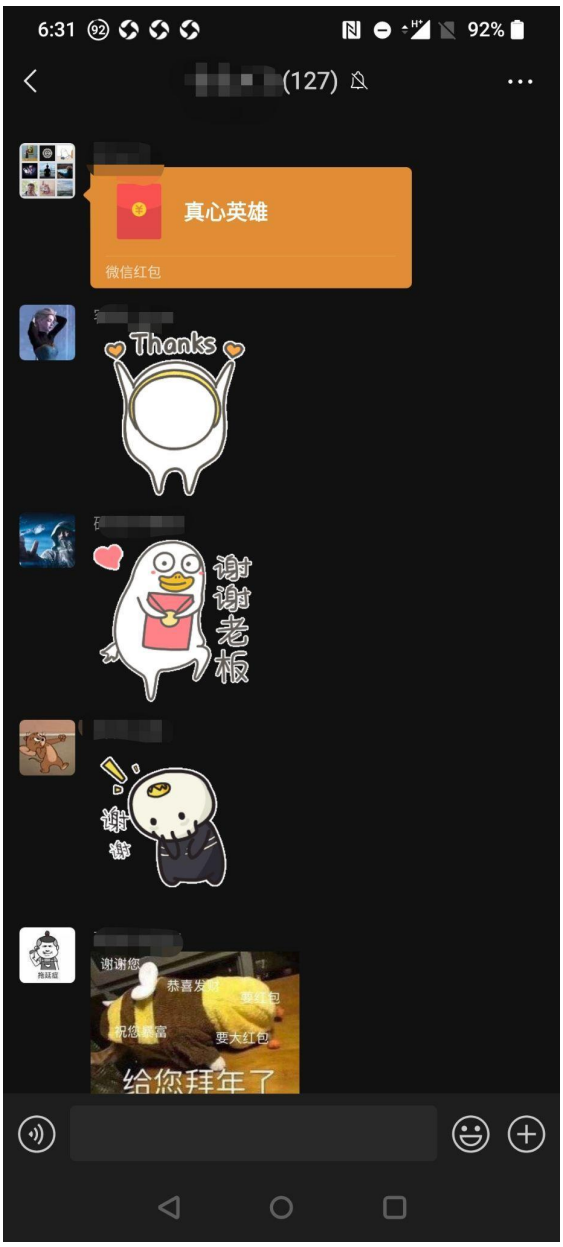

Figure 4.1: screenshot of the WeChat Red Packet posted by the CEO with workers posting GIFs thanking the boss within the company WeChat group.

More broadly, the gift in the Maussian sense has been taken up by numerous scholars to argue that gift exchange constitutes alternate modes of exchange, reciprocity and indebtedness

that are predicated on cultural and non-economical means.[198] The annual party in this regard seemingly fits the articulation of the *potlatch* that posits how the waste and extravagance associated with gift-giving festivals runs counter to the logic of capitalist accumulation.[199] My ethnographic observations of the annual party however point to gift exchange in the corporate context, only functions to sustain corporate interests where *guanxi* relations often become gamified and mediated through the digital affordances of WeChat. While the main event with music, dancing, and comedy skits takes place on stage, another event is taking place digitally - *qiang hongbao*, or scrambling for red packets. Using the Red Packet function in WeChat, various company top managers and shareholders will throughout the night send out red packets containing digital money in the company-wide WeChat group. The amount of money can be set by the giver and the app then randomly assign different values the receiver will get upon opening, the bigger the initial pot of the money means the higher the average randomized payout for each worker. Similar to opening a *hongbao*, WeChat's Red Packets imitate the element of surprise through a virtual skeuomorph of a red envelope that "opens" upon clicking. The subsequent page shows a list of all the draws and the corresponding amount, the person with the highest amount is labeled as the "luckiest draw" (Figure 4.2). But unlike traditional *hongbaos*, WeChat's Red Packets are time limited, meaning that it can only be opened within a certain time period before expiring. Often those with the fastest fingers are the ones who can get a red packet. "Look! A new red packet, go grab it before it's gone!" or "Here comes a big red packet, go get it!" My colleagues would send periodic reminders in our team's WeChat group (separate from

[198] See Marcel Mauss, *The gift: The form and reason for exchange in archaic societies* (London: Routledge, 2002); James Carrier "Gifts, commodities, and social relations: A Maussian view of exchange," In *Sociological forum*, vol. 6, no. 1 (1991), 119-136.
[199] Christopher F. Roth. "Goods, names, and selves: Rethinking the Tsimshian potlatch," *American Ethnologist* 29, no. 1 (2002): 123-150.

the main company group) whenever a red packet popped up. Then everyone proceeded to open up their WeChat app to snatch the Red Packet in the company group followed by an outpouring of hundreds of messages of gratitude in the form of WeChat Stickers (GIFs) like “Thank you, boss!” (谢谢老板！) or “Boss is the best!” (老板最好！) (Figure 4.1). This gift ritual is done throughout the night at seemingly random times in different amounts to heighten the anticipation and excitement in the room.

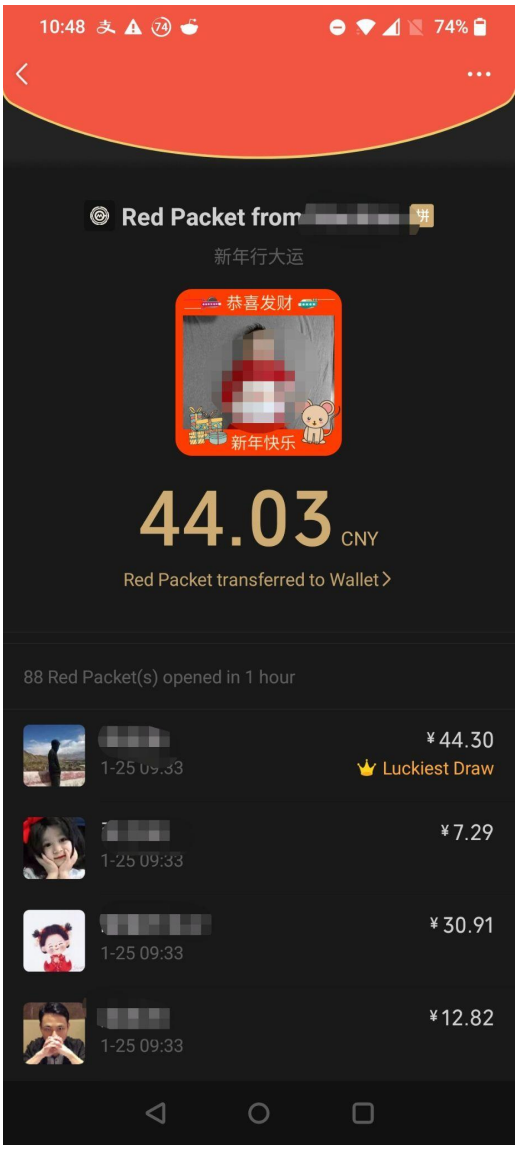

Figure 4.2: WeChat page showing all the amounts each user received from the boss, with the highest labeled as the “luckiest draw”. The amount on top 44.03 RMB is my own draw.

On the surface the WeChat Red Packet function is intended to mimic the *qiang hongbao* games traditionally seen in weddings, birthdays and other festivities. Indeed, gift exchanges have long been considered a form of "social game"[200] predicated on traditional values, norms and reciprocity. Reciprocity as part of *guanxi* relations also entail a form of "emotional affect", or *renqing*, that work to bind superior and subordinate relations.[201] But according to Yang, relations purely based on monetary exchange is also the weakest form of *guanxi* relations because it is based on "gain-loss calculations". In fact, the gamification of gifting in the form of WeChat's Red Packets divulge how the symbolic *guanxi* relations is increasingly dependent on the affordances of digital platforms. Finn Brunton explained how WeChat's Red Packet functions as an infrastructural interface facilitating the transfer of money, especially considering the Red Packet function requires connection to WeChat Wallet, its mobile payment system.[202] The rules and decorum of gift exchange is determined by WeChat as opposed to the social norms of *hongbao* rituals such that the max amount of money one can give is limited by the app. The remediation of *hongbao* on WeChat points to the formation of social bonds based on people's connections via the assemblages of digital networks, as opposed to traditional giver/receiver relations based on personal affinities. The use of terms such as "luckiest draw" also shows the dominance of gamification discourse over that of traditional reciprocity where people compete for the best draw as opposed to the social acts of giving. The Red Packet system not only reconfigures traditional gifting into digital commodities but also works to normalize the gift exchange as simply social forms of money transfers (i.e., money transfer apps such as Venmo).

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[200] Pierre Bourdieu, *The logic of practice* (Stanford: Stanford university press, 1990), 105.
[201] Yang, *Gifts, favors, and banquets,* 78.
[202] Finn Brunton, "WeChat: Messaging apps and new social currency transaction tools," Jeremy W. Morris and Sarah Murray ed. *Appified: Culture in the age of apps* (Ann Arbor: University of Michigan Press, 2018), 179-187.

There are ample accounts of how digitalization has increasingly complicated the distinction between gift and commodity.[203] The digital economy works to subsume elements of corporeal social practices in ways that impart commodity status onto gifts via the infrastructure platforms and data collection.[204] Zhang, et al. even argue that virtual gifting in China works to hijack the gift economy that encourages commodification over reciprocity.[205] Therefore contrary to the suggestion that WeChat gifting may constitute alternate modes of economic exchanges,[206] it actually (re)incorporates it within the wider circuits of commodification. More importantly, the ludification of the gift also functions as tools of affective manipulation whereby monetary rewards are used in exchange for loyalty and gratitude.

The marshaling of individual passions is especially prevalent in the Chinese tech world bolstered by glamorous product launches, trade shows and online sales. The most notable example is Alibaba's annual Single's Day or the 11.11 double eleven carnival, a massive online shopping extravaganza that well encapsulates China's rising materialism and conspicuous consumption.[207] Single's Day (光棍节) falls on November 11th, a metaphor referring the single bachelors or "lone branches" in Chinese, often referred by people in China as the loneliest day of the year. Like mentioned in Chapter 1, the self-deprecating loser, or *diaosi* identity exists as a form of self-parody where young people are increasingly marginalized owing to the growing

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[203] See Yizhou Xu, "Digitizing death: commodification of joss paper on Chinese online cemetery." *Journal of Cultural Economy* (2021): 1-17; Erika Pearson, "Digital gifts: Participation and gift exchange in Livejournal communities." *First Monday* (2007); Alf Rehn, "The politics of contraband: The honor economies of the warez scene." *The journal of socio-economics* 33, no. 3 (2004): 359-374.
[204] Adrian Athique, "Integrated commodities in the digital economy." *Media, Culture & Society* 42, no. 4 (2020): 554-570.
[205] Xiaoxing Zhang, Yu Xiang, and Lei Hao. "Virtual gifting on China's live streaming platforms: Hijacking the online gift economy." *Chinese Journal of Communication* 12, no. 3 (2019): 340-355.
[206] Yusi Xu, "The "Lucky Money" That Started It All - The Reinvention of the Ancient Tradition "Red Packet" in Digital Times." *Social Media+ Society* 7, no. 3 (2021): 20563051211041643.
[207] Jeffrey S. Podoshen, Lu Li, and Junfeng Zhang, "Materialism and conspicuous consumption in China: A cross-cultural examination." *International journal of consumer studies* 35, no. 1 (2011): 17-25.

economic disparity in society.[208] Such sentiments are then co-opted by Chinese tech companies in marketing to youth as an avenue to vent their lonely frustrations by indulging in online consumerism. Double Eleven also works to maintain China's patriarchal capitalism through the discursive construction of Chinese women as the primary spenders of the household.[209] While Single's Day and *diaosi* plays off of stereotypes of the lone bachelor, it reveals a gendered order where female labor is commodified and sold via markets. Much like the annual party, Single's Day also reflects a particular orientation of affect as reinforced through material exchanges as the means of cementing social relations.

The annual party normally concludes with speeches from the CEO and board members reflecting on the past performances and predictably spent more time *huabin* in laying out the company visions and goals for the next year. For the most part the annual party remained professional and largely focused on company affairs, it is the after party where things become more unrestrained. As the main event concludes, people then split into different groups to go partying at other venues around the city. My project team decided to book a large KTV room for those who wanted to join. KTV or karaoke rooms are popular options for nightlife where people sing together and drink in private rooms. Accordingly, the company CEO Mr. Li ordered several cases of beer and quickly encouraged workers to gather and engage in various drinking games. The most popular of which was liar's dice where people attempt to deceive and bluff one another to bid on hands of dice. Mr. Li had an unfortunate bad luck streak and was derided by coworkers with phrases such as "sucker", "loser", "*shabi* (stupid cunt)" throughout the succeeding rounds of games, while getting fined with more drinks. By the end of the night, Mr. Li could barely

[208] Marcella Szablewicz, "The 'losers' of China's Internet: Memes as 'structures of feeling' for disillusioned young netizens." *China Information* 28, no. 2 (2014): 259-275.
[209] Bingchun Meng and Yanning Huang. "Patriarchal capitalism with Chinese characteristics: gendered discourse of 'Double Eleven' shopping festival." *Cultural Studies* 31, no. 5 (2017): 659-684.

stand on his feet and had to be carried home by other co-workers. Such instances of poking fun at upper management are nearly unthinkable back in the office, but the annual party provided a rare outlet by which workers of all ranks and seniority can mingle and joke without reservations.

These discursive moments echo the notions of the "carnivalesque" predicated on the transgressive overturning of hierarchies.[210] Here workers are able to freely engage in friendly jokes and banter rarely seen in the formality of the corporate office. KTVs however have also long been associated with hostess culture and prurient activities within the business community in China.[211] In this regard, the carnival of the annual party also dissolves many of the gender divisions of sociality as described in the previous chapter. Accordingly, the notions of the carnivalesque while allowing for the suspension of rules and norms also points to more grotesque and nefarious purposes. Indeed, Ms. Tsai later confided to me: "there have been times I felt pressured to drink by the boss and it made me uncomfortable during that night". Such episodes are not unique as in 2021, a sexual harassment scandal at Alibaba made headlines detailing its notorious corporate culture of "icebreaker games" where female employees were often pressured to partake in highly sexualized games with other employees as ways of getting to know each other.[212] That same year photos circulated online of the mobile tech company OPPO setting up "blackout stations" for workers who drank too much at its annual party and needed to puke or to lie down.[213] Mikhail Bakhtin's notion of grotesque realism is on full display here manifesting in carnal exorbitance, abundance and debauchery.[214] The carnivalesque aspect of the

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[210] Mikhail Bakhtin. *Rabelais and his world*. Vol. 341 (Bloomington: Indiana University Press, 1984).
[211] Tiantian Zheng. *Red lights: The lives of sex workers in postsocialist China* (Minneapolis: University of Minnesota Press, 2009).
[212] Li Yuan, "Alibaba Rape Allegation Reveals China Tech's Seamy Side," *The New York Times*, September 7, 2021, accessed June 23, 2022, nytimes.com/2021/08/12/technology/china-alibaba-technology-sexual-assault.html
[213] Tan Yu, "OPPO tan nianhui she shuye xinjiuqu: bugulihejiu, dan he duole huizhaoguhao [OPPO statement on IV drip alcohol station: we do not encourage drinking, but those who drank too much will be taken care of]", The Paper, January 13, 2020, , accessed June 23, 2022, https://www.thepaper.cn/newsDetail_forward_5506865.
[214] Bakhtin, Mikhail. *Rabelais and his World*, 688.

annual party is therefore paradoxically intended to be a regenerative moment built upon destructive behavior as a means of mollifying the stresses and tensions of the past year of hard work. But rather than the mobilization of productive passions, it is instead often unleashed in its worst excesses, a pernicious catharsis that is both motivated and enabled by an already toxic work culture.

The corporate mobilization of passions during the annual party runs counter to the longstanding to what many scholars consider as the subversive potentials of the carnivalesque in its radical reversal of normative hierarchies and the facilitation of informal modes of exchange outside of formal economies and institutional power structures.[215] But as both the digital gifting of *hongbao* and the after parties have shown, rather than a spontaneous display of transgression, the annual party reflects the momentary sanctioning of rewards, debauchery and wanton excess that sustains workers loyalty and passions for the company. Hence it is not so much about the balancing of interests and passions per Rofel's articulation, but the careful manipulation of worker affects and sentiments through certain rituals and games that unleash passions at desired times in benefiting the company. In a similar vein, Scott also notes how the institutionalization of the carnival may possibly serve as a "safety-valve" that allows for a brief temporary suspension of hierarchies only to have everything return to normal.[216] The annual party therefore embodies a cursory utopia orchestrated as a carefully managed release of pent-up work pressures that in reality, never actually absolve the inherent oppressive work culture rooted in the everyday.

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[215] David Kurt Herold, and Peter Marolt, eds. *Online society in China: Creating, celebrating, and instrumentalising the online carnival* (New York: Routledge, 2011).
[216] Scott. *Domination and the Arts of Resistance*, 167.

"Touching Fish" and the Tactics of Feigning Productivity

The ludic and cathartic moments of the annual party indeed allow for certain forms of subversion, especially the suspension of ranks, norms and values associated with professionalism of the corporate world. In fact, the annual party was the only time the CEO Mr. Li spoke to me with an offhand congratulation for joining the company, despite sitting just 3 desks away from me at the office. Yet, such sentiments are mostly fleeting and upon the resumption of work the following week, everyone returned to their desks as if none of the festivities and drunk encounters ever happened. As the last chapter suggests, the spatial organization of the office, despite its mantra of openness, actually worked to promote certain forms of ordering and surveillance that impelled workers to find alternate spaces for interaction. The often-coerced display of passions and enthusiasm seldom reflect workers' actual interests and desires as demonstrated by the numerous forms of team building and corporate activities. If the so-called "putting passion to work" is the perennial goal of company management, there are also deliberate means of feigning work in a common workplace practice known as "touching fish" or *moyu* (摸鱼), the Chinese equivalent of slacking off at work. Jane Li from Quartz offered this vivid description of the practices of touching fish:

> Start doing 15 minutes of stretches, or planking, in the office pantry ... These are some of the tips for how to slack off at work provided by Massage Bear, a Chinese blogger whose musings on China's Twitter-like Weibo have attracted more than half a million followers. Her philosophy of "touching fish" (mō yú), a Chinese phrase synonymous with lazing around at work, has resonated in recent months with many Chinese millennials, increasingly exhausted by society's ever more intense rat race. The name references a Chinese proverb that says, "muddy waters make it easy to catch fish,"—that is, that it's possible to use a crisis or period of chaos for personal benefit.[217]

[217] Jane Li, "Why Chinese youngsters are embracing a philosophy of "slacking-off", *Quartz*, December 29, 2020, accessed June 23, 2022, https://qz.com/1938809/why-chinese-youngsters-are-embracing-a-culture-of-slacking-off/

My ethnographic observations confirmed many of the voluntary or involuntary acts of touching fish frequently employed as recalcitrant tactics of avoiding work. Various acts of appropriation and insubordination such as taking extremely long bathroom breaks, napping in meeting rooms, chatting on social media, and pretending to work on computers are frequently employed to bide time until work is over. Mr. Shan from LudoCo shared with me a typical breakdown of his daily routines at the office:

> I usually get to the office around 9:30am and spend a good 30 mins setting up my computer, surfing the web, and making coffee. The next hour should be spent reading emails and planning my assigned tasks for the day, but I am really just chatting with coworkers on WeChat or DingTalk. By this time, it is already 11:00am which I normally either spend time spacing out at team meetings or taking a bathroom break. Without even realizing it is already lunch time and a good chunk of the day is done. Time really flies when I'm doing nothing.

Touching fish in this regard shares striking parallels with the notion of "la perruque" ("the wig" in French) as articulated by de Certeau, which he defined as "the worker's own work disguised as work for his employer. It differs from pilfering in that nothing of material value is stolen. It differs from absenteeism in that the worker is officially on the job".[218] Different from existing research on the "refusal to work",[219] which often encompass open resistance against wage labor and the system of work, touching fish reflect more tacit means of pretending to work during the course of the workday. The full idiom of "muddy waters make it easy to catch fish" also suggests the exploitation of opportune times in what de Certeau consider as a "guileful ruse" that take advantage of the fissures in the "surveillance of the proprietary powers".[220] In other words, corporate bureaucracy makes managing large personnel especially challenging and allows for

[218] De Certeau*, The practice of everyday life*, 25.
[219] Kathi Weeks, *The Problem with Work* (Durham: Duke University Press, 2011).
[220] De Certeau. *The practice of everyday life*, 34

certain acts of non-work and non-compliance to slip through the cracks. What makes “la perruque” or “touching fish” powerful is how it often requires the complicity and oftentimes, coordination from other workers which signifies the potential impetus for collective action. Indeed, my project team would occasionally get together for longer than usual meetings just to pass the time and since meetings are held in closed rooms rather than the office floor, we were also free from the watchful eyes of management.

