DIGITAL PARENTING BURDENS IN CHINA

Online Homework, Parent Chats and Punch-in Culture

SUN SUN LIM
YANG WANG

Open Access Book

DIGITAL PARENTING BURDENS IN CHINA

PRAISE FOR *DIGITAL PARENTING BURDENS IN CHINA*

"Lim & Wang's book provides us with a rare peek into the world of family life in China, a global technological leader, as it is embracing digitalization in all aspects of its life: Parenting, education, leisure, and social relationships. Their thoughtful empirically based observations in this unique culture are highly valuable for readers worldwide well beyond China as they raise the challenges and opportunities facing all families adjusting to the ever-changing digital advancements in their everyday lives."

Dafna Lemish, Distinguished Professor of Journalism and
Media Studies, Rutgers University

"A definitive volume, this book offers nuanced analysis about children, parenting, and digital media in urban China. The implications are, of course, far beyond China as AI and tech-facilitated practices fundamentally transform parenting itself, wherever you are."

Jack Linchuan Qiu, Shaw Foundation Professor of
Media Technology, Wee Kim Wee School of Communication and
Information, Nanyang Technological University

"In this insightful and timely book, Sun Sun Lim and Yang Wang provide a groundbreaking exploration of the burdens Chinese parents face due to the digitalization of family life and intensifying academic pressures. Empirically rich and theoretically nuanced, this book offers invaluable guide to anyone seeking to understand the evolving strains and shifting dynamics of parenting in a digitalizing world."

Bingchun Meng, Professor, Department of Media and
Communications, London School of Economics & Political Science

"Parenting and family life are not what they used to be, particularly since COVID. Many of the tasks and events that marked family life have been changed via digitalization, such as online shopping, gaming and social networking. In their book Digital Parenting Burdens in China: Online Homework, Parent Chats and Punch-in Culture, *Lim and Wang walk us through these changes as experienced in urban China. Thanks to the work of Lim and Wang, this book provides us with perhaps the first glimpse into digital parenting in China. A must-read."*

Rich Ling, author of *Taken for Grantedness: The Embedding
of Mobile Communication into Society* (MIT Press, 2012)

This page intentionally left blank

DIGITAL PARENTING BURDENS IN CHINA

Online Homework, Parent Chats and Punch-in Culture

BY

SUN SUN LIM
Singapore Management University, Singapore

AND

YANG WANG
National University of Singapore, Singapore

INVESTOR IN PEOPLE

CONTENTS

LIST OF FIGURES

This page intentionally left blank

ACKNOWLEDGEMENTS

of the writing process. Yang also wishes to express heartfelt thanks to her husband, whose unwavering support and invaluable emotional backing have been the cornerstone of this journey. She also extends her appreciation to her precious two-year-old son, whose boundless joy, unconditional love, and innocent encouragement have been a constant source of inspiration, enriching her understanding of parenting as she writes on parenting experiences.

We dedicate this book to our families whose support make all the difference.

1

DIGITAL PARENTING: WHY THE CHINESE EXPERIENCE MATTERS

When conducting fieldwork for this book, we travelled to Hangzhou, China, in 2019, the year before the world would be overturned by the COVID-19 pandemic. We were blissfully unaware that an epochal event was around the corner and immersed ourselves in the city's famed tech-friendly environment, juxtaposed against its legendary historical opulence. Often referred to as the Silicon Valley of China (Zhang, 2018), the capital city of Zhejiang province is home to several leading technology companies including online retail behemoth Alibaba, ride hailing and delivery pioneer *Didi Chuxing*, as well as internet, video game, and music streaming giant NetEase. These relatively youthful innovations are woven into the city's centuries-old landscape with iconic landmarks such as West Lake, *Leifeng* Pagoda, and the Tomb of General *Yue Fei*.

Amidst this blend of ancient and modern, the entire city of Hangzhou has emerged as a veritable testbed for technological innovations that residents and visitors frequently encounter as they go about their everyday lives. Facial recognition is used for routine payments in stores big and small and malls boast of smart maps tracking human congestion to guide the movement of patrons. These temples to consumerism are also peppered with new-fangled technological diversions that attract teens and young families alike. There are photo booths featuring giant touchscreens for printing instant selfies with snazzy filters that parents and kids rambunctiously jostle over. Another draw is vending machines selling chocolate – three-dimensional (3D)-printed in a Pokémon character of your choice – right before your eyes. Besides such entertaining wares, technologically enabled conveniences such as public smartphone chargers and shared bicycles and cars can be easily accessed on street corners, activated through mobile phone apps. It was in this techno-centric,

techno-optimistic environment that we first commenced our research on Chinese families' use of technology in parenting.