Like I mentioned in the previous chapter, being able to carve out spaces to gossip and socialize is also an important part of touching fish. Taking coffee or smoking breaks throughout the day often provide a nice mini retreat for workers to get out of the office environment to just relax and not think about work. But these breaks had to be used sparingly in case the manager noticed too many empty seats at the office. Mr. Lu would later confess to me that once he took too many smoking breaks and his direct manager had to come to find him, which caused a lot of embarrassment all around. This echoes Melissa Gregg’s notion of “mindful labor” which “refers to the degree of work involved in producing and maintaining affective composure in the absence of collective labor politics”.[221] In other words, taking long breaks is not just purely the result of slacking off but also recuperative moments outside of the regimes of productivity. What is interesting here is how the act of touching fish is not the result of some grand design but often *ad hoc* responses to stress or boredom - an unspoken consensus formed out of the quotidian drudgery of corporate life. Nor are there any standard methods of touching fish as much of the tactics devised by workers are contingent and unique to their own circumstances. Slacking off at work ranges from various low investment tactics such as delaying, pretending and foot dragging

[221] Melissa Gregg, *Counterproductive: Time management in the knowledge economy*, (Durham, NC: Duke University Press, 2018), 106.

to more sophisticated means of camouflaging such as using keyboard shortcuts to disguise computer screens to look productive.

Likewise, the popularity and prevalence of the term touching fish can also be seen in the numerous compilations of various guides, strategies and tactics on Chinese social media sites such as Zhihu (the Chinese equivalent of Quora) and Sina Weibo with titles such as "how to gracefully touch fish without being noticed",[222] or "guide to how to set up your PC desktop to appear productive". There is even a Chinese game released on the digital game distribution platform Steam that merely mimics the Windows System Update screen as a way of disguising non-work.[223] Because there is no one right way of practicing touching fish, the sharing of tips and guides thus infer more deliberate micro-actions to undermine and divert corporate resources. Moreover, touching fish also shares resonance with the notion of "hidden transcripts" and is also particularly useful in describing the hidden and low stake acts of dissent that is rooted in the everyday workplace. Scott considered various forms of offstage dissent such as feigning ignorance and careless work as forms of resistance against the powers of oppression. The various forms of trickery resulting from touching fish reflect what Scott posits as "the dialectic of disguise and surveillance"[224] whereby slacking off at work becomes a constant point of struggle between the dominant and subordinate. One point of commonality among the variegated forms of touching fish is the intimate awareness of the loci of power in the office, which are often HR and company management. For instance, there was one instance when the HR team was at a meeting, and a good chunk of the office decided to take a collective break to grab coffee outside the office.

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[222] Zhihu. Accessed October 31, 2021: https://www.zhihu.com/question/312069673
[223] Zhihu. Accessed October 31, 2021: https://www.zhihu.com/question/315745108
[224] Scott. *Domination and the Arts of Resistance*, 4

Additionally, mundane tactics in the forms of touching fish points to the performance of "charismatic acts"[225] that are required to disguise and conceal the actual intent of subordinate groups. In this regard there are two sides to the affective dimensions of touching fish, one being a latent collective loathing, contempt and frustration toward work, while the other, a beguiling display of passion, dedication and alacrity through feigning productivity. In other words, the act of faking work requires a lot of affective investment, ranging from just pretending to smile or looking cheerful to having expressive body language during meetings. By putting up the appearance of work, passion is in turn redirected toward workers' own interests and desires outside of the confines of corporate control. Touching fish in this regard is as much an act of dissent as that of a general attitude, a feeling of resentment against work itself. Thus, there is an inherent tension between the corporate mobilizations of passion to sustain productivity and workers pretending to happy while at work.

It is also ironic that many of the perks associated with a tech office, with its numerous rest areas, game consoles, snack bars and various other homey comforts makes it exceedingly easy to slack off on a regular basis. Here lies one of the central contradictions between passion and productivity in the tech industry. The attempts by companies to normalize work as fun and banal also allows workers to tap into what Lefebvre considers as the creative energies of the everyday for their own leisure and enjoyment.[226] In reality, the practice of touching fish is arguably even more prevalent within game companies such as LudoCo because of the aforementioned imbrication between labor and leisure throughout the production of gamic commodities. Indeed, the gamic connection to touching fish cannot be understated. In fact, besides "touching fish" another equivalent term for slacking off Chinese is "wading water" (划

[225] Scott. *Domination and the Arts of Resistance*, 20
[226] Henri Lefebvre, *The critique of everyday life* (New York: Verso Books, 2014).

水), a reference to a battleground in the MMO game World of Warcraft (WoW) where players can wade in water and level up without actually doing the work of fighting other players, which is another way of describing coasting along without doing any actual work. The ambiguities between work and play therefore make it difficult for corporate management to discern whether workers are actually working or not which in turn hinders everyday surveillance controls. For instance, part of my daily tasks at LudoCo is doing quality assurance (QA) on in-game localizations by playing test builds of various games. No doubt a significant amount of my screen time each day is devoted to gaming, which is par for the course at a game company and would hardly raise any suspicions even as I was just playing for fun.

Touching fish as its name suggests therefore, connotes a certain ludic quality to the act of slacking off whereby workers partake in various forms of ruse, maneuvering, and subversive stratagems in order to take advantage of the preterition within corporate institutions. Some workers would capitalize on these exploits further as Mr. Wei explained to me during a coffee break outside the office:

> I'm tired of my role right now and don't see my career going anywhere so I am studying how to use the Unity Engine during work in order to obtain the skills needed to design my own games elsewhere. No one even seems to notice because they just assume I'm working on company projects, when I am in fact doing my own thing and not working at all.[227]

Wei seemed particularly smug about using company time, resources and money to develop his skills to add to his resume in order to get a new job. In this case, touching fish encompasses both the diversion of time and resources away from the company's bottom-line for the purpose of self-benefit. Unlike the games played at the annual party, touching fish reflect a different type of

[227] The Unity Engine is a game development tool popular among independent game developers.

stratagem by which the tables are turned. Instead of the manipulation of passions through affective access by corporate powers, it is instead used for personal benefit through trickery and deceit. Here de Certeau's "poaching" analogy[228] is an apt metaphor to describe not just material theft but also the discursive contestation over the meaning of productivity, passion and work as dictated by company management. So prevalent are such forms of appropriation, LudoCo even started tracking IPs and revoking certain access for workers who download from the company File Transfer Protocol (FTP) server to thwart the pilfering of company resources when employees chose to jump ship to another company. This manifests as a form of constant cat and mouse game where tactics have to adapt, and change based on shifting company reactions and countermeasures.

[228] De Certeau. *The practice of everyday life*, 165.

Figure 4.3: The company Qihoo360's internal app for bathroom occupancy by floor with a timer.[229]

As a matter of fact, most tech companies are not blind to the practices of touching fish and are well aware of how certain workers might just be coasting along while at work. In recent years, reports emerged online regarding Chinese tech companies such as NetEase, Pingduoduo, and Sohu instituting draconian policies in attempts to combat touching fish at the workplace. The

[229] Sina, "hulianwang dachang de chesuo nanti [big tech's bathroom problem]," *Sina*, November 20, 2020, accessed June 23, 2022, https://finance.sina.com.cn/chanjing/cyxw/2020-11-12/doc-iiznctke1118526.shtml

eCommerce company Pingduoduo for instance was reported to have installed timers and motion detectors in company bathrooms to strictly regulate how long employees can take bathroom breaks.[230] Another worker posted on the popular workplace gossip app MaiMai regarding how the company NetEase installed cellular signal jammers in its bathrooms to prevent workers from playing on their smartphones, with one netizen quipping: “the days of taking a shit while getting paid is over". Chinese cybersecurity company Qihoo360 went as far as developing its own app showing the availability of each bathroom stall with the time occupied as a way to monitor and guilt trip people about their bathroom usage (Figure 4.3). Such examples of course are not unique to China. In 2021, Amazon delivery workers were reported to resort to urinating in bottles to save time for bathroom breaks in order to meet performance targets.[231] Such anecdotes underscore not just the contestation over productive time but also workers’ agency over their actions. The fixation on bathroom breaks echoes the carnivalesque fascination with the “bodily lower stratum” that embodies the destructive and negative acts such as defecation.[232] But contrary to the sanctioning of bodily excesses during the annual party, the regulation of bathroom breaks constitutes a form of biopolitical control by which workers’ carnal needs are deemed wasteful and unproductive. At the same time, the control over bathroom breaks also goes to show the limitation of corporate control over everyday practices of touching fish. So, while companies can limit the spaces by which slacking off can occur, the practices of masquerading work as non-work are often far more challenging to detect and deter. The melding of work and

[230] Panshen, Accessed October 31, 2021, https://www.pianshen.com/article/31661853196/
[231] Aimee Picchi, “Amazon apologizes for denying that its drivers pee in bottles,” *CBS News*, April 5, 2021, accessed June 23, 2022, https://www.cbsnews.com/news/amazon-drivers-peeing-in-bottles-union-vote-worker-complaints/.
[232] Bakhtin, *Rabelais and his World*, 688.

leisure within creative and tech industries therefore creates the condition by which individual passions, desires and pleasures can then be mobilized and reclaimed by workers.

Conclusion:

Scholarships regarding affective labor have largely dealt with the broad implications of the shifting paradigm of capitalist production especially in the context of the transition from industrial to informational economy.[233] While affective labor often refers to the labor process of making "immaterial" services and knowledge, I look to the often nonproductive mobilization of affect, both through *guanxi* relations in the forms of wasteful gift exchanges and also the quotidian tactics of touching fishing and non-work. In sum, this chapter demonstrates how passion, or the affective dimensions of work cannot be reduced to merely sentiments of dreams and desires. Nor can passion fully encapsulate the totality of all emotional investment of one's relation to labor. Instead, the case studies of the corporate annual party and the practices of touching fish divulge the importance of passion as a site of contestation, a struggle over the power of affect and its abilities to produce subjectivities and shape social relations. Just as Hardt reminds us of the powerful role of affective labor in the reproduction of social life,[234] the onset of the pandemic brought about renewed contentions over issues of digital labor and biopolitical control. Whether it is office perks, team outings or festive events, there are myriads of ways by which companies utilize passion as a means of promoting productivity. Passion is increasingly seen as the catalyst in sustaining work in an era of renewed work intensification in the form of

[233] Johanna Oksala, "Affective labor and feminist politics," *Signs: Journal of Women in Culture and Society* 41, no. 2 (2016): 281-303.
[234] Hardt, *Boundary*, 98.

crunch time and China's own notorious 996 work schedules (see Chapter 5). Yet, the affective bonds formed through incentives and rewards often lack the "stickiness" in fostering worker engagement beyond brief moments of games and fun. Evidently, the various methods of touching fish highlight other creative mobilizations of affect outside the corporate agenda. Touching fish is not merely a "politics of ambivalence"[235] to the mechanisms of work oppressions but a form of redirection, a consolidation collective acts by which workers can resist the corporate regimes of productivity and providing the informal outlets for workers to harness the powers of the everyday.

The idiom "muddy waters make it easy to touch fish" also points to a particular moment in time, particularly during periods of chaos where workers can exploit for their self-benefit. Undoubtedly, the outbreak of the COVID-19 pandemic exacerbated the already precarious conditions of the workplace and brought about renewed challenges across the industry. China's big tech crackdown and the resulting mass layoffs in the tech industry since 2020 have led to widespread austerity measures across the sector. Many tech companies have drastically cut their annual bonuses and holiday gifts compared to the previous boom years,[236] leading to many workers to complain about losing the few perks of working in the industry. This not only highlights how corporate rewards are dependent on industry fortunes but also the general lack of staying power in perpetuating passion using solely monetary incentives. In other words, corporate annual parties maintain a delicate balance to maintain worker engagement in an already toxic work culture, but often fail to stand up to scrutiny during moments of crisis.

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[235] Greig De Peuter, Nicole S. Cohen, and Francesca Saraco, "The ambivalence of coworking: On the politics of an emerging work practice," *European Journal of Cultural Studies* 20, no. 6 (2017): 687-706.

[236] China Economic Herald, "quxiao xiawucha, suojian nianzhongjiang, zhejie hulianwangren de daiyu zai shoushen [No more afternoon teas, lower annual bonuses, this crop of tech workers are facing a downsizing], China Economic Herald, May 26, 2022, accessed June 23, 2022, http://www.ceh.com.cn/UCM/wwwroot/zgjjdb/syzx/1489407.shtml

Likewise, the shift to remote work at home makes it far more difficult for companies to keep track of touching fish and other forms of slacking off outside the confines of the workplace. As the next chapter will demonstrate, companies have to rely on ever more sophisticated means of monitoring and controlling worker productivity using digital software and platforms. But at the same time, crises and contingencies also present new opportunities for workers to utilize their existing passions and skills to promote solidarity and mutual aid in the face of renewed precarity created by unpredictable contingencies and corporate dominance.

Chapter 4

Locked down but Not Locked out: DingTalk and Chinese Digital Workplace Surveillance in Pandemic Times

On January 23rd, 2020, on the eve of the Chinese Lunar New Year, I was sitting in my cubicle on the 25th floor of a high rise building in downtown Guangzhou when Chinese state media announced the complete lockdown in Wuhan, the epicenter of the COVID-19 pandemic.[237] This strictly enforced lockdown was soon extended across China due to the rapidly escalating situation in dealing with the spread of COVID-19. Working in the mobile tech industry as part of my dissertation project in China I witnessed first-hand the impact of the pandemic on the working lives of tech workers, especially when many were confined in their homes. Unable to travel, I was also isolated in my apartment and increasingly reliant on digital media to keep up to date with the outside world. This extended to my daily movements which were also heavily monitored via mandatory contact-tracing apps in the form of the various "digital health codes"[238] that were required for even a simple outing to get groceries. The increasing intrusion of software-mediated tools in governing the everyday informed me of the heightened precarity in the labor sector upended by the pandemic with companies scrambling to come up with plans to maintain productivity. Major Chinese tech companies such as Tencent, Alibaba and NetEase all announced policies where laborers can remotely work from home.[239] As a result, corporations became wholly reliant on software and apps as the means to keep track of

[237] Guobin Yang, *The Wuhan Lockdown* (New York: Columbia University Press, 2022); Chris Buckley and Javier Hernandez, "China Expands Virus Lockdown, Encircling 35 Million," *The New York Times*, January 23, 2020, accessed June 23, 2022, https://www.nytimes.com/2020/01/23/world/asia/china-coronavirus-outbreak.html
[238] Fan Liang, "<? covid19?> COVID-19 and Health Code: How Digital Platforms Tackle the Pandemic in China," *Social Media + Society* 6, no. 3 (2020): 2056305120947657.
[239] Yusho Cho, "China's tech leaders turn to telework as coronavirus spreads," *Nikkei Asia*, January 29. 2020, accessed June 23, 2022, https://asia.nikkei.com/Spotlight/Coronavirus/China-s-tech-leaders-turn-to-telework-as-coronavirus-spreads.

worker productivity outside the formal workplace setting. While the various intrusive modes of workplace surveillance are nothing new as measuring and maintaining employee efficiency and performance had long been the central aim of the neo-Taylorist corporate regime,[240] the onset of a global pandemic created both obstacles and opportunities for the sustained monitoring of the workforce. On one hand, the lockdown-imposed self-isolation at home made it increasingly difficult to track workers who were otherwise contained within organized spaces and tight cubicles. On the other hand, the pandemic provided an opportune time for the intrusion of digital surveillance software into the private domestic sphere, something that has long eluded total corporate control.

One such software, DingTalk (or DingDing 钉钉 in Chinese) has taken center stage in facilitating, measuring and governing the day-to-day operations of the Chinese workforce. Since its introduction in 2014, DingTalk, a product of the Chinese tech titan Alibaba, has evolved from a simple office collaboration tool similar to Slack into a one-stop platform for all work-related tasks. By late-2020, DingTalk had amassed over 300 million users across 15 million public and private organizations standing as a testament to its near-ubiquitous adoption in the Chinese labor sector.[241] DingTalk represents the tendencies for Chinese software companies to make "all-in-one apps"[242] that are bloated with features encompassing every function imaginable. In addition to its main purpose for office communication, DingTalk has myriad of productivity features such as file sharing, to-do lists, calendar, video calls, company wiki, in addition to a dizzying array of

[240] Willem Niepce and Eric Molleman, "Work design issues in lean production from a sociotechnical systems perspective: Neo-Taylorism or the next step in sociotechnical design?," *Human relations* 51, no. 3 (1998): 259-287.
[241] Yining Ding, "Tech giants beefing up digital offerings," *Shine.cn*, May 18, 2020, accessed June 23, 2022, https://www.shine.cn/biz/economy/2005188367/
[242] Super apps or Meta apps are also popular in contexts such as Japan's Line which share similarities with China's WeChat see Marc Steinberg, "LINE as Super App: Platformization in East Asia." *Social Media+ Society* 6, no. 2 (2020): 2056305120933285; Julie Yujie Chen, Zhifei Mao, and Jack Linchuan Qiu, *Super-sticky WeChat and Chinese society* (West Yorkshire: Emerald Group Publishing, 2018).

mundane features such as live-streaming, video classes, achievement badges, digital business cards and even a fitness tracker that alert you if you been sitting for too long. It became the *de facto* tool for many Chinese companies as it served as repositories for much of a given company's policies, employee guidelines and work-related authorizations. DingTalk is also a multi-platform experience as it is available as a mobile app (iOS & Android) as well as various desktop clients (Windows & Mac), which in turn forces workers to have DingTalk installed on every device they carry, wherever they are, be it the office, home, or public spaces. DingTalk would serve a pivotal role during the pandemic not just the primary software workers report their up-to-date status on a regular basis but also, as this chapter will show, provide the infrastructural foundations for the adoption of the health code system for China's COVID-19 contract tracing system where its parent company Alibaba would play a major role. In other words, workplace surveillance is intimately linked to the biopolitical regimes of Chinese state control, with the tech industry and more specifically tech workers, being the experimental grounds for its instrumentalization.

Taking cues from a mix of ethnographic approaches, discursive interface analysis, and my own "insider" status working in the mobile game industry in China during COVID-19, this project centers on the lives of tech workers and how they must navigate both their personal and professional lives that are increasingly being controlled and monitored via digital technologies. DingTalk thus serves as an important vantage point in unpacking the interplay between state, corporate and platform-mediated forms of control, along with the often-conflicting motivations by which workers must contend with workplace software in their daily lives. To this end, I seek to offer critical insights into two intervening developments related to digital workplace surveillance during COVID-19. First, I offer a discursive interface analysis of the core features

of DingTalk in order to unravel how several key monitoring features provide the building blocks of a wider digital surveillance apparatus that was used for contact tracing during the pandemic. Second, through extensive interviews with Chinese tech workers, I look at the various tactics and strategies used in order to circumvent and subvert digital-mediated forms of control on worker's personal and professional lives. I argue the pandemic-imposed lockdown, while enabling the further means of digital surveillance through software such as DingTalk, also exposed potential vulnerabilities in the system by which workers can subvert and work against. In doing so I want to dissect the various institutional and infrastructural limits imposed on productive tech labor via digital software that opens for new ways of thinking about worker agency and means of resistance. While the software-mediated workplace imposed new risks and precarity in regard to surveillance and exploitation, there are also distinct strategies and tactics employed by workers to circumvent and undermine such intrusive modes of digital oppression. Here, tech workers occupy a contradictory position by which they are often the makers of the very oppressive surveillance technologies that also control and regulate their own lives. Indeed, tech workers such as developers, IT specialists, backend operations, designers, etc. all possess the technical literacy to potentially engage and exploit the system in ways other workers might not have the wherewithal to do so. Centering this chapter within the context of the Chinese tech industry thus provides the unique vantage point to dissect the relationship at the intersections of state control, software-mediated surveillance and worker agency.

This chapter is based on my work at LudoCo where I experienced firsthand the initial wave of the COVID-19 outbreak in China and spent the subsequent months under various forms of lockdown all the while working full time. Doing fieldwork in the middle of a pandemic not only provided opportunities to intimately research workplace oppression, but also allowed me to

be an active participant during a time of crisis. Despite the lockdown and shift to remote working making it challenging to conduct in-person interviews, it also provided opportunities to observe a workplace regime that is increasingly mediated by software and interfaces. Through ethnographic interviews with my coworkers during and after the initial lockdown in China, I was able to gain a firsthand account into the quotidian working conditions of a typical Chinese tech company during the lockdown and observe the struggles and challenges of work in times of increasing precarity. Additionally, my research also integrates the method of "discursive interface analysis"[243] to probe the design, interface and affordances of DingTalk and how its intended usage helps shape and is simultaneously shaped by the corporate workplace. A discursive analysis of DingTalk's interface provides useful optics in understanding the norms, values and power structures encoded in the functional designs of software that workers must contend with and against on a regular basis. When coupled with on-the-ground interviews, I can then obtain a broad survey of how different workers make sense of their digital working experiences. Being an employee in a tech company also provides me with a corporate DingTalk account which gives me more access to additional features that a personal account does not possess, particularly features that deal with workplace monitoring and tracking. Unlike approaches such as the "walkthrough method",[244] this chapter is not intended to be a definitive overview of DingTalk and its myriad of features but rather a focus on its specific affordances in dealing with surveillance and control. Likewise, because apps are transitory interfaces that are always connected and updated via cloud networks and are thus always subjected to changes and

[243] Mel Stanfill, "The Interface as Discourse: The Production of Norms through Web Design," *New Media & Society* 17, no. 7 (2015): 1059–74; Taina Bucher and Anne Helmond. "The affordances of social media platforms." *The SAGE handbook of social media* (London: Sage Publications, 2017): 233-253.
[244] Ben Light, Jean Burgess, and Stefanie Duguay, "The walkthrough method: An approach to the study of apps," *New media & society* 20, no. 3 (2018): 881-900.

updates,[245] I will be only looking at versions 4.7 to 5.0 released between October 2019 and July 2020 which not only coincided with the periods of my fieldwork but also the initial waves of the pandemic which brought about significant feature updates to the app. Finally, I will augment these methods by using extensive archival analysis of DingTalk's corporate user manual and official company FAQ, along with news articles about DingTalk to dissect the formal and informal reception of the app and its impact on Chinese society in the backdrop of a global pandemic.