DIGITAL PARENTING WITH CHINESE CHARACTERISTICS

The critical role technology plays in parenting in Chinese households is best illuminated (literally) by a popular study lamp known as the *Dali deng* (powerful lamp). Developed by ByteDance, the parent company running popular social media platforms such as TikTok and its Chinese counterpart *Douyin*, this lamp was introduced as a reliable and capable study companion for children (Lim, 2021). Beyond its basic functionality as a lamp, the *Dali deng* is equipped with two integrated cameras – one directly facing the child and another positioned above the seated child. These cameras enable parents to keep a vigilant eye on their children remotely, whether they are at the office, the mall, or even in a different country altogether (Chen, 2021a). In instances where parents are occupied and unable to provide direct supervision, they have the option to enlist someone else to monitor or tutor their children through the lamp's phone-sized screen. Notably, this intelligent lamp is capable of providing educational guidance itself, leveraging artificial intelligence to assist with maths problems, recite Chinese poems, and pronounce English words. The range of services is expanding, with additional features and academic subjects in the development pipeline (Lim, 2021). Children also have the ability to upload videos of their homework for parental review, as well as record video responses to interactive quizzes that can be shared with other Dali customers (Chen, 2021a).

This voice-activated device combines the features of lamps, smartphones, home assistants, and social media. Higher-priced models include additional features like identifying poor posture. If the device detects the child hunching over, it triggers a voice alert, takes photos of the child, and retains these images for up to three days, allowing parents to review them at their convenience. Despite the substantial price of USD120, ByteDance successfully sold 10,000 units of the lamp in its initial month of release. Additionally, the Chinese tech giant Tencent was in the process of developing its own version. This telling example illustrates key aspects of Chinese children's lives and the parenting practices surrounding them. In China, academic achievement of children is a household priority, and parents invest considerable resources to bolster these academic pursuits. Any technological innovation that can boost educational accomplishments is welcomed and actively incorporated into their parenting practices. Indeed, with technology encroaching into virtually every facet

of society, Chinese families have incorporated digital devices and services in their everyday routines as our subsequent chapters will reveal. Significantly, as households domesticate technology, integrating it into their daily lives to meet their demands and desires, they embrace the advantages and conveniences it brings but grapple with managing the associated costs and drawbacks. For Chinese parents, technology is unequivocally both a blessing and a curse.

Indeed, what had principally motivated our study are rising concerns that technology has intensified Chinese parents' responsibility for their children's educational endeavours. Exemplifying this growing unease is an incident involving a father who was kicked out of a school chat group after he had complained about his Primary 3 child's homework (Yan, 2023). On the evening of 17 March 2023, his child's form teacher had informed the parent–teacher group on popular Chinese social media app WeChat that all students should watch an educational programme and submit a report of around 300 Chinese characters thereafter. Whereas several parents sought clarifications from the teacher on the assignment, the father instead lamented in the group: 'Parents have been assigned homework again', only to be removed from the group within 20 minutes.

Irate, he took screenshots of the chat group and posted them on his WeChat account that was visible to other parents and teachers (Yan, 2023). This triggered an angry phone call from the form teacher who demanded to know why he had shared the screenshots so openly. The father then recounted the entire incident in a video taken in front of the school gate, which he posted online for public viewing. It quickly went viral and led to an investigation into the incident by the Qinyang Education Bureau of Henan province. His video practically ignited a firestorm of debate across China, with many parents empathising with him and venting fervidly about the practice of making parents directly accountable to teachers for their children's homework.

This increasingly avid use of digital platforms for education-related communication among parents of all socioeconomic brackets is in fact a notable trend in Chinese society. Schools across elementary and high school have adopted home-school conferencing and class management apps such as Ding-Talk, *Yiqixue*, and *Banji youhua dashi* for teachers to communicate with parents so as to better involve them in overseeing their children's studies and homework. Home-school conferencing refers to communication between educators and parents concerning their children and is considered a fundamental aspect of parental involvement in education today. It encompasses both individualised communication between teachers and parents about their children specifically, as well as broader communication addressing general school or class information. Whereas teachers previously relied on face-to-face meetings

and phone calls to engage parents on their children's academic progress or disciplinary concerns, the increased prevalence of online communication has significantly technologised home-school conferencing (Stright & Yeo, 2014).

Education technology or edtech platforms now have home-school conferencing features built in for enhanced parent–teacher communication. These edtech platforms offer various functionalities such as lesson schedules, tools for managing homework, notifications, online courses, and shared drives for uploading learning materials and assignments. Extensively utilised by both primary and secondary schoolteachers as well as parents in urban China, the frequent use of these apps enables effective, immediate communication between parents and teachers. This helps teachers to provide timely feedback on students' academic performance and to share daily instructions with parents to guide their children in their studies. Parents are required to respond to these requests while staying informed about their children's educational progress and achievements. A good example is the Home-School Communication System, known as *Xiaoxuntong*, extensively employed in schools throughout China's Guangdong province (Cheng, 2015). Teachers utilise mass messaging in the system to publicly praise students with commendable academic achievements while criticising those who perform inadequately: 'Xiao Mui improved a lot in the Maths exam; while Xiao Tian and Xiao Ming received a "fail" grade' (Cheng 2015, p. 122).

In addition to these specialised home-school conferencing applications, another notable trend involves parent chat groups on WeChat, China's foremost social media app (see Chapter 2 for information on WeChat's market share, user base, features, and applications). For instance, educational institutions in Chongqing mandated the establishment of official WeChat accounts to facilitate teacher–parent and teacher–student communication at all levels, from kindergarten to middle school (Sun, 2016). These chats extend beyond mere announcements and reminders, serving as crucial platforms for teachers to oversee and assess students' homework submissions. Teachers have been known to phone students to remind them of midnight submission deadlines, while sending simultaneous notifications to parents to enlist their support for timely completion of assignments (Sun, 2016). The incessant barrage of homework reminders to both parents and children has reportedly caused parents so much stress that some resort to muting these notifications.

These WeChat groups that can include teachers, one or both parents, and even grandparents are an entire ecosystem unto themselves with their own norms, linguistic codes, and applications. Schools leverage them for administrative tasks such as circulating official notices and collecting fees for uniforms and meals. Parents use them to seek anything from last-minute

requests for information, to the sharing of photographs taken during school activities, to assistance for challenging homework assignments. Regardless of the varied purposes to which these chats are put, parents invest considerable energy in responding to messages and requests that flood phones with intensity (Peng, 2023). As an American father who had enrolled his twins in Chengdu Experimental Primary School wryly observed:

> *On the first day of class, I counted forty-nine beeps from the WeChat group. There were seventy messages on the second day. Day Three clocked in at two hundred and thirty-seven – an average of one beep every six minutes for twenty-four hours. That was also the day that I figured out how to mute the alerts on WeChat. (Hessler, 2023)*

Nevertheless, however tiresome the chats could be, parents can ill afford to tune out. Yet another American parent who had enrolled her son in a Chinese elementary school in Shanghai lamented, 'A parent's reply to a teacher's WeChat message was expected to be immediate, if not instantaneous, and keeping up with this daily flow of information was part of my job' (Chu, 2017, p. 35).

As these media reports and first-person accounts suggest, parent–parent communication in these WeChat groups has also heightened competition among parents, fostering an environment driven by self-indulgence and self-aggrandisement. Parents openly flaunt their children's achievements on these platforms and ingratiate themselves with teachers to earn preferential treatment (Lim & Wang, 2024), becoming effectively 'flattering groups' where parents strategically curry favour with teachers (Yuan, 2020). For example, instead of sending a private message to a teacher to express appreciation for her tutelage, a parent may send a message to the entire group of parents and the teacher in order to publicly praise her for helping the child win a competition. In doing so, the parent forges positive social capital with the teacher, while glorifying the child's triumph, although possibly earning the ire and resentment of other parents (Lim & Wang, 2024).

These chat groups have also been used for disseminating motivational messages, promoting products, and even gifting digital money to teachers through virtual red envelopes (Zhu, 2023). Consequently, the Chinese authorities sought to establish guidelines to prohibit commercial activities and ban the public disclosure of students' academic achievements (Cheng, 2015) albeit with uneven conformance and enforcement as media reports strongly suggest. Although efforts by Chinese parents to sharpen their children's competitive edge through gifts for teachers are not new, the publicness of such chat

groups has distinctly raised the stakes for parent–teacher communication and made the performative dimension of parenting significantly more pronounced (Lim & Wang, 2024).