Contextualizing Digital Workplace Surveillance

There exists a significant volume of research on workplace surveillance given the prevalence of workplace monitoring within highly industrialized societies.[246] Particularly in the context of capitalistic production whereby labor is alienated from the products of labor which require new means of measuring efficiency at the workplace. Early tools such as punch card machines, performance sheets, scheduling programs, and workplace collaborative tools were all intended to facilitate the ease of measurement and control over workers' performance and behavior. These scientific management measures only intensified with the neo-Taylorist turn as workplace surveillance became increasingly reliant on computational and technological systems.[247] Some scholars have considered this as a form of "digital Taylorism" whereby highly

[245] Svitlana Matviyenko and Paul D. Miller, *The Imaginary App* (Cambridge, MA: MIT Press, 2014), 4.
[246] See Martha Crowley, Daniel Tope, Lindsey Joyce Chamberlain, and Randy Hodson. "Neo-Taylorism at work: Occupational change in the post-Fordist era." *Social Problems* 57, no. 3 (2010): 421-447; Patricia Wallace. *The Internet in the workplace: How new technology is transforming work*. Cambridge University Press, 2004; Kirstie Ball, "Workplace surveillance: An overview." *Labor History* 51, no. 1 (2010): 87-106.
[247] Christopher O'Neill, "Taylorism, the European science of work, and the quantified self at work," *Science, Technology, & Human Values* 42, no. 4 (2017): 600-621.

skilled knowledge work becomes standardized using digital technologies.[248] Such reliance platforms and software also reflect how workplace oppression is increasingly imbricated with digital technologies and surveillance tools into one's working routines. Shoshana Zuboff regards this as a form of "instrumentarianism",[249] where power is enforced and expressed not through violence but the instrumentation of behaviors through surveillance technologies such as apps and platforms. In doing so, the economic regime of control transforms what was supposed to be qualitative spaces into quantitative spaces by which labor and precarity are disguised as promoting productivity. This conforms to the neoliberal logic of making work a personal responsibility that is supposed to be a liberating experience as opposed to an oppressive one. Phoebe Moore and Andrew Robinson for instance, detail the increasing adoption of wearable technologies at workplaces using various sensors and protocols. The direct consequence of this is the internalization of policing and control to the individual that promotes the conception of the "quantified self" by which metrics and measurements are presented as a form of self-betterment as opposed to control.[250] Such contentions are all the more apparent in the always-on app economy by which employee metrics and data are constantly being monitored by digital platforms connected via cloud networks.

Another major strand in surveillance studies is the metaphor of the "panopticon"[251] where the nexus of control is largely rendered invisible, and workers are constantly being spied on

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[248] Phillip Brown and Hugh Lauder, "Economic globalisation, skill formation and the consequences for higher education," *The Routledge international handbook of the sociology of education* (2009): 229-240.
[249] Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (New York: Public Affairs, 2019).
[250] Phoebe Moore, and Andrew Robinson, "The quantified self: What counts in the neoliberal workplace." *New media & society* 18, no. 11 (2016): 2774-2792.
[251] See Michel Foucault. *Discipline and punish: The birth of the prison*. (New York: Vintage, 2012); Peter Bain, and Phil Taylor, "Entrapped by the 'electronic panopticon'? Worker resistance in the call centre." *New technology, work and employment* 15, no. 1 (2000): 2-18; Jamie Woodcock, "The algorithmic panopticon at Deliveroo: Measurement, precarity, and the illusion of control." *ephemera: theory & politics in organization* 20, no. 3 (2020).

without their knowledge or consent. Monitoring software and digital platforms seems to fit neatly into this asymmetry of power as the very process of knowledge production, distribution and reception are mediated via the softwarization process that are often hidden behind opaque interfaces.[252] From wearable badges with cameras and accelerometers that can track one's arousal and performance, to infrared sensors that can monitor location and space within the office, to RFID tags and biometrics recognition, surveillance technologies have increasingly colonized the workplace in ways that allows for persistent and total control over working life.[253] This digitally-mediated workplace conforms to what Mark Andrejevic considers as the notion of the "digital enclosure" where all interactions with software become incorporated as forms of labor that can be monitored and commodified.[254] Recent interventions further expanded with the notions of "dataveillance"[255] by which large data sources can be pooled together to form vast networked surveillance apparatuses that can track and even predict possible patterns in user engagement. Or what Wendy Chun elaborates as the implicit relations between software and governmentality where interfaces both work to provide a facade of individual choice but also inevitably confines them within the organizational powers of software.[256]

Yet, the panoptical model in the Foucaultian sense often does not fully conform to the case of digital workplace surveillance. Digital platforms encompass multiple layers of control that are highly visible through its metrics of self-quantification, but also opaque through its persistent data collection. Software like DingTalk operates along three intersecting layers of

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[252] Lev Manovich, *Software takes command* (London, UK: A&C Black, 2013).
[253] Ivan Manokha, "The Implications of Digital Employee Monitoring and People Analytics for Power Relations in the Workplace," *Surveillance & Society* 18, no. 4 (2020): 540-554.
[254] Mark Andrejevic, *iSpy: Surveillance and power in the interactive era*. (Lawrence: University Press of Kansas, 2007).
[255] José Van Dijck, "Datafication, dataism and dataveillance: Big Data between scientific paradigm and ideology." *Surveillance & society* 12, no. 2 (2014): 197-208; Crooks, Roderic. "Cat-and-Mouse games: Dataveillance and performativity in urban schools," *Surveillance & Society* 17, no. 3/4 (2019): 484-498.
[256] Wendy Hui Kyong Chun, *Programmed visions: Software and memory* (Cambridge, MA: MIT Press, 2011)

control: first, there is a visible front-end that is accessible and interfaced by workers on a regular basis. Second, there is a client-side portal by which companies can monitor and track worker data in real-time. Third, there is an invisible back-end accessible only to DingTalk's parent company Alibaba where data is harvested from multiple companies. Another important consideration is the important influence of the Chinese state in regulating big tech. In 2021, the Chinese Ministry of Industry and Information Technology (MIIT) issued a draft regulation to rein in the powers of tech companies like Alibaba and Tencent by migrating data to government-controlled cloud services.[257] Thus, big tech just like everyday tech workers are also under the whim of state power. This multivalent means of control conforms to what some consider as the increasingly Deleuzian or rhizomatic means of surveillance where the loci of control is both exercised through software interfaces and also diffused across multitudes of different stakeholders and institutions with potentially divergent interests and goals.[258] In the case of DingTalk, control lies not just within the hands of the self-quantifying individual and company supervisors but also the data centers at Alibaba and ultimately the Chinese state.

However, such scholarly debates remain largely grounded in the Western context of the neoliberal workplace, with relatively little attention paid to how work surveillance is experienced and enacted in other regions of the world. More troubling however, is the increasing labor exploitation in non-Western contexts especially given the prevailing outsourcing of tech work, including both hardware and software production, to Asia. Here the deployment of workplace surveillance compounded the existing oppression of workers in an already extractive

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[257] Frank Tang, "Data security law: China orders state firms to migrate to government cloud services," South China Morning Post, august 28, 2021, accessed June 23, 2022, https://www.scmp.com/economy/china-economy/article/3146743/data-security-law-china-orders-state-firms-migrate-government.

[258] Selena Nemorin, "Post-panoptic pedagogies: The changing nature of school surveillance in the digital age." *Surveillance and Society* 15, no. 2 (2017): 239-253.

environment. Carol Updahya's work on Indian IT knowledge workers for instance, argues the client-driven outsourcing model has encouraged local companies to adopt panoptical means of boosting productivity.[259] In applying such tensions to China, Julie Chen in looking at DiDi's ride-hailing drivers in China, helps to situate surveillance in the context of the on-demand economy where workers are subjected to persistent algorithmic control.[260] Finally, studies have also reflected on the challenges of studying labor politics in Chinese tech companies owing to the state surveillance of researchers,[261] which complicates the already multilayered systems of monitoring in the workplace. Such contentions also raise important questions as to its impact on workplace precarity and labor oppression, made all the more acute due to the COVID-19 pandemic. Specifically, DingTalk uses a mix of geolocation and timestamping to track when and where workers should be working despite being relegated to telecommuting from home. More importantly, working from home as a result of COVID-related lockdowns did not in fact grant workers the freedom to work in their own time and space but the exact opposite, a perpetual work culture that permeated every aspect of one's working life. Or what Melissa Gregg sees it as a form of "presence bleed",[262] by which the never-ending work schedule spills over to the domestic sphere where one's personal time and space also becomes subsumed by work. In other words, the COVID-19 lockdowns produce new intersecting layers of oppression and alienation for tech workers in China that are both enabled and impeded through the constant interfacing with software.

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[259] Carol Upadhya, "Controlling offshore knowledge workers: Power and agency in India's software outsourcing industry," *New Technology, Work and Employment* 24, no. 1 (2009): 2-18.
[260] Julie Yujie Chen, "Thrown under the bus and outrunning it! The logic of Didi and taxi drivers' labour and activism in the on-demand economy," *New Media & Society* 20, no. 8 (2018): 2691-2711.
[261] Liu, Hong Yu, "Reflections on Conducting Fieldwork under Digital Surveillance: Investigating Labour Politics in China's Tech Industry," *Journal of Contemporary Asia* 52, no. 1 (2022): 152-162.
[262] Melissa Gregg, *Work's intimacy*. (Hoboken: John Wiley & Sons, 2013).

DingTalk and the Softwarization of Work

DingTalk in its early iterations drew close inspiration from other online collaborative software (OCS) such as Slack in focusing on office messaging and collaboration. The main interface also resembles a typical messaging app organized across different contacts and work teams by which employees must interact on a daily basis. While Slack, as its name might suggest, can be seen as functioning to foster more fun, informal, and social workplace interactions.[263] The discursive construction of DingTalk positions it as its polar opposite. According to the company FAQ, DingTalk or DingDing in Chinese, takes its name from the Chinese idiom 板上钉钉 which literally means "nails on a board", intended to signify the nailing down of decisions as part of the work collaboration process.[264] But the nail metaphor in DingDing can also be interpreted as the increasing machization of work itself, as workers become part of the proverbial cogs in the wheel in driving capitalist production. A fellow cubicle mate in my company Ms. Tsai confided to me "I don't really trust DingTalk because it's made by Alibaba, a company that caters to businesses as opposed to the individual". While this categorization may seem overly simplistic, it implies the perception of DingTalk as not a social messaging tool but an organ of utility and control. More pertinently however, the Chinese name DingDing is also a homonym for the "ding" sound that alerts workers of the notifications from the app, which often imply there is work to be done. In fact, Chinese workers often use "ding" as a verb (i.e., go *ding* this person) as a way of trying to solicit a reply from a coworker or trying to get someone's attention. This decidedly Pavlovian response reflects how workers are constantly

[263] Mel Bunce, Kate Wright, and Martin Scott, "'Our newsroom in the cloud': Slack, virtual newsrooms and journalistic practice," *New media & society* 20, no. 9 (2018): 3381-3399.
[264] "DingTalk FAQ", DingTalk, accessed December 1, 2020, https://www.dingtalk.com/qidian/help-detail-1000123104.html.

conditioned to constantly anticipate and respond to messages where persistent notifications (which buzz in the app even while muted) become an integral part of the aurality of the modern workplace.

Herein lies one of the most notorious features of DingTalk, read receipts that mark if a worker read the message or not similar to functions in Whatsapp or iMessages. However, unlike Whatsapp which functions as a social app, the application of read receipts in workplace apps carry a lot more stake especially when it is tied to evaluating worker engagement in the office. On the practical level, whenever a message is sent or received a notification shows up under the message marking it unread unless the user interacts with the chat box, which only then it will be marked as "read". An audible notification also accompanies the sent message and if the user's device is muted, the taskbar will flash to notify of an incoming message. This results in the persistent expectations especially from team leaders and managers for having workers to respond promptly to any work-related inquiries. The social obligations imposed by the read receipts feature also exacerbates workplace anxieties associated with interpersonal work communication in ways that creates an always-on mentality by which workers must always be available on standby for work. This dovetail with Chun's assertion of the neoliberal crisis enabled by new media that requires users to "constantly respond in order to remain close to the same",[265] which habituates users as wholly dependent on new media technologies. Additionally, the read receipt function is also reciprocal for both the sender and receiver whereby both can see whether the messages are read. This is especially apparent during group chats by which group members can easily see which person did not read a message. As a result, the affordances of DingTalk enforce

[265] Wendy Hui Kyong Chun. *Updating to remain the same: Habitual new media*. (Cambridge, MA: MIT press, 2016).

a form of "imagined surveillance"[266] by which workers collectively surveil and supervise each other in groups. Thus, the enforcement of attentiveness becomes a collective act whereby everyone must partake in through interfacing with DingTalk. Those workers who are unresponsive were deemed inattentive at work and are often called out for it by their superiors. Read receipts are thus highly visible modes of control intended to regulate the timeliness and performance of workers' daily interactions in ways that often produce additional stress and anxiety.

Figure 5.1 (left): DingTalk's clock-in (*daka*) interface with a large blue button with time registered.

Figure 5.2 (center): The geolocation clock-in attendance system as determined by proximity to the office and the daily health checkup feature in DingTalk. The caption in the circle says, "You are within the clock-in area".

[266] Brooke Erin Duffy and Ngai Keung Chan. ""You never really know who's looking": Imagined surveillance across social media platforms." *New Media & Society* 21, no. 1 (2019): 119-138.

Figure 5.3 (right): My attendance statistics page on DingTalk that shows the average hours worked, numbers of days logged, lateness, missing attendance, etc.

The second main feature workers must interface on a daily basis is the geolocation clock-in/clock-out attendance system in the mobile app that tracks workers via their smartphones. This system is known as *daka* or "punch card" in Chinese and it's a literal reference to the card punch machines used by companies in the past to record worker attendance, only in this case the system is remediated into a digital app where employee data is constantly collected and monitored. Each day the first thing workers must do upon arriving at the office is to open DingTalk and clock-in their attendance and the app will also notify workers before the required attendance time in case they forgot. The main *daka* interface is made up of a large blue button with the real time clock showing when workers must press the button to clock-in for work (Figure 5.1). Since the attendance system is directly tied to company timesheets logging daily hours worked, failing to clock-in/out regularly will negatively impact how workers are evaluated and ultimately paid. Through DingTalk, companies can set the specific time for clocking in/out of work as well as the physical proximity to the office where attendance can be logged which is generally between 100-300 meters away from the office knowns as "attendance zone" (考勤范围) (Figure 5.2). Sourcing location data from the built-in GPS on smartphones, the attendance interface features a circular radius of the area where users can clock-in. Registering a location outside this perimeter or failing to clock-in will prompt the message: "please select your real current location, we will forward your location data to your company to confirm your hours of attendance". One's personal smartphone essentially transforms into tracking devices interfaced through the DingTalk app, where the employer has full access to workers' geolocative information within the "attendance zone". This forces workers to be not just punctual in terms of clocking-in on time but also be within close physical proximity to the office. Finally, workers also have a summary

page with all their attendance statistics such as average hours worked per day, numbers of late days or absences, etc. (Figure 5.3). This in turn require workers to be constantly aware of their attendance record to avoid any penalties. Gregg considers such productivity software as creating an "aesthetics of activity" that paradoxically "create expectations for more activity"[267] through further affective investment and attention demands for completing work mediated by app interfaces. It is only fitting that DingTalk provides gamified badges that are awarded to workers with the most engagement for completing activities within the app such as "the hardest worker" for those with the most days clocked-in.

Both the temporal and spatial forms of surveillance implemented in DingTalk therefore creates added anxieties for workers each morning where many already have long and stressful commutes to work downtown. As a result, many of my coworkers would text one another early in the mornings just to remind everyone to clock-in on time. "Don't forget to open DingTalk! Don't let the company dock your pay for no reason!" Mr. Lu, our team leader, would frequently post each morning in our separate private WeChat group. The very fact DingTalk requires manual inputs to clock-in despite its constant geolocative tracking is a constant source of frustration for many workers. "Why can't they [the company] just have everything automated so I can clock-in when I enter the attendance zone? Isn't DingTalk supposed to be smart?" complained Mr. Han on a day he forgot to clock-in on time. On one hand, the need to manually clock-in is designed to demonstrate intentionality of actually going to work as opposed to just loitering around the office. On the other hand, DingTalk's *daka* feature also belies the offset of responsibility to that of the self-disciplinary individual via the personal devices they carry. So, while app-mediated attendance may seem convenient compared to past systems that require

[267] Gregg, *Counterproductive*, 85.

physical presence (i.e., the use of punch cards, RFID cards and fingerprint scanners), it still requires deliberate effort for workers to operate.

Figure 5.4: Promotional material from DingTalk touting its advanced backend features for employers to track all the attendance data from workers.

Nevertheless, DingTalk in its promotional materials touts this form of digital attendance as a "simple way to clock-in, never wait in line again, your phone is your attendance machine".[268] The remediation of punching cards into punching buttons therefore work to inoculate work attendance into one's own routine by normalizing it as part of the everyday digital experience, no different than clicking on any other app. But, as I mentioned, the digitization of attendance does not necessarily bring about convenience. It also does not account for moments of failure such as network connection issues and device lockups, or app crashes when workers cannot clock-in on time. There were several times during my fieldwork that I also encountered issues with DingTalk that prevented me from logging my attendance. While the app allows for

[268] "DingTalk User Manual", DingTalk, accessed December 1, 2020, https://notes.dingtalk.com/p/Y7kmby3lP40KXLq2/docs/Y7kmbqPPWgNNYXLq.

workers to make-up attendances, it must be approved by a direct supervisor or HR, which adds to the red tape that defeats the very purpose of having a seamless, remote and personalized clock-in experience. Moreover, much of the aforementioned features are merely those available on the user end, and there is an entire backend that the company has direct access to. On promotional material targeted toward employers Alibaba proudly highlights DingTalk's ability to collect workers' attendance data and visualize it in ways that can further the company's bottom-line. For instance, one slogan claims: "Look up attendance records anytime and anywhere, discover quality teams and employees" (Figure 5.4). The promise of access to employee data further reinforces the creation of a "quantified workplace" by which the barometer of productivity is continuously extrapolated through tracking and surveillance technologies.[269] DingTalk in this regard functions as a one-way mirror, on one side workers must interface with the app as self-regulating and self-disciplinary individuals, while on the other side, the company management scrutinizes every input and data trace from its employees.

[269] Phoebe Moore, Lukasz Piwek, and Ian Roper, "The quantified workplace: A study in self-tracking, agility and change management." In *Self-tracking* Btihaj Ajana ed. (London, UK: Palgrave Macmillan, 2018), 93-110.

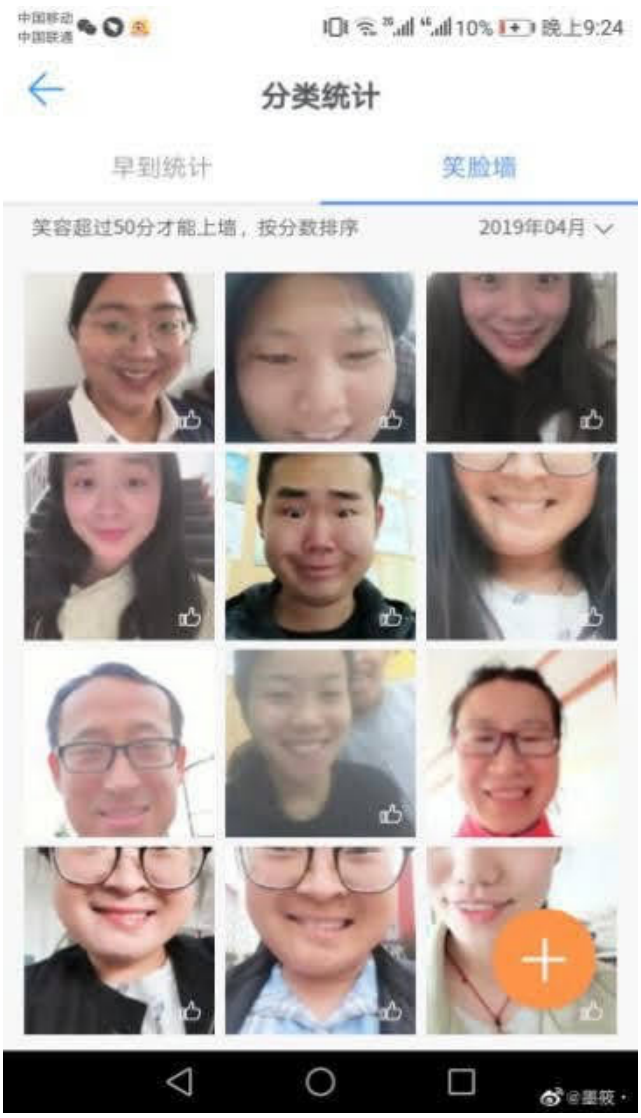

Figure 5.5: DingTalk smile attendance feature.[270]

The move toward a digitalized attendance system is also not without its faults, the decentralization of the clock-in process onto individual personal mobile devices also paradoxically made it harder to keep track of who is actually checking-in. In theory, technically anyone can lend their phone to someone else to do the work of clocking-in on time each

[270] Sina. "Dingding Xiaolian Daka, Ni Zhongzhao le ma? [DingTalk's smile attendance system, did you fall for it too?]," *Sina*, May 16, 2019, accessed June 23, 2022, https://cj.sina.com.cn/articles/view/1068516191/3fb0435f01900i4qj

morning, a practice known as *daiqian* or *dai daka* that farms out the labor clocking-in to other people for a fee. As a result, DingTalk would also go on to introduce the smile attendance feature where workers must submit a smiling selfie that is verified through facial recognition, which will then be posted to a digital "wall" with other smiling coworkers where they are ranked by the best smile of the day (Figure 5.5). Many workers responded on social media saying "we don't know whether to laugh or cry"[271] to voice their incredulity to such an absurd system. While the smile attendance system was not widely rolled out to every company (including mine), this seemingly dystopian means of fostering worker happiness and engagement belies a more ominous means of dataveillance by which user's personal information and biometrics are increasingly being harvested for the purpose of tracking their movements and behavior. In fact the DingTalk FAQ specifically states the smile clock-in system is intended to promote "security" and to dissuade users from engaging in *dai daka* behaviors.[272] More important is how the use of facial recognition goes beyond simply identification but also the measurement of one's mood, feelings and sentiments in the form of an emergent emotion AI that works to police the affective dimensions of work itself.[273] Much like the manipulation of passion detailed in the last chapter, the nascent ability for companies to quantify elements of affective labor, even if superficially, can have dire implications on the roles of worker agency in the digital workplace.

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[271] Sina, "Dingding Xiaolian Daka, Ni Zhongzhao le ma? [DingTalk's smile attendance system, did you fall for it too?]," *Sina*, May 16, 2019, accessed December 1, 2020, https://cj.sina.com.cn/articles/view/1068516191/3fb0435f01900i4qj

[272] "DingTalk FAQ", DingTalk, accessed December 1, 2020, https://m.dingtalk.com/qidian/help-detail-20719225

[273] Andrew McStay. "Emotional AI, soft biometrics and the surveillance of emotional life: An unusual consensus on privacy." *Big Data & Society* 7, no. 1 (2020): 2053951720904386; Daniel Black, "Facial analysis: automated surveillance and the attempt to quantify emotion." *Information, Communication & Society* (2021): 1-14.

Figure 5.6: Me checking into the office building via the automated facial recognition camera at the gate.

In recent years however, DingTalk also introduced hardware check in devices in the form of the M2 Smart Attendance System that scans workers face upon arrival to work and the D2 smart lock that requires QR codes to unlock office doors. All the data collected can be accessed by companies for a real time visualization of who is in and out of the office. Such shifts demonstrate the increasing vertical integration of software and hardware solutions as a means for

companies to obtain information from workers. However, my company LudoCo did not implement such systems during my tenure at the company and there exist other forms of facial recognition systems at the office. To enter the office for instance, each employee must scan their face to unlock the gate to the elevators taking them to the respective floors. However, this gate is controlled by building management instead of my company and requires a separate app to scan and register one's facial information. This brings to light my earlier contentions of how workplace surveillance is not just based on one central node of control but multiple points of monitoring. The facial recognition data collected by building management is implemented through DingTalk and the information is not shared with LudoCo in general. This in turn creates several surveillance systems that may or may not be interoperable with one another which can create added bottlenecks during contingencies and periods of crisis as the following section will reveal.

Pandemic and the Challenges of Control

My discursive interface analysis of DingTalk and other interfaces at the workplace encompass several key features that were created well before the onset of COVID-19. Yet, the increasing use of app-mediated surveillance, geolocative tracking, facial recognition, etc. provided some of the fundamental building blocks for the widespread adoption of the health code contact tracing system used in China to keep track of COVID-19 cases. Indeed, the DingTalk team was part of combined efforts across several product divisions within its parent company Alibaba that contributed to the very first implementation of the health code on February 9th 2020 - the Hangzhou Health Code that later evolved into the Alipay Health Code deployed

nationwide.[274] Here, Alibaba leveraged existing expertise in QR code payments from Alipay, its cloud computing service Aliyun, and DingTalk's portfolio of workplace monitoring tools to build a digital surveillance infrastructure that can process, collect and monitor massive amount of personal, biometric and geolocative data for the purpose of mass surveillance. The health code required multiple verifications and regular updates of one's health information to be active and functionally displayed. It then generates a unique QR (quick response) code that is then scanned which will then display a color-coded status of the risk of contact associated with the user based on their risk of exposure to the disease based on geolocation[275]. Because of the ubiquity of QR code systems used in everything from mobile payments, to unlocking gates, to ordering off a menu, it has become an everyday routine for many Chinese which in turn normalizes it as a digital token of self-identification that is integrated with different apps and platforms. In other words, the health code system was not merely an *ad hoc* reaction to the pandemic but rather the outcome of existing forms of social controls being inoculated in Chinese social life that is in part due to the ongoing integration with digital platforms. It shows how the mechanisms and infrastructures of workplace surveillance are closely aligned with the various means of biopolitical control that has already been developed in China's high-tech surveillance society.

The pandemic-imposed lockdown also opened up new opportunities for more invasive technologies to penetrate the everyday lives of people, particularly through the increasing reliance on platforms such as DingTalk to keep track of workers at home. Yet, the onset of COVID-19 also brought along many new sets of challenges and obstacles for tech companies to keep a watchful eye on its workers relative to their performance and productivity. While

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[274] Paul Mozur, Raymond Zhong and Aaron Krolik, "In Coronavirus Fight, China Gives Citizens a Color Code, With Red Flags," *The New York Times*, January 28, 2020, accessed June 23, 2022, https://www.nytimes.com/2020/03/01/business/china-coronavirus-surveillance.html?.

[275] Liang. "<? covid19?> COVID-19 and Health Code".

aforementioned features such as read receipts can have a powerful disciplinary effect in the office, it loses much of its clout once workers are at home and outside the view of their bosses and coworkers. In the second week of teleworking, the CEO Mr. Li sent this urgent email to the company:

> While the transition to working from home has gone smoothly, certain teams during this critical time have had a noticeable decline in productivity. Many employees are hard to get a hold of and some even refuse to respond to messages [on DingTalk] from their superiors...do not think just because no one can see you, you can lower your own expectations for work!

Such reactions serve as a counter to the often-totalizing discourses on digital surveillance as unavoidable given the ubiquity of software in tracking and collecting user data, particularly the ways workers are made legible or seen through the panoptical gaze of digital surveillance. Yet the shift to remote working during the pandemic points to how the all-seeing powers of platforms can lose its luster and effectiveness. As I mentioned in the previous chapter, the practices of touching fish are already endemic in the workplace as means of diverting time and resources away from corporate dominance. The shift to remote work only made slacking off easier outside the organizational control of the workplace. Ms. Xiao, admitted to me how she binged TV shows while working from home and only paid scant attention to DingTalk. “If everyone didn’t respond to messages in a timely manner then there is no stigma for slacking off, I’m sure even the managers are not paying too much attention”, she said, which shows how quickly workers break free from the oppressive expectations of the workplace. Such avoidance strategies also highlight how the use of software and digital platforms remain very much spatially contingent despite its promises of omnipresent access and persistent tracking. Or in other words, once people are outside the office, the disciplinary effects of software-mediated surveillance are tempered by the

various recalcitrant and subversive tactics employed by workers in their private lives. The informal nature of workplace communication tools like DingTalk, when used at home in private, just becomes another social messaging tool where people can choose to interact or ignore.

Figure 5.7: Workers waiting in long lines to get to work due to face mask requirements that rendered facial recognition entry inefficient.

In addition, the various health regulations and protective measures as the direct result of the pandemic can often counter the affordances and intended uses of apps such as DingTalk. The most glaring example of this is the aforementioned geolocative attendance feature. Despite the fact that all workers are relegated to working from home remotely, my company still requires

daily clock-in and clock-out during specific times at home. But because the attendance system must be within the vicinity of the company to register as effective, the clock-ins became largely a formality to merely record working hours for payroll purposes as opposed to enforcing productivity. The inability to use geolocation tracking thus defeats the very intended design of DingTalk's invasive attendance system and opens up opportunities for workers to reclaim spaces for themselves. This disruption of software-mediated surveillance remained even after returning to work post-lockdown when health guidelines remain in place. For instance, mandatory mask requirements as a result of COVID-19 made going to work particularly troublesome due to the facial recognition system required to enter the office. This resulted in long queues in the morning to get into the office as workers must remove their masks to scan their faces which defeats the purpose of the seamless, contact-free design of facial recognition entry systems in the first place (Figure 5.7). The hour-long lines also forced workers to arrive much earlier to work to clock-in on time, which only added to the existing long commute many have to make to the office and exacerbated the precarity associated with excessive working hours.

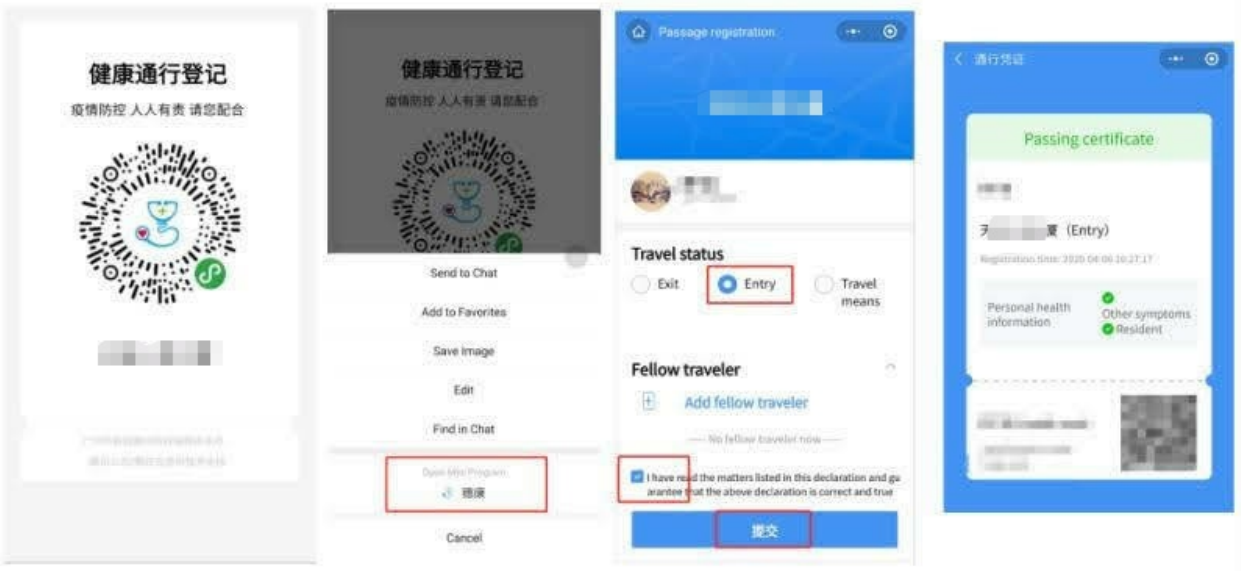

Figure 5.8: Health code integration in DingTalk in order to enter office buildings.

Because DingTalk is an app that resides on personal devices, it works to render the mechanisms of message alerts, geolocation tracking and daily attendance as something that is normalized and habitual, or according to Wendy Chun, dulls us from the perpetual cycles of crisis under capitalistic control only to paradoxically sustain it.[276] The plight of the COVID-19 crisis both intensified the softwarization process in the workplace but also points to its inevitable deficiency and redundancy that must be constantly updated to keep up with contingencies. On February 25th, about a month after the initial lockdown, DingTalk issued a major release in the form of version 5.0 that notably added a health check feature intended for companies to better track employee health. This system collects data from the Alipay Health Code where if workers are exposed to COVID-19 (code red) they will be denied from entering the office (Figure 5.8). However, because personal information reported to the health code system is private and stored on Alibaba's cloud service, companies in need of employee health information had to resort to other means of collecting data. For instance, each morning my company will manually measure worker's temperatures and record in a binder notebook so it can track whether an employee is potentially sick. Likewise, the building management opted to put a physical sticker on each person when they first checked into the building to mark their health status, so they don't have to repeatedly scan each worker who often goes out and returns after lunch. This decidedly analogue method of data collection offers a stark contrast to the seemingly sophisticated forms of digital surveillance such as DingTalk. More tellingly, this highlights the contentions between the attempts to centralize dataveillance control and institutions, companies and individuals seeking to maintain control over its own data. Thus, despite DingTalk's attempt to meet the challenges of the pandemic through constant updates, the impact of the pandemic in reshaping its environs of

[276] Chun, *Updating to remain the same*, 9.

intended use demonstrates the inflexibility and inadequacy of digital platforms when facing major disruptions that threatens its mechanisms of control.

Worker Agency and Counterveillance

The challenges presented by the pandemic for workplace surveillance on a broad level, is also applicable to surveillance in China writ large. The health code system so touted by Chinese state media was marked by problems, particularly in regard to its fragmented rollout where each region used its own health code where cross-compatibility is not always seamless. Moreover, the health code was implemented by both Alibaba and Tencent which created rival health codes that required users to register for multiple accounts, creating a bifurcated regime of health surveillance that adds to the complexity to an already tedious workplace monitoring process. For instance, the city of Guangzhou where I was located used the Suikang Health Code that reside in Tencent's WeChat app as a mini program that does not have synergies with Alibaba's health code and DingTalk, necessitating opening multiple apps each morning to register the health code and to clock-in to work. Moreover, during the first weeks of the implementation of the health code, foreign employees including myself found out the hard way when we were unable to register the app because only Chinese citizens with national ID cards can register for the system. One of my American coworkers, Matt, expressed his frustration, "I mean I can't confirm my identity in that app because it only accepts Chinese national ID cards in the form. Because despite China wanting to attract foreigners to work here, they never think to account for them in the registration software". This dilemma not only creates a blind spot in the contract tracing system as certain people are denied access to the system but also indirectly points to the preexisting notions of who ought to be included in the health code surveillance regime to begin

with. Indeed, apart from contending systems of Tencent and Alibaba, the initial rollout of the health code system was fraught with issues particularly when it comes to access. Despite China's large mobile phone adoption rate, there remain significant populations without smartphone access particularly among the elderly and rural denizens of the country. Likewise, the reliance on the health code system on geolocation as a means of contact tracing also meant that in the event of faulty issues with ones' smartphone GPS, it can lead to major issues in terms of identifying potential COVID-19 contacts. Indeed, there have been numerous documented cases by which individuals' health code "accidentally" turned red due to myriads of issues related to geolocation, lack of connection and access to networks. These deficiencies in the system therefore point to how software-mediated forms of control can open up opportunities for users to exploit and subvert.

Having already documented everyday forms of resistance in the forms of outsourced clock-in's (*dai daka*) and deferring answering DingTalk messages, there are specific strategies used by workers to directly tinker with the technical affordances of apps like DingTalk outside the scope of its intended usage. While the pandemic highlighted the limits of digital surveillance at home, workers, as the following ethnographic interviews show, continue to come up with innovative means of challenging the system after returning to work after the lockdown. Such contentions echo Scott's notion of "hidden transcripts", or tacit forms of resistance that lie outside the view of the powers of authority.[277] The often informal and unsanctioned means of interfacing with software is a key element of workplace subversion in the digital age. Such application of offstage resistance to digital platforms brings to question the notions of "counterveillance" as the means by which workers can potentially break off the shackles

[277] Scott. *Domination and the arts of resistance,* xii.

imposed by surveillance technologies. Here counterveillance does not imply a direct toppling of the structures of power but rather the various means of delaying, disrupting and perhaps ameliorating the most harmful effects of workplace oppression.[278] Such strategies help to reconsider the total dominance of the state-corporate hegemony where workers may not actually be so powerless in the face of the perceived omnipotence of digital control. Working at a mobile tech company in particular, has the distinct advantage of exposing me to workers with the tech know-how and proficiency to engage in recalcitrant tactics that workers used on a daily basis in attempting to thwart many of DingTalk's most intrusive features. While these tactics range from deliberate attempts to cheat the system to exploiting minor loopholes, it demonstrates different degrees of sophistication by which workers circumvent the intended design of DingTalk in their everyday working lives.

During the course of my fieldwork, DingTalk's attendance system with its persistent geolocative tracking was cited as the most frequent source of worker angst and frustration, and the primary target of subversion. One co-worker, Mr. Hu who worked as technical designer at the company confided to me "I tried using an emulator in my office computer to clock into DingTalk remotely just to see what can happen but HR discovered it so they can probably see it in the backend". This ruse failed because DingTalk is inevitably tied to one's device ID that includes IP address, geolocation and browser information which can be easily discovered. Hu admitted that "I knew it probably would not work but since I regularly use emulators as part of my work testing new builds of apps, I figured it might go unnoticed". Another colleague, a computer programmer, Mr. Cui said "I even contemplated using a VPN to fake his GPS coordinates to try to trick DingTalk into thinking I was close to the office to clock-in", but he

[278] Claudio Celis, "Critical Surveillance Art in the Age of Machine Vision and Algorithmic Governmentality: Three Case Studies," *Surveillance & Society* 18, no. 3 (2020): 295-311.

decided against it due to fears of losing his job in case HR somehow found out. Cui claimed he got the idea of faking his location from playing the game Pokemon Go where rampant cheating exists in the form of manipulating GPS coordinates using 3rd party apps. The subsequent reaction from Nintendo to permanently ban players caught cheating[279] was also one of the deciding factors for Cui to not go through with his plan. In both cases, the fear of the potential fallout of subversion is enough to deter workers from actively engaging in such activities. Likewise, the familiarity with digital software such as emulators and VPNs show how digital literacy also can ironically hinder subversive action through the understanding of its technical limitations. As such these tactics reveal the challenges in engaging with always-on forms of digital control where despite the temptation of disrupting such systems, many workers are intimately aware of the risks involved in the process.

Despite this, workers also engage in routine, makeshift, and simple means of everyday resistance in dealing with DingTalk. Even those who may not be technically proficient compared to IT workers and programmers can still partake in subversive acts. Ms. Zhang, one of my cubicle mates at the marketing team offered her own decidedly low-tech strategy:

> Before getting off my metro station to work I would turn off my GPS on my smartphone then quickly turn it back on, so the GPS has to recalibrate to triangulate my location, which often tricks DingTalk into thinking I am closer to the office than where I actually was, thus allowing me to clock-in.

Admitting to not being as technically proficient as her colleagues in the development team, Zhang inadvertently discovered this loophole due to previous experiences encountering poor signals in the subway. While such tactics often only save 10 to 15 minutes, Zhang considers this

[279] Julia Alexander, "Here's what happens if you're caught cheating in Pokémon Go," *Polygon*, July 12, 2016, accessed June 23, 2022, polygon.com/2016/7/12/12159908/pokemon-go-cheating-ban-gps-spoofing

worth it due to her hour-long commute to work each day and the time-consuming health checks due to COVID-19, every second saved makes the already stressful morning better. While saving time is an important part of gaming the clock-in system, workers will often attempt to prolong hours when clocking out of work. Mr. Cui explained “occasionally after getting off work, I would take my time getting dinner close to the office, then head back to clock-out. This way I can add a few hours to my overtime pay”. Here DingTalk’s invasive geolocation attendance system is ironically also the main target for workers as they manipulate their online spatial and temporal footprint in order to reap their own benefits.

The final point of contention involving worker resistance is simply the outright refusal to engage with DingTalk beyond its required features. In fact, the mandatory implementation of DingTalk across many Chinese tech companies also made it one of the most hated apps for workers. During a weekend shift I messaged Ms. Tsai on our team’s WeChat private group for some work-related questions that required using DingTalk only to get the response: “nice try but I’m not opening DingTalk on a Sunday, no thank you!” For Tsai, there is a clear boundary for her in regard to which software she will use during the weekend. As mentioned in Chapter 2, my colleagues would often resort to using alternate apps such as Tencent’s WeChat or QQ as the primary forms of private messaging, while only using DingTalk for work-related tasks. Because WeChat is a social app, it does not come with some of the more intrusive features such as read receipts that guilt trip users from responding. Nor does WeChat have any clock-in or attendance features like DingTalk. The divergent use of social apps vs productivity apps therefore entails different affordances, design and features that are ill adapted for cross compatibility. Despite this, in recent years, companies like ByteDance and Tencent have all introduced their own productivity software to compete with DingTalk with limited success. However, the tendencies

for China's big tech players to create walled gardens as explicated in Chapter 1 makes centralized control difficult as users adopt a variety of digital software for different purposes at the workplace and beyond. Much like the bifurcated regime of the health code from Alibaba and Tencent, the multiplatform digital experiences also challenge the surveillance apparatus imposed by contending corporate interests.

Conclusion:

The rise of DingTalk during pandemic times, of course, is not an isolated case as numerous Western platforms such as Zoom, Microsoft Teams, Google Meet, etc. have all witnessed rapid growth as a result of remote work.[280] DingTalk, as the most popular workplace collaboration software in China, occupies a significant position as not just a digital surveillance tool but also as the building blocks for wider social control across China through the health code system. Indeed, in September 2020, Alibaba announced the consolidation of Aliyun Cloud Service and DingTalk's development teams in order to further benefit "people's work, study and life, along with creating more value for economic growth and social governance."[281] It is no surprise that in the wake of the COVID-19 pandemic, DingTalk was also heavily promoted as the main learning management software for primary, secondary and universities across China. The sudden switch to remote teaching provided the opportunity for DingTalk to massively expand its presence in the education sector especially with the introduction of version 5.1 in May

[280] Stephen Nellis, "Remote work during coronavirus outbreak puts millions more on Microsoft Teams, Slack," *Reuters*, March 19, 2020, accessed June 23, 2022, https://www.reuters.com/article/us-microsoft-tech-idUSKBN21629D

[281] Sina. "Alibaba gongbu yunding yiti zhanlue: aliyun yu dingding quanmian ronghe [Alibaba announce merger of services: Aliyun and DingTalk officially becomes one]", *Sina*, September 27, 2020, accessed June 23, 2022, https://finance.sina.com.cn/tech/2020-09-27/doc-iivhvpwy9195501.shtml

2020[282] that added education versions of the app bespoke for learning at home. Thus, students, like workers, were also subjected to the same intrusive attendance, messaging and monitoring systems that were initially developed in the workplace. This eventually led to massive organized "review bombing" of DingTalk on the app store by students across the country in an expression of their collective disdain for the software by giving it the lowest possible 1-star rating.[283] While the recent application of DingTalk in education warrants additional studies in its own right, it demonstrates the broader roles of workplace monitoring technologies in enabling surveillance across different social institutions.

The analysis of DingTalk during and after China's COVID-19 lockdown also raises several interesting questions as to the efficacy of widespread digital workplace surveillance. As this chapter has shown, the pandemic created a slew of unforeseen issues that the team behind DingTalk struggled to evolve despite its seemingly sophisticated means of data collection and control. The lockdown had the unintended result of allowing workers to carve their own spaces and working routines despite the outreach of companies to extend its control into people's homes. While it can be argued that digitally-mediated forms of resistance can play into the hands of tech companies through the persistent dependency on software, DingTalk as an always-on app also presents renewed contradictions and challenges associated with worker resistance in the age of digital surveillance. The all-seeing, ubiquitous, and totalizing aspect of the digital workplace are often contradicted by the personalization, compartmentalization and individualization of the mobile app experience. This tension belies the need to reimagine labor activism and worker

[282] Jiemodui. "Dingding shangxian xuesheng ban, man xiang quanguo 1.5 yi zhongxiao xueshen [DingTalk releases education version, targeted toward 150 million primary school students]", *Jiemodui.com*, July 29, 2020, accessed June 23, 2022, https://www.jiemodui.com/N/118442.html

[283] Jane Li, "What is DingTalk, Alibaba's Slack equivalent that quarantined kids in China hate?" *Quartz*. March 10, 2020, accessed June 23, 2022, https://qz.com/1814937/what-is-dingtalk-the-alibaba-app-that-quarantined-kids-in-china-hate/

solidarity that are under increasing precariousness under corporate-state dominance. The various means of digital insubordination documented by this project during the course of a global pandemic shows how apps like DingTalk lead to disparate, *ad hoc* and makeshift tactics that are fragmented and detached from any larger movement for change. Thus, it is important to reconceptualize the means by which workers can engage or disengage with software in ways without simultaneously foreclosing the possibilities for collective action and advocacy against workplace oppression.

Chapter 5

Putting the "Digit" in Digital Activism: Coding Publics and Networked Contentions in the 996.ICU Movement

In March 2019, a GitHub repository by the name 996.ICU was created by anonymous users as a form of collective protest against excessive workplace overtime in the Chinese high-tech industry.[284] 996.ICU, is an abbreviation meaning "working from 9am to 9pm for 6 days a week and having to go to the intensive care unit (ICU)" (Figure 6.1). This movement is a response to this extreme form of overtime first instituted by 58.com, an online advertising company, which exposed many of the formal and informal practices of overwork adopted across the sector.[285] Often rendered as just 996, the GitHub protest would eventually make its way across news headlines as a collective rallying cry against extreme working hours taking a toll on workers' everyday mental and physical well-being.[286] The 996.ICU page would accumulate over 256,000 stars as one of the fastest growing repository projects on GitHub at the time. Here workers engaged in various forms of public advocacy to bring attention to their plight of overtime through media outreach, online campaigns, and sharing of information of companies known for abusive practices.

While the 996 work schedule is technically illegal under Chinese national labor laws, it is widely practiced across the tech sector and in numerous other industries. Chinese labor laws specifically stipulate overtime cannot exceed 36 hours per week, a rule that is seldom enforced especially behind the walls of tech companies. The Chinese tech giant Huawei for instance

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[284] 996.ICU, accessed March 15, 2021 https://github.com/996icu/996.ICU

[285] Danfeng Zhang, "shenqi de 58 tongcheng shixing quanyuan 996 gongzuozhi bei zhi biyuangong zhudong chizhi [shocking 58.com forces all employees to work 996, accused of forcing workers to voluntarily quit]," *Yicai*, September 1, 2016, accessed June 23, 2022, https://www.yicai.com/news/5083801.html.

[286] Yuan Yang, "China tech worker protest against long working hours goes viral," Financial Times, April 3, 2019, accessed June 23, 2022, https://www.ft.com/content/72754638-55d1-11e9-91f9-b6515a54c5b1.

promotes the so-called "wolf culture" that stresses unity and discipline, which often equate to harsh regimented working conditions befitting its founder Ren Zhengfei's military background.[287] Despite denying instituting 996 work hours, Huawei's brutal management model has also contributed to several work-related scandals that made headlines in recent years.[288] Of course such oppressive work culture isn't unique to Huawei as numerous other tech companies often equate hard work with endless work as a path to success. China's then richest man and Alibaba's founder Jack Ma even famously defended 996 in stating:

> I personally feel 996 is a huge blessing, many companies and workers don't even have a chance at doing 996…if you do not exceed other people's time and hard work, how can you achieve success? [289]

This understandably drew the collective ire from workers online who criticized his inhumane view of justifying 996 by equating endless work with performance. Not to mention Alibaba is also the parent company of DingTalk that was commonly derided for its persistent forms of surveillance and control as I detailed in the previous chapter. In addition, 996 work culture has also been praised by Tesla's Elon Musk who spoke fondly of Chinese workers in 2022 by stating:

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[287] Anna Fifield, "'Bloodthirsty' like a wolf: Inside the military-style discipline at China's tech titan Huawei," *The Washington Post*, December 13, 2018, accessed June 23, 2022, https://www.washingtonpost.com/world/asia_pacific/bloodthirsty-like-a-wolf-inside-the-military-style-discipline-at-chinas-tech-titan-huawei/2018/12/12/76055116-fd85-11e8-a17e-162b712e8fc2_story.html.

[288] Phoebe Zhang, "Huawei says former employee has right to sue company over extortion case," *South China Morning Post,* December 13, 2019, accessed June 23, 2022, https://www.scmp.com/news/china/society/article/3040434/huawei-says-former-employee-has-right-sue-company-over-extortion.

[289] Josh Horwitz, "Alibaba founder defends overtime work culture as 'huge blessing'," *Reuters*, April 12, 2019, accessed June 23, 2022, https://www.reuters.com/article/us-china-tech-labour-idUSKCN1RO1BC.

> They won't just be burning the midnight oil, they will be burning the 3am oil, they won't even leave the factory type of thing, whereas in America people are trying to avoid going to work at all.[290]

This sentiment is not unique as other Western entrepreneurs such as Sequoia Capital's Michael Moritz praised 996 as the type of work ethic that is outpacing US companies.[291] For many outside China, the 996 work schedule is therefore seen as a key element of China's competitive advantage in tech development over the US, only to conveniently ignore the flagrant labor violations that it entails.

To be clear, 996 is not a hard rule for required work hours as many companies institute even more excessive overtime, but instead the 996 number has evolved into an important discursive slogan in referencing workplace oppression and as the chapter will show, a deliberate form of coded messaging that can lead to worker activism. Crucially, what makes the 996.ICU movement unique is also the use of a seemingly unlikely platform - the collaborative coding repository GitHub - as a tool for activism. As a site that caters primarily to programmers and tech workers, GitHub, with its emphasis on open-source sharing and collaboration provided an ideal conduit by which collective solidarities could occur. Likewise, it also reflects a novel approach on the part of Chinese tech workers to air their grievances to a global audience since GitHub remains one of the few Western collaborative coding platforms not currently blocked in China. The use of GitHub as a form of activism for Chinese programmers also enabled exposure for their cause and brought attention to other tech workers around the world advocating for similar changes relating to labor exploitation.

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[290] Wilfred Chan, "Elon Musk praises Chinese workers for 'burning the 3am oil' – here's what that really looks like," May 12, 2022, accessed June 23, 2022, https://www.theguardian.com/technology/2022/may/12/elon-musk-praises-chinese-workers-for-extreme-work-culture.

[291] Michael Moritz, "Silicon Valley would be wise to follow China's lead," *Financial Times,* January 17, 2018, accessed June 23, 2022, https://www.ft.com/content/42daca9e-facc-11e7-9bfc-052cbba03425

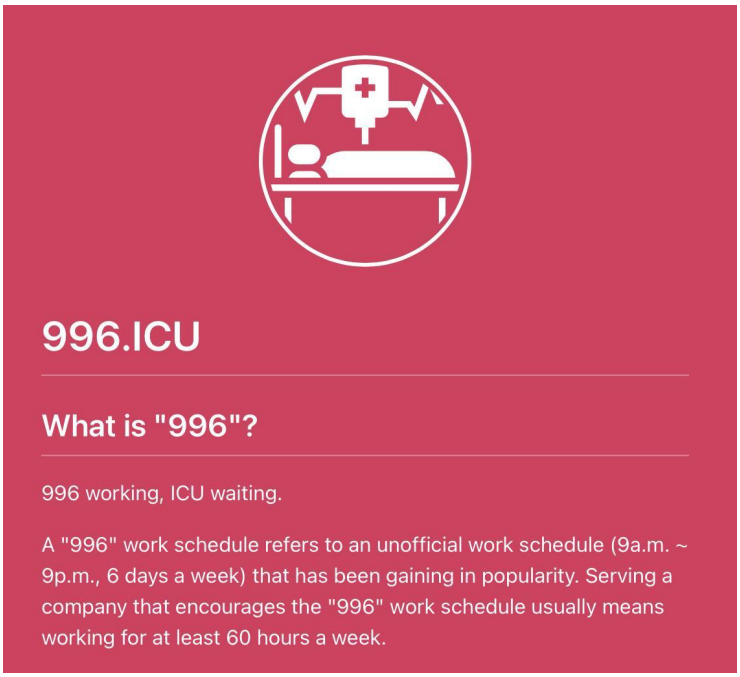

Figure 6.1: Official site of 996.ICU with a logo describing ending up in ICU due to overwork.

996.ICU is a prime example of a form of digital activism by which tech workers make use of tools and software they are most familiar with to protest and potentially impart change. While the previous chapter highlighted how tech workers cope with everyday pressures of always-on digital surveillance through various mundane and ad hoc tactics, they remain mostly disparate acts of noncompliance as opposed to any organized modes of subversion. If the everyday resistance against the affordances of Alibaba's DingTalk and other workplace software reflects a provisional, subliminal, and backstage tactic, the 996 movement is indicative of a collective effort at directly confronting the oppressive regimes of state-corporate control. Here China's rapid ICT development demarcates who gets access to information in ways that can both empower and disempower them. Scholars have argued that the proliferation of mobile communication technologies in the form of cell phones, internet cafes and social media can also allow for disparate groups such as migrant workers, low wage laborers, and other

disenfranchised groups to form collective solidarities and the formation of a networked class.[292] The use of surveillance tools and digital technologies work to both limit but also harvest the powers of the worker collective in unintended ways that may not conform to the original intent of oppressive systems. The use of GitHub, a repository owned by Microsoft, as a site of protest points to several intersecting contentions in relation to labor activism in the digital age. On one hand, tech workers such as programmers, IT specialists and operations managers, etc. possess the necessary technical proficiency to peer into the black box of the corporate-state machine. This provides tech workers with the ideal opportunity to engage in hacktivist and deviceful means of resistance and advocacy.

Just as corporations are increasingly turning to software as mechanisms of control and surveillance, workers too can make use of software and platforms in ways that benefit their mutual interests. On the other hand, this reliance on software and platforms points to how worker subjectivity is intimately woven into the fabric of their digital everyday lives. In this case, platforms, software and code play a pivotal role in shaping how, where and when workers can mobilize. This resonates with what Rob Kitchin and Martin Dodge contend as software having a "secondary agency" where it directly supports the agency of human actors.[293] Likewise, software can also limit and oppress individuals in governing their day-to-day interactions. Indeed, the 996.ICU page was briefly blocked by mobile browsers from Chinese companies such as Tencent and Xiaomi over subversive content.[294] Thus, software can both restrict but also empower users depending on its social context, which speaks to the notions of software as an actant in the world;

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[292] Qiu, *Working-class network society;* Wallis, *Technomobility in China*.
[293] Rob Kitchin and Martin Dodge. *Code/space: Software and everyday life* (Cambridge, MA: MIT Press, 2011), 39.
[294] Xinmei Shen, "Chinese browsers block protest against China's 996 overtime work culture," *South China Morning Post,* April 3, 2019, accessed June 23, 2022, https://www.scmp.com/abacus/culture/article/3029260/chinese-browsers-block-protest-against-chinas-996-overtime-work

it possesses agency, explicitly shaping to varying degrees how people live their lives. GitHub as a code repository therefore reflects how the collaborative process of coding acts as a site of deliberation and political action, whereby interactions with digital software would play a central role.

This chapter reflects on some of the culminations of the various political, institutional, and interpersonal pressures I outlined in the previous chapters in dealing with the tech industry in China. Here the everyday urban conditions, material struggles, temporal constraints, affective labor, and platform contentions are all intimately related in ways that can foster a common cause against the perceived injustices of tech work in China. This chapter uses a mix of ethnographic approaches including my own experiences working in the tech industry along with interviews and participant observation with tech workers in regard to their own encounters with 996 work culture. Additionally, I utilize critical discourse analysis of how workers use platforms like GitHub to engage in collective action, with a specific focus on the various strategies used to gain visibility online. Finally, drawing on various informal discourses on Chinese social media and news media coverage of 996, I work to dissect the public reception and reaction to the 996 movement in Chinese society as a whole. Having a grounded perspective of 996, including my own experiences in the industry is especially useful in contextualizing overtime beyond the lens of exploitation but also the productive agencies of workers in coping and resisting such oppressions. Likewise, the discursive influence of 996 among Chinese workers presently points to how the use of coding repositories can act as an important space by which potentially powerful activist voices can emerge.

Inspired by Stuart Hall's model of the encoding/decoding process, I seek to emphasize how coding as a productive process is contingent on the articulations between the "framework of

knowledge, relations of production, and technical infrastructure"[295] mapped to intersections of politics, platforms and precarity. This also follows Hall's dominant, negotiated, and oppositional codes of signification where workers, corporations and institutions come into contention, which can reveal the tensions within the cultural production process that can give rise to political action. In doing so I point to several interconnected processes in relation to how the anti-996 movement is coded, conceived and contested. First, I want to decipher the semiotics of 996 and how the rhetorical use of numbers as political expression points to the formation of a digital subjectivity that can foster solidarities among tech workers. Second, I want to demystify the totalizing conception of the oppressive 996 work culture covered in the popular press through close ethnographic interviews with tech workers in Shanghai and Guangzhou. In doing so, I want to offer a personal account of actual working conditions that contribute to excessive overtime that gives rise to work oppression. Finally, using the case of the 996 GitHub labor activist movement in 2019, I look at how tech workers use digital platforms to facilitate various forms of political action. Here platforms like GitHub embody the collaborative aspects of coding work where workers can share and take collective ownership over the process of production. Here the decentralized and disparate modes of activism on GitHub can also point to divergent interests and conflicts that can make it challenging to organize and mobilize, which can potentially hinder meaningful change. Just as Hall articulates how encoding/decoding can often be uneven and asymmetrical, I work to dissect the highly contested perceptions of tech labor among not just programmers, but ordinary tech workers predicated on different class, literacy and social positions. It is thus critical to envision a possible networked solidarity in advocating for all working subjects in the age of digitally mediated oppression.

[295] Stuart Hall, "Encoding/decoding, 164.

Encoding the Digital Subject

Since the initial 996.ICU protest on GitHub, there have been multiple other incidents involving workplace oppression and overtime, notably the Huawei "251 incident" in 2019 where a dispute over severance pay led to a former Huawei employee being wrongfully detained by Shenzhen police for 251 days.[296] This subsequently led to an uproar online condemning Huawei's notorious overtime culture and its corrupting influence on the local legal system. Like 996.ICU, netizens also came up with a series of number slogans to mock this particular incident:

> "读书 985，日常 996，加班 007， 劝退 035，离职 251，发帖 404"
> "Attending school 985, everyday 996, overtime 007, forced to resign 035, dismissed from work 251, defending rights 404".

While this string of number phrases may seem cryptic at first but it in fact parodies the life struggles of a typical tech worker. "Attending school 985" refers to "Project 985",[297] a consortium of universities promoted by the state as elite institutions and are often the minimum requirement for getting a job at tech companies in China; "daily 996" points to the aforementioned everyday 996 working culture; "overtime 007" is a play on the notion of working from 00:00 hour midnight for 24 hours, 7 days a week; "force to resign 035" eludes to ageism in Chinese tech companies where those after age 35 are let go; "dismissed from work 251" refers to the "Huawei 251 incident"; finally, "defending rights 404" is an allusion to how tech workers engaged in protest online are often met by the "404 not found" page due to

[296] Lily Kuo, "Huawei under fire in China over employee detained for eight months," *The Guardian*, December 2, 2019, accessed June 23, 2022, https://www.theguardian.com/technology/2019/dec/02/huawei-under-fire-china-employee-detained-eight-months
[297] Charles Eesley, Jian Bai Li, and Delin Yang, "Does institutional change in universities influence high-tech entrepreneurship? Evidence from China's Project 985," *Organization Science* 27, no. 2 (2016): 446-461.

persistent censorship. These intersecting issues of schooling, overtime and layoffs reflect the involution turn in Chinese society where people are increasingly being trapped in the precarious quest for upward attainment. These numerical discourses expose the various institutional, infrastructural and interpersonal tensions within the tech industry that workers must contend with in their everyday lives. Numbers therefore act as important semiotic signifiers that directly point to the systems of oppression within the tech industry. But most importantly, the use of numbers as a form of protest slogans produces a form of coded resistance that is both rhetorically and discursively potent in conveying political messaging.

In fact, the use of number slogans has a longstanding tradition in China, frequently leveraged by state propaganda as a quick way of disseminating information to the masses. Whether it was Mao Zedong's "Three anti's" and "Four olds", or Deng Xiaoping's "One country, Two systems", Jiang Zemin's "Three represents", or the recent "One Belt One road" initiative under Xi Jinping, number slogans have been at the very center of Chinese national policy and promoted as signature directives of its respective leaders.[298] Here the use of numbers goes beyond a rhetorical device in the form of a pithy saying but also belies its critical role in its productive power to shape discourse. Theodore Porter's *Trust in Numbers* for instance have regarded numbers as a powerful mechanism for standardization that renders knowledge valid and objective for social institutions.[299] Indeed, quantifying measures such as statistics and the census

[298] Number slogans were frequently used as titles for national policies. The "three-anti" campaigns refer to the purges Mao conducted in 1951 against class enemies, The "four olds" was a campaign to destroy traditional Chinese culture deemed unsuitable for socialist modernity. Deng's "one country two system" is the guiding principle of China's relationship with Hong Kong and Macau in providing relative autonomy under socialist rule. The "Three represents" is the hallmark policy under Jiang Zhemin in steering economic, cultural and political policy. Finally, the "One Belt One Road" (now known as the Belt and Road Initiative) is the current president Xi Jinping's policy of Chinese overseas development strategy. The Chinese state also used military-inspired codenames in issuing major economic, technological and social projects of national and strategic importance, i.e., project 221 and 985 (education), program 863 (aerospace and computing), program 973 (rare earth and advanced materials). See Ted Anthony, "Chinese Use Numbers As Slogans," *Associated Press*, March 8, 2002, accessed June 23, 2022, https://apnews.com/article/c1ebc231b1c9c857d64e95581e2eb881

[299] Theodore M. Porter. *Trust in numbers*. (Princeton, NJ: Princeton University Press, 1996).

had long been considered by the likes of Foucault as elements of governmentality by which people are rendered legible to those in power.[300] In the context of Chinese statistical policies, Ghosh reveals how the strategies of enumeration functions as a contested site where state ideology and policy is produced.[301] Finally, Jacqueline Wernimont in her book *Numbered Lives*, points to the integration of quantum technologies in tracking people's lives that denote certain values often predicated on race and gender.[302] Such contentions not only reflect the importance of numbers as a form of political control but also its quantifying abilities in the measurement of modern social life. This is all the more apparent with the increasing adoption of online technologies whereby measures of self-quantification are not only means of self-discipline as described in my analysis of DingTalk but also ways for people to make sense of their own digital experiences and lived realities.

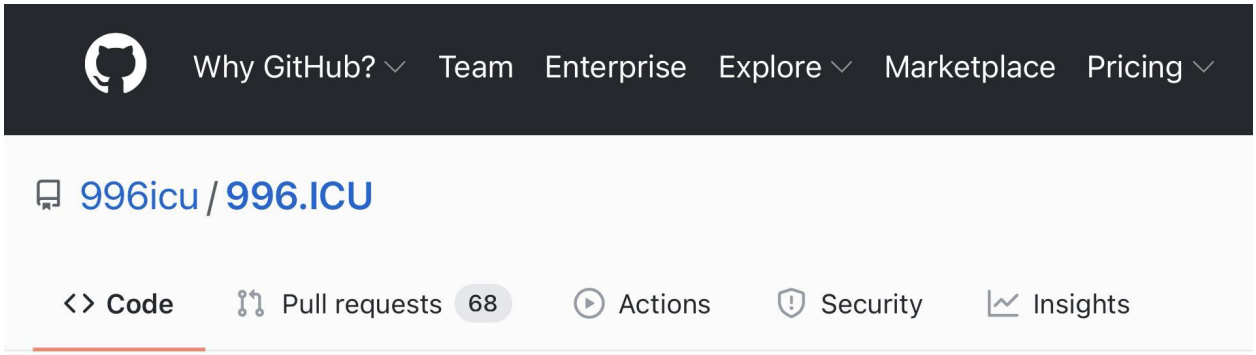

Figure 6.2: 996.ICU GitHub header where documentation is listed under the code interface where users can input text.

[300] Margo Huxley, "Geographies of governmentality," *Space, knowledge and power: Foucault and geography* 191, 2007.
[301] Arunabh Ghosh, *Making It Count: Statistics and Statecraft in the Early People's Republic of China*. Vol. 23. (Princeton, NJ: Princeton University Press, 2020).
[302] Jacqueline Wernimont. *Numbered lives: Life and death in quantum media* (Cambridge, MA: MIT Press, 2019).

Numbers in this regard also imply the literal process of digitization that requires the remediation of things into digits. This is all the more apparent on the Chinese internet as some of the top Chinese domain names are often rendered as numbers.[303] Whether it is one's national ID numbers, cell phone number verifications, or the ubiquitous QQ numbers that many netizens in China are assigned, where numbers govern and shape the everyday interactions of the digital subject. These numbers therefore provide the infrastructural foundations for regimes of dataveillance by which people can be monitored and commodified.[304] But on a personal level, the Chinese preference of using digits over letters is often the result of the ease of memorization where numbers often serve as homophones for other words.[305] In this regard, people in China are often more socially attuned to view numerical digits as a syntactic language as opposed to a unit in mathematics, enabling the public visibility of an otherwise coded language. The anti-996 movement reflects a bottom-up cooptation of similar number slogan strategies used by the state to raise public awareness. Much like how Friedrich Kittler traces the discursive notions of code to the codex of laws governing nations,[306] the various state and corporate institutions governing the tech industry present numerous limits that tech workers have to navigate on a daily basis. At the same time, 996 also implicitly hints at the process by which activism is rendered digital constituting a form of coded resistance against the machinization of workplace oppression. Similarly, Elaine Zhao in her work dealing with the informal platform economy in China, posits the informal roles of hackers, pirates, open-source makers, tinkers and their negotiated roles with

[303] Many Chinese sites are rendered as numbers such as hao123.com (news portal), 58.com (classified), 126.com (email), 4399.cn (gaming), 10086.cn (mobile carrier), 12306.cn (train ticketing), 91waijiao.com etc. The number 91 for instance is a homonym for *jiuyao* or 'just want', which spawned numerous popular sites such as 91waijiao.com (just want foreign teachers) or 91danji.com (just want games) and so forth.
[304] Jennifer Holt and Michael Palm, "More than a Number: The Telephone and the History of Digital Identification." *European Journal of Cultural Studies*, (2021). https://doi.org/10.1177/1367549421994571.
[305] Christopher Beam, "The Secret Messages Inside Chinese URLs," *The New Republic,* May 2, 2014, accessed June 23, 2022, https://newrepublic.com/article/117608/chinese-number-websites-secret-meaning-urls
[306] Friedrich Kittler, "Code," Fuller, Matthew, ed. *Software studies: A lexicon* (Cambridge, MA: MIT Press, 2008).

formal state institutions. These semi-autonomous professionals are in turn able to open alternate outlets and informal circuits of consumption and production that are not necessarily sanctioned by the state.[307] Unsurprisingly, it was a collective of coders and tech specialists who came up with 996.ICU as a means of advocacy.

Indeed, scholars within the emerging field of critical code studies scholars have noted the importance of looking at code as a social text and a means of political expression "between humans through communication with machines".[308] Kevin Brock for instance reminds us of the rhetorical powers of code not just within its text, syntax and logics but also sociopolitical commentaries outside the code.[309] Likewise, Mark Marino also noted coding can be a powerful forms of protest through instances of collective action on GitHub among Indian female programmers, particularly the act of publicizing their GitHub user numbers as a form of visibility and validation.[310] In other words, code is not merely a sequence of texts but also a communicative practices that impart meaning through both software programs and the collaborative processes of coding itself. In this regard, GitHub effectively constitutes a form of "coding publics" whereby the free exchange of software and code are intimately connected to the formation of political action.[311]

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[307] Elaine Jing Zhao. *Digital China's Informal Circuits: Platforms, Labour and Governance* (New York, NY: Routledge, 2019).
[308] See Mark C Marino. *Critical code studies*. (Cambridge, MA: MIT Press, 2020); David Berry. *The philosophy of software: Code and mediation in the digital age* (New York, NY: Springer, 2016)' Nick Montfort, Patsy Baudoin, John Bell, Jeremy Douglass, and Ian Bogost. *10 Print Chr $(205. 5+ rnd (1));: Goto 10*. (Cambridge, MA: MIT Press, 2014).
[309] Kevin Brock, *Rhetorical code studies: Discovering arguments in and around code*. (Ann Arbor, MI: University of Michigan Press, 2019).
[310] Marino, *Critical code studies*, 26.
[311] Geoff Cox and Christopher Alex McLean, *Speaking code: Coding as aesthetic and political expression* (Cambridge, MA: MIT Press, 2013).

Decoding 996 Work Culture

During the course of my fieldwork in both Shanghai and Guangzhou, 996 working hours were never an enforced company policy but often the result of formal and informal practices that became institutionalized as company norms. However, both new coverage and emergent scholarship[312] around 996 are largely fixated on excess working hours, worker deaths and protests without actually dissecting its root causes within the context of the shifting dynamics of labor relations in the tech industry. In other words, 996 work culture is not merely a binary between corporate oppression and worker resistance, but rather different sets of interpersonal, institutional and infrastructure factors that coalesced to create intersecting precarious conditions. The discourses of 996 work culture peaked during a time where the Chinese tech scene witnessed a boom in venture capital reaching over 105 billion USD in 2018,[313] nearly the size of the US VC market. Yet, by 2019 the Chinese VC market has largely cooled and with it the downsizing and bankruptcies of notable tech corporations coupled by the iconic images of mass graveyards of bike sharing companies.[314] The past 5 years within China's tech industry share some superficial parallels with the dot-com boom and bust era in the US whereby the initial euphoria of tech investment also led to equally dramatic downfalls of certain sectors and in turn creates high turnovers and uncertainties in the labor sector. Gina Neff, for instance, argues in the

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[312] See Kevin Lin, "Tech Worker Organizing in China: A New Model for Workers Battling a Repressive State." In *New Labor Forum*, vol. 29, no. 2 (2020),52-59; Xiaotian Li, "The 996.ICU Movement in China: Changing Employment Relations and Labour Agency in the Tech Industry," *Made in China Journal*, June 18, 2019, https://madeinchinajournal.com/2019/06/18/the-996-icu-movement-in-china-changing-employment-relations-and-labour-agency-in-the-tech-industry/

[313] Rebecca Fannin, "China Rises To 38% of Global Venture Spending In 2018, Nears US Levels," *Forbes*, Jan 14, 2019, accessed June 23, 2022, https://www.forbes.com/sites/rebeccafannin/2019/01/14/china-rises-to-38-of-global-venture-spending-in-2018-nears-us-levels/?sh=58ba9bdf5a5c

[314] Alan Taylor, "China Is Still Sorting Through Its Colorful Bike-Share Graveyards," *The Atlantic*, August 1, 2018, accessed June 23, 2022, https://www.theatlantic.com/photo/2018/08/china-abandoned-bike-share-graveyards/566576/

book *Venture Labor* that in the midst of the dot-com boom workers are conditioned toward a "new cultural attitudes toward risk",[315] which repackages precarity as something that is exciting and positive. In other words, economic risks are socially constructed and are co-produced via the process of neoliberalization. The normalization of the crisis is apparent in my analysis of DingTalk and the perpetuation of work at home during the COVID-19 pandemic. But as the previous chapters have shown workers experience different facets of oppression not just from corporations and institutions but the conditions of their urban lives.

Hence by demystifying the totalizing conception of 996 beyond purely a system of oppression allows us to understand what Hall consider as the various "determinant moments" within the production process not only occupied by dominant code of corporate hegemony but also the negotiated and oppositional code of subversion that workers can engage in. This is particularly important in the tech industry that is often populated by highly skilled semi-autonomous workers. Nicole Cohen, in explaining these issues, describes how the labor of freelancers and cultural workers have shifted in the post-Fordist model of production in that they are highly attached to the product of their labor and are relatively autonomous in operations.[316] At the same time, tech workers are increasingly placed under increasing precariousness precisely because of how work is prescribed to be self-directed and internalized. Many scholars have also noted how such precarity can be taken advantaged by companies as a new form of discipline and control that actually strips them of autonomy.[317] Likewise, the venture capital-backed tech industry helps to create prolonged periods of economic uncertainty that creates a labor culture of

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[315] Gina Neff, *Venture labor,* 4.
[316] Nicole S. Cohen, "Cultural work as a site of struggle: Freelancers and exploitation." In *Marx and the Political Economy of the Media* (Leiden: Brill, 2015), 36-64.
[317] See Victor Wong and Tat Chor Au-Yeung, "Autonomous precarity or precarious autonomy? Dilemmas of young workers in Hong Kong." *The Economic and Labour Relations Review* 30, no. 2 (2019): 241-261; Marcello Pedaci. "The flexibility trap: temporary jobs and precarity as a disciplinary mechanism," *WorkingUSA* 13, no. 2 (2010): 245-262.

"flexibility, instability and insecurity".[318] Thus, both companies and their workers are driven to partake in more risky and precarious endeavors because that was perceived as the only means of attaining economic opportunities. Here the promises of autonomy also offload work responsibility onto the self-enterprising individual, which in turn normalize the conditions of labor oppression.

The Chinese tech industry, centering in affluent metropolitan areas, with its high compensation also presents itself as an attractive place to work for young graduates from less well-off areas in China. Many of the tech workers I interviewed described how big tech companies (or *dachang*) like Tencent, NetEase, and Alibaba were among the dream companies they wanted to work at despite being fully aware of the pervasive discourses around 996 work schedules. In this light, tech work can be categorized as a form of "aspirational labor"[319] where workers willingly work above their means in anticipating the possible promises of upward advancement and social mobility. As I detailed in Chapter 2 and 3, Chinese tech companies also take advantage of this desire to enter the industry through both material perks and the marshaling of individual passions the further perpetuates the regimes of work. Benefits such as "free lunches", homey offices, annual bonuses, and corporate outings all work to conceal an otherwise toxic work culture.

One way 996 is instrumentalized is through the careful exploitation of loopholes in the national labor law by corporate management. Notably, most tech companies I encountered have a policy known as *buxiu* (补休), or make-up days, where after national holidays workers have to work extra time on Saturday or Sunday as a way for making up for the supposed time lost.

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[318] Neff, *Venture labor,* 8

[319] Brooke Erin Duffy, "Gendering the labor of social media production," *Feminist Media Studies* 15, no. 4 (2015): 710-714.

Because Chinese labor laws only explicitly focus on protecting working hours during legal holidays and the workweek as opposed to weekends, companies can extend work into the weekends as a way of skirting the law. Some companies go as far as making working Saturdays a norm which formalize the 6-day work week so despised in the anti-996 movement. Make-up days are thus a great source of consternation for my interlocutors. Mr. Cui, for example, complained to me: "So I get a 3-day long weekend only to work 6 days straight the following week, what is the point of having a holiday in the first place!" In fact there are dozens of posts on Chinese Q&A site Zhihu questioning the legality of such policies, with one commenter sarcastically posting: "they don't give you holidays so that you can make more money and pay off your mortgage, you failed to consider how much the nation cares about you!"[320] Ostensibly, apart from pointing out the clear corporate abuses, many netizens were also upset at the lack of legal protection provided by the state in closing loopholes and curbing workplace oppression.

Having documented the lavish amenities and corporate perks many Chinese companies use to attract and retain workers in Chapter 2, there also exist numerous policies in place that indirectly promote overtime through a series of rewards and benefits. For instance, as a standard policy among tech companies, workers doing overtime after a certain hour (normally 8pm or 9pm depending on the company) are entitled to a free taxi or rideshare home that is reimbursed by the company. Given the often long and crowded commutes on public transportation in Guangzhou and other Chinese cities, many workers are compelled to stay late at work in order to take a free car ride home in relative comfort while avoiding rush hour traffic. During one of Guangzhou's frequent rainstorms, Ms. Gan the HR assistant at LudoCo posted in a company-wide DingTalk message: "Instead of getting drenched outside, why not get more work done,

[320] Zhihu, accessed March 15, 2021, https://www.zhihu.com/question/21192032/answer/369430759

remember you can always take a free ride home afterwards". This shows how companies deliberately promote the free ride as a way of indirectly encouraging people to stay later than required. Much like giving sway free rides, the free meals provided by tech companies also serve to incentive working long. For instance, at LudoCo, dinner from the dreaded smart food locker can only be picked up after the regular clock-out time of 6:30pm, which basically forces workers to work later to enjoy their "free" meal. Ms. Xiao admitted to me often times free is still better than other options:

> The free dinners at the companies is a nice bonus because restaurants are usually packed at dinner time and it would take me more than an hour to get home if I choose to order delivery, so staying late at work to eat is the best possible option.

Such incentivizing through freebies, perks and rewards in turn create a culture of dependency where workers are trapped into a cycle of perpetual work, which in turn further strengthens corporate control. More tellingly however, is how much of the practical choice to remain in the office is predicated on pressures of mundane urban struggles which creates a condition by which workers have little say because of the temporal and spatial limits of the everyday. Here simple reasons such as avoiding rush hour traffic is enough to persuade workers to stay later than necessary.

Many of my other interlocutors were especially torn regarding the issue of 996. Mr. Nie, a data optimization specialist from Tencent whom I met through another acquaintance reflected on his take on 996 work culture:

> I feel as long as there is genuine work to be done and I need to complete a certain project on time, I don't mind working extra hours. But in my previous company the boss made us work 996 even when there was nothing to do, it was absolutely ridiculous as we all had to stay late in the office for no real reason but to make him look good to the management.

Here working long hours have become largely a formality in order to provide the facade of work for the management to meet artificial quotas and hours that benefit the managers more than the average employee. Such tensions were encountered throughout my research in the Chinese workplace. On the first day of employee orientation at the LudoCo, the game company I worked at in Guangzhou, the HR assistant Ms. Gan made it abundantly clear, "we do not encourage working overtime, as long as all of you complete your required work each day, then you should all be able to go home on time". While such assurances may seem encouraging at first, it belies how working hours are directly tied to productive output. The key here is that what constitutes "required work" often goes far beyond what a normal 9-hour workday entails. Strict attendance policy via DingTalk also enforces strict collection of work hour and attendance data to ensure workers meet the minimum required hours each day. In echoing this, Mr. Wei, an operations specialist at the mobile game company FunPlus complained to me: "my weekly tasks assigned by my PM [project manager] are impossible to fully complete each day so I have no choice but to work extra hours". Such experiences are not unique as most of my interlocutors also fretted against the stringent KPI (key performance indicators) requirements they must finish each quarter demonstrating whether they completed the required projects in a timely manner. More pertinently, the completion of one's KPI each quarter is directly tied to possible promotions and advancement within the company. Thus, Chinese tech companies will never on the surface promote or condone 996 work culture, due to its explicit violation of labor laws, but instead actively internalize prolonged work by equating it with performance and compensation.

Figure 6.3: My project team working to push out an Android update late in the night due to internet downtime during the day.

The final point regarding the cause of 996 is how the propensity for overtime is not merely the result of oppressive policies from companies but also occurs due to various political institutions and technological processes that either directly or indirectly prolong work. The most obvious example of this is the domineering impact of China's GFW online censorship system. Like I explained in Chapter 1, strict internet censorship that denies access to major Western digital platforms is particularly problematic for Chinese tech companies seeking to expand globally. Because companies like AppMax and LudoCo use the Android and Apple app store ecosystems to distribute their apps, they must rely on VPNs to circumvent restrictions where much of the daily struggle in software development revolves around simply trying to get access to a stable internet connection. In a memorable incident in mid-2017 while I was working for

AppMax in Shanghai, before the imminent release of a major Android update onto the Google Play Store, the company internet suffered significant outages throughout the day. In this case even a small 20 megabyte .apk (android app package) file takes hours to upload onto the Android app store which essentially makes meeting product releases challenging if not impossible, which in turn adds pressure for workers who need to meet their targeted performance deadlines. Ultimately, my project team and I had to stay at the office until 11:00pm to complete our work (Figure 6.3). While such downtime is relatively rare, its occurrence during major product launches means the development and operations teams have to stay late into the night waiting for a proper connection. In light of such contingencies, the institution of overtime was instead the result of state-imposed policies impacting technological infrastructure in ways that operate outside of the workers' and the company's direct control.

Coding Publics and Political Activism

The consolidation of multiple individual, institutional and infrastructural limits facing tech workers in China thus offers both challenges and opportunities to envision new ways of thinking about worker agency and advocacy in the age of perpetual work culture. The 996.ICU movement on GitHub incorporates specific discursive and rhetorical strategies used to collectively organize and broaden its appeal to a global audience, primarily through its outreach to foreign press and corporations. GitHub as a code repository is built on the ideals of open collaborations and has become an important source for open-source developments for millions of developers around the world. The site is organized so that anyone who registered can contribute to repositories (or repo in short) to add files and store code. Users can also add collaborators to work on projects together and track changes, which augments the site as a social network for developers. It is

precisely GitHub's combination of open-source and social features that makes it an ideal platform for the anti-996 movement.

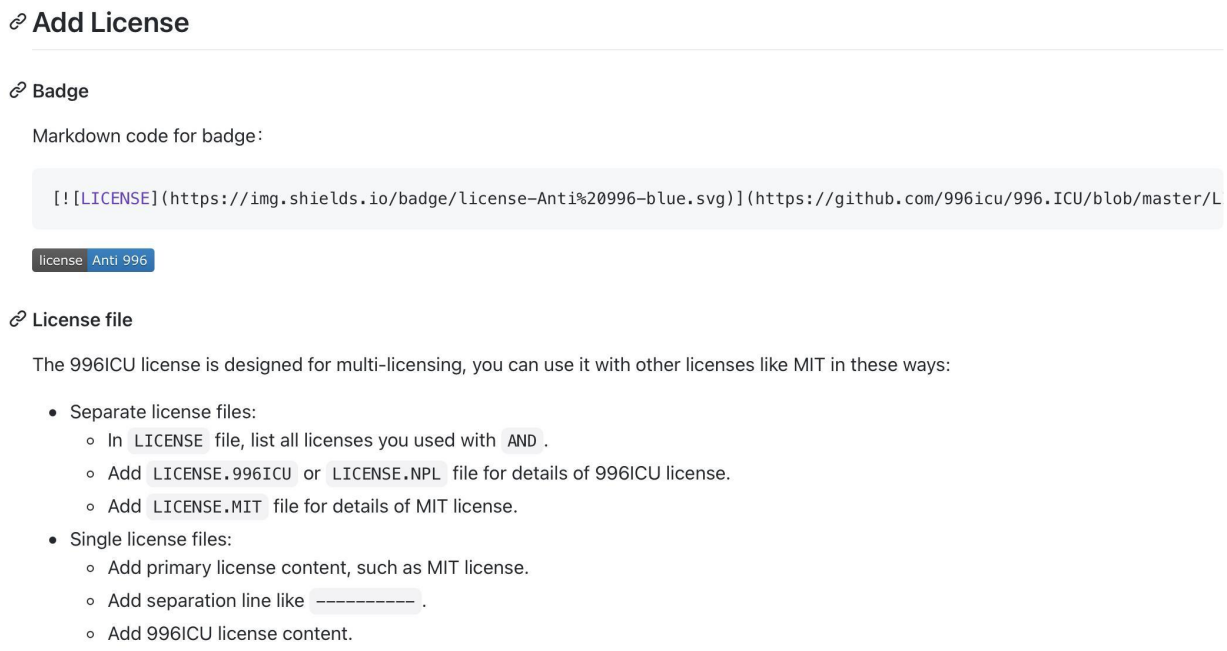
On the 996.ICU's GitHub front page is a prominent lists of the movement's four guiding principles and purpose in English:[321]

- 996.ICU is an initiative initiated by IT practitioners. We welcome people from other fields and other countries to join the discussion.
- This is not a political movement. We firmly uphold the labor law and request employers to respect the legitimate rights and interests of their employees.
- It is great progress from closed source to open source, and it will also be great progress from open source to emphasizing labor rights at the same time. What we want is to create an open source software license that advocates workers' rights.
- We are willing to hear all positive and constructive proposals and advocate mature and responsible speech.

Of these guidelines, the focus on open-source development as a means of advancing workers' rights is particularly interesting because it points to its implicit modes of subversion. Despite specifically stating that "this is not a political movement", likely out of safety concerns due to China's crackdown on labor movements, the use of open-source software as a means of expression highlights a novel approach in gaining solidarity among programmers and tech workers who were often seen as apolitical. Indeed, certain programmers and IT workers were frequently the source of derision and mockery online, with names such as *diaosi* (losers), *chengxuyuan* (code monkey), *manong* (code farmers) being common labels to refer to their social alienation and the associated deskilling process of low-end coding. Yet as Ping Sun

[321] 996.ICU, accessed March 15, 2021, https://github.com/996icu/996.ICU

argues, such terms are also ironically used as a unifying symbol by programmers as a means of expressing their marginalization in Chinese society.[322]



Add License

Badge

Markdown code for badge:

```
[![LICENSE](https://img.shields.io/badge/license-Anti%20996-blue.svg)](https://github.com/996icu/996.ICU/blob/master/L
```

license Anti 996

License file

The 996ICU license is designed for multi-licensing, you can use it with other licenses like MIT in these ways:

- Separate license files:
  - In `LICENSE` file, list all licenses you used with `AND`.
  - Add `LICENSE.996ICU` or `LICENSE.NPL` file for details of 996ICU license.
  - Add `LICENSE.MIT` file for details of MIT license.
- Single license files:
  - Add primary license content, such as MIT license.
  - Add separation line like `----------`.
  - Add 996ICU license content.

Figure 6.4: 996.ICU has a repo allowing all GitHub users to add an “Anti 996” badge as a license to their projects to promote solidarity for the cause.[323]

Despite this, programmers also occupy interesting positions as intermediaries between technology and society, as they create and maintain the very code powering much of our current technosocial infrastructure. This brings to light actor network considerations by which the programmer is integrally linked with the wider assemblages of code and machine, whereby coders process the necessary technical skills to disrupt, disable and discombobulate the systems of control. At the same time, their expertise and relative autonomy also can potentially challenge

[322] Sun Ping and Michelangelo Magasic, "Knowledge workers, identities, and communication practices: understanding code farmers in China," *tripleC: Communication, Capitalism & Critique. Open Access Journal for a Global Sustainable Information Society* 14, no. 1 (2016): 312-332.
[323] Add a badge, accessed March 15, 2021, https://github.com/996icu/996.ICU/blob/master/externals/instruction.md

the "established networks of power and authority"[324]. Gabriella Coleman in her book *Coding Freedom*, sees the free software movement as a means of subverting the legal system which allows programmers and hackers to reclaim ownership over their "productive freedom".[325] The focus on open-source software also implicitly challenges the dominance of corporations that enforce perpetual work cultures in search of lasting profits. Cox and Mclean consider the embrace of open source can foster the creation of "coding publics"[326] by which coders can work to resist capitalist logics in order to form political solidarities. Such instrumentalization of coding public can be seen in the feature to add a line of code to display an anti-996 badge on GitHub users' projects with the aims of denying companies that engage in 996 uses of code and projects under this license on Github (Figure 6.4). This in turn allows programmers to retake control over the products of their labor in advocating for solidarity.

Likewise, there are also multitudes of ways in which GitHub allows for collaborative contributions and also shares this similar mantra where workers from different backgrounds can crowdsource issues and build topics that can further their cause. Here the 996.ICU page serves as a collective repository for different strategies workers use to call attention to the issues of overtime. The page also follows the interface structure of GitHub in creating code repositories to track versions and pull requests in allowing for collaborative version control. This in turn allows for constant documentation of issues relating to the anti-996 movement. Notably, the main repo 996.ICU publicly shames by listing a group of "capitalists" tech CEOs including Jack Ma of Alibaba, Richard Liu of JD.com and Bai Ya of Youzan, many of whom either directly or

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[324] Nathan L. Ensmenger, *The computer boys take over: Computers, programmers, and the politics of technical expertise* (Cambridge, MA: MIT Press, 2012), 28.
[325] Gabriella Coleman, *Coding freedom: The ethics and aesthetics of hacking* (Princeton, NJ: Princeton University Press, 2012).
[326] Cox and McLean, *Speaking code.* 69.

indirectly defended 996 work culture. On another repo page named 996.law it lists guides, case studies and FAQs providing legal advice for workers who want to advocate for their rights.[327] This is especially important because both the national labor law and corporate hierarchy is often cryptic and difficult to navigate for the common worker. For example, the guide presents specific methods of obtaining evidence for hours worked with one notable example being taking screenshots of DingTalk's attendance page. In doing so, workers can build a case to take to the local labor bureau in the event of company abuses of overtime. Similarly, the repo page 996.petition contains a draft open letter addressed to the All-China Federation of Trade Unions (ACFTU) in the hopes they will directly lobby the Chinese government in condemning 996 work culture.[328] There is even a repo page titled 996.OD which stands for 996 occupational diseases, that describes various ailments such as carpal tunnel syndrome and herniated disc from long hours spent sitting in front of a computer.[329] All this documentation functions as "know your rights" pages intended to not just inform workers of the material precarities of 996 but also meaningful ways to combat it.

On a more practical level, another repo page titled 996.action documents various campaigns and practical guides for workers to partake in order with the hopes of spurring real change. Such actions included petition for changes and amends to China's national labor law to prevent abuse during China's annual two sessions meetings of the National People's Congress.[330] Specific proposals include increasing fines to companies that engage in excessive work hours from between 100 - 500 RMB to 10,000 - 50,000 RMB in order to make the cost of skirting the law much higher for companies, which in turn can dissuade them from engaging in further

[327] 996.LAW, accessed March 15, 2021, https://github.com/CPdogson/996.law
[328] 996.Petition, accessed March 15, 2021, https://github.com/xokctah/996.petition
[329] 996.OD, accessed March 15, 2021, https://github.com/gnoloehz/996.OD
[330] 996.Action, accessed March 15, 2021, https://github.com/CPdogson/996action

workplace abuse. Tactics also included letter writing campaigns in 2019 in the form of weekly mass emails to a list of companies known to be instituting 996 work schedules. Other more informal actions included an organized hashtag campaign #SendJackMaLaborLaw directed at Jack Ma on social media to mobilize people to send hardcopies of the Chinese labor law to Alibaba's headquarters in Hangzhou. The organizers also deliberately chose May 4th as the date of the campaign as a symbolic call back to the May Fourth Movement of 1919, an important date of Chinese nationalist protest against Western imperialism.

These specific calls to action on the internet, despite persistent censorship, do indeed seem to have some effect in recent years. For instance, Chinese official state media Xinhua published a lengthy editorial criticizing 996 work culture,[331] while it was also reported in July 2020, Alibaba's own management has decided to phase out weekly reports and "meaningless overtime" that can contribute to 996 work schedules.[332] Finally, in 2021, the Supreme People's Court in China officially stated that the 996 work schedule is illegal and issued specific guidelines on overtime for companies in China.[333] Shortly after this companies including ByteDance formally ended compulsory overtime during the weekend.[334] While this may seem like a major victory for the anti-996 movement in general and shifts in corporate policies are certainly welcomed by workers, whether such changes will reshape the broader systems of abuse in the Chinese tech industry remains to be seen. GitHub has also come under increasing scrutiny and has been intermittently blocked throughout the years which forces many Chinese developers

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[331] Shiping Xin, "We should encourage hard work but 996 needs to go," *Xinhua*, April 15, 2019, accessed June 23, 2022, http://www.xinhuanet.com/politics/2019-04/15/c_1124370790.htm.
[332] Chen Du, "Exclusive: Alibaba Revamps Corporate Culture by Ending '996', Banning PowerPoints," *PingWest*, July 16, 2020, accessed June 23, 2022, https://en.pingwest.com/a/7245.
[333] Reuters, "Chinese authorities say overtime '996' policy is illegal," *Reuters*, August 27, 2021, accessed June 23, 2022, https://www.reuters.com/world/china/chinese-authorities-say-overtime-996-policy-is-illegal-2021-08-27/
[334] Reuters, "TikTok owner ByteDance to end compulsory weekend overtime," *Reuters*, July 9, 2021, accessed June 23, 2022, https://www.reuters.com/technology/tiktok-owner-bytedance-end-compulsory-weekend-overtime-2021-07-09/

to use the domestic alternative Gitee that is heavily censored, even down to the level of the code.[335]

The term 996 also has since lost much of its meaning as the fine lines between work and leisure become ever more ambiguous. Like I already mentioned, since 996 was rarely a formal rule in companies, it is often the result of ad hoc measures and habitual practices that may or may not be intentional. In a highly involuted tech industry with cutthroat competition for jobs, many workers chose to work 996 schedules out of the desire for possible promotion, more pay, and out compete others. Likewise, as I explained in Chapter 4, China's pandemic lockdown have created the condition by which remote work have extended corporate control into one's private homes. Elon Musk's much praised Gigafactory in Shanghai even had to transition to "closed-loop manufacturing" during the pandemic where workers have to live and work in factories. The notion of set working hours such as 996 is less relevant in the context of a perpetual work life where the distinction between home and office no longer applies. Therefore, even so the courts officially invalidated the practices of 996, the question of if such ruling will actually be enforced is uncertain (since after all it was always illegal under labor laws), but it does demonstrate many of the critiques against 996 work culture are at the very least being acknowledged within official state narratives.

[335] Zeyi Yang, "How censoring China's open-source coders might backfire," *MIT Technology Review*, May 30, 2022, accessed June 23, 2022, https://www.technologyreview.com/2022/05/30/1052879/censoring-china-open-source-backfire/

Elite Conceptions and Class Contentions

In the case of 996.ICU, the radical use of GitHub as an outlet for coded resistance against corporate hegemony may seem to suggest the formation of coding publics built on the free exchange of information. The valorization of open source also implies a subversion against the closed source nature of platforms and "walled gardens" of big tech in enabling the dominance of state-corporate institutions. Yet, the 996.ICU movement points to a form of activism predicated on exclusionary practices that run counter to the protection of all working classes. While many scholars have noted how internet and mobile technologies can narrow the gap for people from different socioeconomic backgrounds to partake in digital activism,[336] the expertise required for coding and IT work can also exclude people from active participation. Just as many critiques leveled against the Habermasian bourgeois public sphere lie within its inherent exclusion of subaltern classes particularly along gender and racial lines, the 996.ICU campaign on GitHub is largely organized by a technical class, many of whom work at elite tech companies based in China's wealthy first-tier cities. Nor does Habermas account for alternate, coeval or counter-publics that may exist outside the so-called rational, democratic public sphere.[337] This echo many of the conditions leading up to 996 as predicated on "determinate moments" where different groups and stakeholders may have divergent perspectives. Or as Peiren Shao and Yun Wang argue as an increasingly fragmented public sphere in China divided among individual, commercial and state interests.[338] Indeed, the term 996 initially popularized by programmers in

[336] Wenhong Chen, "A moveable feast: do mobile media technologies mobilize or normalize cultural participation?" *Human Communication Research* 41, no. 1 (2015): 82-101.
[337] Nancy Fraser, "Rethinking the public sphere: A contribution to the critique of actually existing democracy," *Social text,* no. 25/26 (1990): 56-80.
[338] Peiren Shao and Yun Wang, "How does social media change Chinese political culture? The formation of fragmentized public sphere," *Telematics and Informatics* 34, no. 3 (2017): 694-704.

the IT industry has in recent years been increasingly taken up by gig economy laborers such as ride hailing drivers and delivery workers who are responsible for much of the physical labor in the on-demand economy. Unlike IT professionals working in corporate settings, these platform laborers lack the basic amenities of the workplace, let alone legal and institutional protection over wages and hours. Likewise, the expertise required for the creation of coding publics can also potentially hinder these workers who may not have the technical knowledge to partake in the same form of advocacy. Thus, it is imperative to understand the intended benefactors of 996.ICU, particularly relating to the power relations between tech workers and others who may be excluded from the process of advocacy.

Apart from the aforementioned practical actions such as petitions, online campaigns and legal guides, 996.ICU is also heavily focused on issues of publicity and visibility. For instance, 996.ICU features a crowdsourced page listing all the companies that do not partake in 996 work schedules that are considered 955.WLB companies, which stand for a normal schedule of 9am to 5pm, 5 days a week, with work-life balance. Interestingly enough most of the companies on the list are Western companies such as Microsoft, Google and Amazon, many of which still maintain large operations in China despite having services banned in the country. The categorization between 996 and 955 work culture is therefore also a clear distinction between Western and Chinese organizational practices. Such contentions also conform to the mythos of non-hierarchical and meritocratic Silicon Valley culture that have become a model for many Chinese tech companies.[339] Western companies and multinational corporations (MNCs) were often seen as more desirable places for workers in China, especially concerning issues of overtime.

[339] Paul Mozur, "Silicon Valley's Culture, Not Its Companies, Dominates in China," *The New York Times*, December 4, 2016, accessed June 23, 2022, https://www.nytimes.com/2016/12/04/technology/china-silicon-valley-culture.html.

Evidently, in the now defunct 996.ICU Discord group, many workers seem more focused on asking one another how to get a job at Western tech companies than actually advocating for labor rights. This dovetails with Zizi Papachrissi's assertion of how the virtual public sphere is increasingly drawn to commercial interests as opposed to spaces of deliberation.[340] Here activism becomes not only means of self-interested advancement but a process by which online participation becomes commodified. 996.ICU's reliance on digital platforms, the creation of repos, badges and various online campaigns also reflect what Jodi Dean considers as a form of "technological fetishism" that can actually foreclose politics by creating a fantasy of interaction and community.[341] 996.ICU then seemed less concerned with resisting state-corporate dominance, than chasing the dreams of work-life balance in the capitalist workplace, all the while ignoring the very precarious conditions that created inequalities and injustices among tech workers, particular other laborers doing more physical on-demand tasks.

Elitism and class distinction are also reflected in the prevalent appeals to global media, corporations and institutions. This is arguably one of the most successful aspects of the movement as 996 have gained widespread media coverage in mainstream Western outlets. In fact, the main repo page has a full press list from scores of international news agencies such as *Reuters*, *Financial Times*, *The Economist*, among many others.[342] This leveraging of foreign media had been a long standing tactic in Chinese protest politics to exert pressures on the Chinese government to make possible, albeit, limited concessions.[343] Additionally, there is a dedicated repo support.996.ICU that lists tech workers' signatures from Microsoft, GitHub and

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[340] Zizi Papacharissi, "The virtual sphere 2.0: The Internet, the public sphere, and beyond." *Routledge handbook of Internet politics, Andrew Chadwick and Philip N. Howard ed.* (New York, NY: Routledge, 2009), 245.
[341] Jodi Dean, "Communicative capitalism: Circulation and the foreclosure of politics," *Cultural Politics* 1, no. 1 (2005): 51-74.
[342] Related press, accessed March 15, 2021, https://github.com/996icu/996.ICU/blob/master/externals/news_EN.md
[343] See incidents relating to the Wukan Protest: Steve Hess, "Foreign media coverage and protest outcomes in China: The case of the 2011 Wukan rebellion." *Modern Asian Studies* (2015): 177-203.

other tech companies in a show of support for the cause.[344] Indeed, on 996.ICU it proudly displays a quote from Guido van Rossum, the founder of Python, who tweeted: "The '996' working schedule is inhumane".[345] In seeking validation from the global cohort of tech workers and companies, 996.ICU positions itself as a site of international solidarity among all tech workers. Yet, underpinning all these forms of global outreach is the prevalence of the use of English language on most of the repo pages as a rhetorical strategy to gain widespread recognition. This is not surprising as English is widely used as the de facto global language used on protest signs in movements across the globe.[346] But because English is also a predominant language in computer programming that many coders must develop expertise in, it can demarcate significant barriers for the attainment of the necessary literacy to engage in communicative action. Ping Sun, in her study of *manong* (code farmers) in Shenzhen, for instance notes "English is not only a tool for programming, but also a kind of cultural capital" whereby proficiency denotes not just higher level of skills but also social status.[347] This echoes Marino's assertion of how the prevalence of English in high-level programming languages constitutes a form of "encoded chauvinism" that systemically denies access for people in socially disadvantaged positions.[348]

It is interesting to note, on the bottom of 996.ICU main page is the phrase "Developers' lives matter" as a clear reference to the Black Lives Matter (BLM) movement. Like numerous other appropriations of similar rhetorical messaging, the valorization of developers as a professional class ignores the actual material conditions of people of different cultural, social and

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[344] Support.996.icu, accessed March 15, 2021, https://github.com/msworkers/support.996.ICU
[345] @gvanrossum, Twitter, accessed June 23, 2022, https://twitter.com/gvanrossum/status/1111628076801236993
[346] Luanga A. Kasanga, "The linguistic landscape: Mobile signs, code choice, symbolic meaning and territoriality in the discourse of protest," *International journal of the sociology of language* 230 (2014): 19-44.
[347] Ping Sun, "Programming Practices of Chinese Code Farmers. Articulations, Technology, and Alternatives." *China Perspectives* 2017, no. 2017/4 (2017): 19-27.
[348] Marino, *Critical code studies,* 170.

racial status. Despite this, 996 as a discursive construction in describing a particular work culture within Chinese tech companies have evolved into a cause célèbre of collective angst toward oppressive work environments for workers of all socioeconomic backgrounds. The 996.ICU movement while leading significant media exposure to the issues of overwork, thus brings to question the issues of inclusivity, when the very access to participation is neither equal nor seamless. For one, when 996.ICU first started in 2019 the GitHub issues page evolved into a type of unconstrained public forum whereby tens of thousands of posts (or issues) were written by people discussing labor abuses, outing 996 companies, and discussing campaign tactics. Despite this, the issues page was quickly taken down by 996.ICO founders for supposed spam and other potentially politically subversive content. The curtailing of online public discourse seems contrary to the initial aims of the movement in facilitating open source and free expression. As a result, the amount of user activity on 996.ICU has largely subsided by the end of 2019 with few organized campaigns and updated repos. 996.ICU became in effect a repository without issues, code without bugs, and movement without voices.

Coda

In January 2021, within the span of 2 weeks, a 22-year old woman working for the grocery delivery division of the Chinese eCommerce company Pinduoduo died of overwork while getting home from work, and an engineer from the Shanghai office surnamed Tang committed suicide due to work-related pressures.[349] Shortly after this, another programmer surnamed Wang from Pinduoduo was fired after posting a video of a coworker taken to the

[349] Yujie Xue. "Death of 22-year-old Pinduoduo employee renews controversy over China's 996 overwork culture, sparking an investigation," *South China Morning Post,* January 4, 2021, accessed June 23, 2022, https://www.scmp.com/tech/big-tech/article/3116385/death-22-year-old-pinduoduo-employee-renews-controversy-over-chinas.

hospital in an ambulance due to overwork.[350] He subsequently posted an online video exposing the inhumane working conditions at the company where employees at the corporate headquarters in Shanghai had to work 300 hours per month, while workers doing delivery service had to work more than 380 hours each month. He also documented the horrendous company amenities such as unhealthy office conditions, rancid foods, and strictly timed restroom breaks. Such cases of workplace abuse tempered much of the aura surrounding the privileged high-tech industry and inspired renewed debates on the Chinese internet about 996 and if such grueling work culture is germane in Chinese society. Whether it was scandals involving worker suicides at Apple supplier Foxconn[351] or Meituan food delivery workers protesting for living wages,[352] the cycles of exploitation and oppression reflect much of the human cost of China's technological rise. Likewise, 996 as a numerical slogan has evolved beyond just a movement on GitHub among coders but comes to signify oppressed workers everywhere. The anti-996 movement and the ways it has been discursively taken up by IT workers such as coders and programmers as well as platform workers helps to problematize the definition of tech work itself. The tendencies to classify IT professionals as knowledge workers belies a disposition toward cerebral labor over that of menial physical work. But as the Pingduoduo incidents demonstrate, abusive working conditions are equally applicable to office workers and platform workers alike. The legacy of the 996.ICU movement, despite its fixity on programmers and coders, points to a necessary solidarity irrespective of working backgrounds.

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[350] JS Tan, "Fired tech worker exposes inhumane working conditions at Chinese internet giant Pinduoduo," *Collective Action in Tech*, February 4, 2021, accessed June 23, 2022, https://collectiveaction.tech/2021/fired-tech-worker-exposes-inhumane-working-conditions-at-chinese-internet-giant-pinduoduo/

[351] Jenny Chan and Ngai Pun, "Suicide as protest for the new generation of Chinese migrant workers: Foxconn, global capital, and the state." *The Asia-Pacific Journal* 37, no. 2 (2010): 1-50.

[352] Yuan Yang and Ryan McMorrow, "Chinese courier sets fire to himself in protest over unpaid Alibaba wages," *Financial Times*, January 12, 2021, accessed June 23, 2022, https://www.ft.com/content/d6189ee8-9aea-41dd-a412-b8daba9cacf2

In imagining a radical possible solidarity, I want to revisit my earlier contentions of looking at the imbrication of digital technologies into everyday life as fundamentally a subject-making process. The digitization of the workplace and the platformization of labor has created a condition where people from all walks of life are intimately connected through the wider assemblages of the integrated ICT infrastructure. Whether it is elite programmers coding apps on corporate campuses or gig workers doing the physical groundwork, they are all inseparable parts of systems of exploitation driving China's burgeoning tech industry. Indeed, one of China's top internet buzzwords of 2020 was the term *dagongren* or just simply the "ordinary worker" as a self-deprecating phrase to describe inescapable conditions of the working class.[353] The prolonged fatigue and perpetual work created by the COVID-19 pandemic have ironically and unironically become a great unifier, or as a human resource company on Zhihu puts it: "there's no difference between white-collar workers in office cubicles and blue-collar workers on assembly lines."[354] Much like disparaging terms such as *diaosi* and *manong*, *dagongren* reflect a common identification through both alienation and aspiration, the nascency of a collective laborer identity. Here it is important to remind ourselves of Hall's model of encoding/decoding as an "articulation of connected practices" by which the politics of signification can occur, rendered all the more obvious through the intersecting modes of oppression experienced by all workers. As the case study of 996.ICU has shown, tech workers have the power to not only encode various tools of activism on GitHub but also decode digital forms of control through "manipulation, subversion

[353] Wei Zhou, "Weekend Long Read: Deaths on the Job Make People Mull the Meaning of Work," *Caixin Global*, February, 06, 2021, accessed June 23, 2022, https://www.caixinglobal.com/2021-02-06/weekend-long-read-deaths-on-the-job-make-people-mull-the-meaning-of-work-101660925.html.
[354] Lianzhang Wang, "Young Chinese Bemoan Rat Race With Tongue-in-Cheek Memes," Sixtone, October 23, 2020, accessed June 23, 2022, https://www.sixthtone.com/news/1006336/young-chinese-bemoan-rat-race-with-tongue-in-cheek-memes

and disruption".[355] This in turn can create the conditions in enabling determinant moments by which different social positions can converge to advance a common political future.

[355] Fabian Ferrari and Mark Graham, "Fissures in algorithmic power: platforms, code, and contestation." *Cultural Studies* (2021): 1-19.

Conclusion

From *fanshen* to *tangping*: immobility, involution and technological interruptions

On Shenzhen Metro's busiest subway line 5 there is a peculiar station called Fanshen（翻身站）named after the nearby Fanshen Village. The term *fanshen* derives from the popular idiom *xianyu fanshen*, meaning a "salted fish overturns", portending miraculous fortunes, because after all, a dead fish cannot turn over. It is a term long used in China's revolutionary past to describe the social transformation under communism that saw the overturning of power and resources from the wealthy to the peasants.[356] Today the term *fanshen* or overturning has taken on a new meaning and refers to a stroke of fortune during trying times and *fanshen* has been adopted by many in China as having finally made it. This term has come to signify the collective dreams and aspirations of millions of rural migrant workers who entered the city looking for a better life. Fanshen Station has also since become a sort of a viral sensation and a site of pilgrimage for young people to pray for good luck in their life and career.[357] Echoing this, Lisa Rofel considers *fanshen* a powerful metaphor for the upending of traditional social ties, subjectivities and individual desires in the wake of China's reforms and opening up.[358] Shenzhen (and the Great Bay Area as a whole) served as a witness to this socioeconomic transformation that elevated the city as a global tech center. Each day hundreds and thousands of workers commute in and out of metro line 5 connecting the various tech hubs across the city.

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[356] William Hinton and Fred Magdoff, *Fanshen: A documentary of revolution in a Chinese village* (New York: NYU Press, 2008)
[357] NetEase, "Shenzhen ditie fanshen zhan cheng wanghong, nianqingren fenfen daka, kewang xianyufanshen [Shenzhen Metro Fanshen Station became viral, young people all come to check-in hoping for good fortunes!]", NetEase, accessed June 23, 2022, https://www.163.com/dy/article/FLGHAGEI0529LJS4.html
[358] Rofel, *Desiring China*, 13.

Figure 7.1: Shenzhen Metro motivational campaign with the slogans: no wading water, no involution, no touching fish, no lying flat.[359]

It is ironic that in 2021, Shenzhen Metro started to display digital wall advertising full of slogans including: “no wading water”, “no involution”, “no touching fish”, “no lying flat” (Figure 7.1). The first three terms are already extensively covered in previous chapters, but the term “lying flat” or *tangping* only gained popularity in late 2020 after my fieldwork. Lying flat is ostensibly an extension from the general sentiment of cynicism and pessimism of involution. Whereas involution largely provides the theoretical context for a hopeless, downtrodden society, lying flat reflects its affective and embodied response. The hypercompetitive work culture in China has led to egregious practices such as the 996 work schedule that created sustained forms

[359] China Digital Times, accessed June 23, 2022, https://chinadigitaltimes.net/chinese/671934.html

of work intensification which led to widespread burnouts in the industry. If *touching fish* and *wading water* represent tacit means of subversion within corporate institutions, lying flat has become synonymous with openly giving up, or the refusal to participate in the endless rat race that has come to define working class struggles in China.[360] Given the increasing volatility and unpredictability in the industry, lying flat therefore represents a reversal of the hopes and aspirations espoused in the radical overturning that is *fanshen*. This somatic divergence between *fanshen* and *tangping* reveals in the discursive shifts that mirror the boom and bust of the tech industry writ large.

Terms such as “involution”, “lying flat” and most recently “let it rot",[361] reflect the increasingly pessimistic outlook for working class people of all backgrounds. The Chinese fondness for buzzwords, of course, is partly the result of strict internet censorship that makes it difficult to make direct social critiques. At the same time, it is also indicative of the power of a vibrant digital culture that can shape public discourse. In fact, there are practically new buzzwords gaining popularity each year and they are frequently featured in top ten lists in Chinese media.[362] But all these terms all reflect a steady decline in fortunes for many Chinese tech companies and are symptomatic of the overall downturns in the Chinese economy and the collective disillusionment towards the future. At the same time, lying flat much like the self-parodying notion of *diaosi* have also transformed into a cause célèbre as recalcitrant forms of inaction, refusal and subversion of the Sisyphean struggle for social advancement.

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[360] Ivana Davidovic, "'Lying flat': Why some Chinese are putting work second", *BBC*, accessed June 23, 2022, https://www.bbc.com/news/business-60353916

[361] Let it rot is a further evolution of *tangping*, meaning losing all hope in any recourse. See Beatrice Tamagno, "New Chinese Buzzword 'Let it rot' takes 'lying flat' to new heights", *Radiichina*, accessed June 23, 2022, https://radiichina.com/let-it-rot/

[362] Sohu, "pandian 2021 niandu liuxingyu Top 10, 'tangping', 'yyds' zhexiechi ni douyongguoma? [Compilation of the top 10 buzzwords of 2021, 'tangping', 'yyds' have you used these terms?]", *Sohu*. December 7, 2021, accessed June 23, 2022, https://www.sohu.com/a/506140663_792551

Shenzhen Metro's campaign against lying flat also points to how the feelings of pessimism and despair are increasingly seen as a threat to China's innovation drive that is driven by toxic work cultures such as 996.[363] So influential are terms such as involution and lying flat, that even Chinese state media took a strong stance against "lying flat" with numerous editorial pieces criticizing its usage. The head of China's Communist Youth League He Junke for instance, criticized "lying flat" and instead argued that young people need to carry on the struggle of hard work.[364] Increasingly, the term lying flat has also been taken up to express frustration toward China's prolonged lockdown and zero Covid policy. The CCP mouthpiece China Daily went as far as issuing a strong rebuttal stating: "The country will not lie flat. It will continue to endure the short-term pains of battling the virus in order to safeguard people's lives."[365] Sentiments such as involution and lying flat are therefore increasingly seen as against the rhetoric of the Party-state's policy and the promotion of a Chinese Dream based on shared struggles and aspirations.

While the proliferation of the term lying flat as a popular zeitgeist cannot be understated, the actual realities on the ground are however different. In a follow up interview with Ms. Xiao from LudoCo, who had since left and joined a rival game company. She responded rather cynically when I asked if she is still doing overtime: "yeah, I'm still doing the 996 hours. Ideally, I would want to lie flat and not do anything, but I have bills to pay and there is no choice but to keep going." Central to her reaction is how one's predisposition for work remains tied to the

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[363] David Bandurski, "The 'lying flat' movement standing in the way of China's innovation drive", *Brookings Institute*, July 8, 2021, accessed June 23, 2022, https://www.brookings.edu/techstream/the-lying-flat-movement-standing-in-the-way-of-chinas-innovation-drive/.
[364] Sina, "Tuanzhongyang lingdao tan 'tangping': zhengzhen 'tangping' de shijishaoshu, buxiefendou de shidaduoshu [Youth league secretary talk about tangping: only a few really practice tangping, most are working hard]", *Sina*, accessed June 23, 2022, http://k.sina.com.cn/article_1664221137_6331ffd1019013r9y.html
[365] China Daily, "Dynamic clearing most cost-reducing approach: China Daily editorial," *China Daily*, accessed June 23, 2022, https://www.chinadaily.com.cn/a/202204/26/WS6267e999a310fd2b29e59766.html

material realities of making ends meet. This in turn makes practices such as touching fish even more compelling as means of pilfering existing resources, compared to outright refusal to work and make money. Indeed, the practicality of lying flat is also another major issue for workers in the tech industry given the growing intrusion of state and corporate control. The following is a WeChat conversation I had with Mr. Cui explaining the reasoning behind him leaving the company in late 2021:

> Cui: I just resigned from my job, leaving next month.
> Me: Really? Where will you go next?
> Cui: I don't have any offers so far, but I don't care. I need to get out of this toxic environment.
> Me: What made you finally quit?
> Cui: The IT guy installed this software to track our activity on everyone's PC (with the excuse they are just installing antivirus software). But the IT guy doesn't know that I have my own keylogger and I kept the installer for myself and started to look for changes on my PC.
> Me: Wow and I thought having to use DingTalk was bad enough.
> Cui: Yeah! Apparently, this software tracks all my web inputs and search queries, it's crazy. I'm not using the company WiFi anymore on my phone, or WeChat on their PC. I only need to resist one more month and I'll be gone.

The installation of keyloggers[366] on employees' workstations illustrate corporate institutions are not letting up on the sustained forms of monitoring of its workers. On a broader scale, the Chinese state has also magnified its various means of high-tech surveillance using the health code system. For instance, in June 2022, it was reported people protesting against bank fraud in Henan Province had their health code turn red, meaning they can't move about freely.[367] This led

[366] Keyloggers is short for keystroke logging which is used to monitor each stroke on a keyboard, this in turn can track what kind of content users are searching online.
[367] Engen Tham, "China bank protest stopped by health codes turning red, depositors say", *Reuters*, June 16, 2022, accessed June 23, 2022, https://www.reuters.com/world/china/china-bank-protest-stopped-by-health-codes-turning-red-depositors-say-2022-06-14/

many to question the overreach of government control in using the health code for purposes outside its intended design. At the same time, it also shows the ease by which the Chinese government can adapt its health surveillance system to monitor and suppress dissent. My brief conversation with Cui however also points to how tech workers often have the ability to spot and resist technological control. This in turn makes studying tech workers all the more important in our increasingly digitally-mediated society.

This project is borne out of the desire to demystify many of the techno-orientalist depictions of the Chinese tech industry that have increasingly taken on an adversarial lens, particularly in the context of the Sino-US tech trade war. Yet, despite the calls for "decoupling" with China's tech industry, much of our everyday digital hardware and software consumption is still reliant on Chinese tech labor. Indeed, the Chinese tech industry has long served as an important center of global ICT production and with it the stigma as the factory of the world often associated with low quality, cheap and mass-produced products. The labor of said production also remains largely invisible, under-valued and exploited under the logic of global outsourcing. China's promotion of indigenous innovation and "cultural power" have in many ways reflected the transition away from the export-oriented model of manufacturing and toward the cutting-edge and disruptive technologies. This shift has seemingly bore fruit as ByteDance's TikTok has become a global sensation while companies like Tencent and NetEase are leading players in the mobile game market. China's harboring of innovation zones and protectionist policies such as the GFW was able to incubate numerous successful big tech companies. But as Chapter 1 has shown, China's heavy-handed promotion of innovation often results from contradictory policies that can hinder creative work. The delicate tryst between state and corporations exists as a patron-client relationship where corporate interests may not always be commensurate with the

Party-state's bottom line. The simultaneous promotion of technology and the strict regulatory crackdowns on tech have created chaos within that industry that not only damaged companies' balance sheets but also exacerbated the preexisting precarity within the labor force.

The focus of Chapter 2 and 3 is therefore intended to shed light on both the spatial and temporal regimes of work and how various state and institutional policies work to sustain and limit one's passions, desires and aspirations. China's developmental model of promoting SEZs and tech parks has also created increasing inequalities reflected in its urban policy. These two chapters function as introduction to the field site and work to illustrate the everyday realities of working and living in urban China. Spatial politics here is directly tied to exclusionary policies such as the *hukou* system which contributes to further marginalization and alienation. Remote work has created the conditions by which work spillover into one's private life, which in turn continue to blur the boundaries between office and home. The isolation imposed in different social spaces, be it in the city or office, functions as not just physical but also discursive terrains by which the issues of access, mobilities, and placemaking are fought over. Work in the high-tech economy in particular is also framed as a personal responsibility disguised as forms of empowerment and freedom, which in turn offload risk and precarity onto the individual. Productivity is also increasingly monitored and measured by digital platforms while simultaneously maintained and mobilized through affective manipulations. Passion, as documented in Chapter 3, is not only used to sustain work in moments of crisis but also as performative forms of resistance against work and the regimes of productivity.

My dissertation came into being not just during the perils of a global pandemic but also bookended by periods of rapid growth and decline within the tech industry. It serves as a snapshot of an industry in a state of flux and constant upheaval. This study does not make any

claims as to the future prospects of the tech industry in China but rather to offer a glimpse into a particular moment in time during numerous global contingencies that exposed many of the underlying latent fault lines in the workplace. My fieldwork in Shanghai and Guangzhou also do not represent the totality of the tech industry in China. Like I explained in Chapter 1, there exist multiple technopoles in the country, each with its own distinct production cultures, policy institutions and local inclinations. While the pandemic significantly limited the number of field sites I could visit, I believe by conducting immersive fieldwork within typical startup tech companies can offer the insights into working practices and institutional logics that allows me to speak more broadly about the tech sector as a whole. The discursive analysis of DingTalk in Chapter 4 for example delved into the ubiquitous adoption of workplace management platforms to standardize and normalize surveillance across tech companies across China. As work becomes ever so dependent on digital platforms, shedding light on the persistent modes of human-machine interfacing is critical to understanding the convergence of myriads of labor practices under corporate domination and surveillance.

Another important aspect to note is that most of my interlocutors are college educated and primarily work as white-collar professionals in first tier cities. This is of course not to say my informants all belong to the category of elite knowledge workers removed from precarious living. On the contrary, this dissertation has worked to problematize the classic distinction between manual and mental work, where workers from all sectors often share similar predicaments due to not just oppressive labor practices but also the quotidian struggles of living in urban China in general. While it would be useful for this project to expand further in looking at the struggles of other tech workers in the digital economy (i.e., gig workers, freelancers, code

farmers, etc.), this dissertation provides a good starting point to look at one component of global software production from within the veiled walls of corporate institutions.

As a matter of fact, there has already been significant scholarly attention devoted to gig workers and platform laborers in the global economy. But what I contend throughout this dissertation is that all work in the digital economy is becoming platform-mediated work. Whether one is out doing deliveries or sitting in cubicles, they all remain tethered to a digital interface that comes to define productivity, passion and play in the workplace. In another vein, digital technologies also help provide the delicate threads in connecting disparate interests and backgrounds in the face of common oppression. Likewise, the intersecting oppression imposed through the 996 work schedule as documented in Chapter 5 also divulges the possibility for collective worker solidarity and digital activism that can unite *dagongren* of all class, gender and working backgrounds.

Despite primarily focusing on China's domestic tech industry, my ethnography of Chinese tech startups also has profound global implications. While Chinese tech companies have had marked successes in marketing its cultural commodities abroad, it was also guilty of promoting some of the darker side of its forms of algorithmic control, data collection and institutional practices. For instance in 2022, ByteDance was accused of enforcing its 996 work schedule in its head office in London, leading to a mass exodus of staff.[368] This comes during a time when many countries like the UK are advancing the move toward a 4-day work week to improve people's well-being and productivity.[369] It is ironic that China, long facing the brunt of

[368] Cristina Criddle, "TikTok Shop's troubled UK expansion: staff exodus and culture clash", *Financial Times*, June 8, 2022, accessed June 23, 2022, https://www.ft.com/content/dc1aba86-2055-4521-8f0c-1f026c7f6864
[369] Alice Kantor, "Four-Day Work Week Has a Chance to Gain Traction This Time", *Bloomberg*, June 17, 2022, accessed June 23, 2022, https://www.bloomberg.com/news/articles/2022-06-17/four-day-work-week-flexible-schedules-gain-traction-as-employee-perk

exploitation in global ICT manufacturing, is now exporting its own toxic work culture abroad. This goes to highlight how the issues of abuse, precarity and austerity within the workplace is indicative of the wider oppressive logic of global capital. The onset of the pandemic and global economic crises however revealed deep fractures related to the precarious conditions of work - a suspension of the status quo established by the post-Fordist political economic order.

The popularity of Chinese terms such as involution, lying flat, touching fish, etc. all share discursive parallels with the so-called "great resignation", the "big quit" and the anti-work movement in Western societies.[370] These terms all reflect a form of suspension, refusal and interruption of the existing conditions of labor. Indeed, the tech industry in the US, despite its aspirational allure, also witnessed mass exodus of workers due to longstanding issues dealing with burnouts, low wages, workplace harassment and rising cost of living. The shift to remote-work and the limits to mobilities have led many to view the working status quo as no longer tenable, or even acceptable. In another vein, the pandemic helped to shed light on much of the invisible labor of gig workers whose labor is simultaneously enabled and imperiled through digital platforms. The COVID-related lockdowns have the added effect of reconfiguring work toward the domestic sphere, where workers inhabit different spaces, intimacies and temporalities. This in turn renews focus on the gendered conception of work where much of the added labor resulting from the pandemic have fallen disproportionately on the backs of women and other disenfranchised groups.

Finally, a major challenge of writing about the tech scene is the rate by which the industry changes and keeping up with its latest developments. Practically every month there was breaking news dealing with the turmoil in the industry owing to the various regulatory

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[370] Ishaan Tharoor, "The 'Great Resignation' goes global", *Washington Post*. October 18, 2021, accessed June 23, 2022, https://www.washingtonpost.com/world/2021/10/18/labor-great-resignation-global/

crackdowns since 2020. It would be impossible to keep this dissertation up to date with every new policy change and industry shifts. Yet, as Wendy Chun reminds us, "this twinned ennui and excitement is not a reaction to new media, it is produced by the very concept of new media."[371] In other words, the newness in new media technologies is often predicated on habitual cycles of crisis endemic to neoliberal capitalism. China's involution turn also recalls Berlant's "impasse of the present", or the waning ideals of the good life beset by the material realities of the present and an increasingly precarious future.[372] Indeed, the crisis of the pandemic not only grounded the global economy to a standstill but also severely limited the mobilities of people across the world. It is only ironic that the tech industry, long having billed itself as at the forefront of disruptive technologies, can do little in the face of major socioeconomic disruptions.

During China's renewed lockdowns in Shanghai in spring of 2022, Chinese state media have increasingly referred to the pandemic lockdown by different names such as "static management" (静态管理) or "press the pause button" (按下暂停键)[373] where the latter is often used to describe digital media interfaces. The state therefore works to normalize the lockdown by framing the lockdown in a language familiar to people's everyday mobile experiences. More ominously, it also divulged the attempts by the state to silence criticisms toward its zero Covid policy increasingly seen as unsustainable - both socially and economically. The reliance on mobile technologies illustrates the importance of tech in China's social governance which is made all the more obvious through the mandatory use of the health code system that works to regulate and monitor people's everyday lives. The lockdown induced moments of stasis and

[371] Chun, *Updating to remain the same*, 73.
[372] Berlant, *Cruel Optimism*, 263.
[373] Zuopeng Ma, chengshi anxia 'zantingjian', qiye shehui hui dandang bu zanting [The city pressed the pause button but companies and society should not pause]", *People's Daily*, May 14, 2022, accessed June 23, 2022, sh.people.com.cn/n2/2022/0514/c134768-35268677.html

suspension that served as a freeze frame into the preexisting tensions within China's technological rise, and potential decline. Yet, this dissertation has also shown the incredible resilience of my interlocutors in the face of the intersecting oppression from state and corporate institutions. Tech workers, in spite of the odds, continue to subvert, resist and interrupt the systems of control through creative everyday practices. Here the ambivalence between innovation and involution, performance and passion, control and contestation provide liminal spaces where tech workers can lay claim over their own tech futures and the meaning of work.

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