As the preceding discussion shows, the digital parenting burden of Chinese parents is substantial. The empirical evidence we have gathered for this book comprising 80 interviews with 60 Chinese parents in Beijing and Hangzhou before and during the COVID-19 pandemic captures how they appropriate technology as they raise their children and steer them towards academic achievement. In our subsequent chapters, we will chart how these digitally enabled parenting practices have intensified even as parents bear the weight of social aspirations in their quest for academic excellence. We also capture how Chinese parents navigated the rocky terrains of children's online learning during the pandemic lockdowns, feeling both supported but also overwhelmed from being ceaselessly connected via always-on, always available digital platforms.

FAMILY LIFE AND PARENTING PRIORITIES IN CHINA

To fully appreciate why digital parenting responsibilities so consume the energies of Chinese parents, it is important to foreground our analysis with an exposition into the family life and priorities of urban Chinese households with schoolgoing children. Although China is a sprawling country with a population of over 1.4 billion spread across 22 provinces, generalising about the nature of childhood and family life is difficult. Nevertheless, for urban families, the country's integration into the global market economy has led to a 'growing commercialisation and standardisation of Chinese childhood' (Naftali, 2016, p. 3).

It has been observed that parentocracy – avid parental investment in child rearing – has become the prevailing trend in urban China (Meng, 2020), significantly transforming the role of parents and home-school interaction (Lyu & Zhong, 2023). The country's cultural lingo has also caught up with this intensifying shift, with terms like 'mompetition' or *pinma* (competitive mothering) (Xiong, 2018; Xu, 2017), 'wolf father', *jiwa jiazhang* (pushy parents)', and 'scientific parenting' reflecting Chinese parents' proactive involvement in children's education. So lofty is this parenting mission that it has been described as the 'moral project of Chinese childrearing' (Xu, 2017, p. 2), inextricably linked with 'the long history in China of parents finding existential meaning in the success of their children' (Kipnis, 1997, p. 215). The societal expectations pinned on the parenting endeavour have thus translated into

heightened parental involvement in caregiving and significant investments in their education and overall development (Gu, 2021; Jankowiak & Moore, 2017; Short et al., 2001).

Research in other parts of the world suggests similar trends, and the growing belief in the pivotal role of parents in shaping children's identity and future has been termed parental determinism (Faircloth, 2014). The shift towards parental determinism and the exaggerated perception of childhood vulnerability have been criticised for fostering too heavy a reliance on parents to shape children's development and discounts their resilience, instead encouraging and legitimising excessive parental involvement (Furedi, 2008). Consequently, parenting has become overly burdensome, and couples are thus discouraged from having children. Over time, the concept of parental determinism appears to have become more entrenched, and the societal belief in the fundamental influence of parents on a child's development is increasingly accepted without questioning (Furedi, 2002).

In China, this emergence of parental determinism and parentocracy has been attributed to China's introduction of the one-child policy in the late 1970s that morphed into a universal two-child policy in 2015 and, subsequently, a three-child policy in June 2021 (Zhai et al., 2014). During the one-child policy era, most families were restricted to having only one child, with limited exceptions granted for two or three children based on specific criteria such as ethnicity, health, socioeconomic status, and geographical factors including rural/urban distinctions (Peng, 1997). The one-child policy saw a rise in 4-2-1 families, comprising four older people (paternal and maternal grandparents), two parents, and only one child (Jankowiak & Moore, 2017; Long et al., 2021). These children are colloquially referred to as the *Xiao Huangdi* (Little Emperors) in public and scholarly discourse due to the inordinate attention, care, and investments bestowed upon them by their families (Wang et al., 2009).

Indeed, with only one or a few children, Chinese families have become especially focussed on ensuring the quality of their children's upbringing. Chinese grandparents too, scarred by the deprivation they experienced during the Cultural Revolution, are particularly determined to confer every advantage on their grandchildren (Naftali, 2016). Hence, advertisements for products and services targeted at infants and children exploit this very sentiment by exhorting parents and other caregivers with the message: 'Don't let your kids lose from the beginning' (Yu, 2014, p. 123). Whereas under Maoist ideology, child rearing was heavily influenced by the state, the prevailing notion today is that individual families can determine parenting outcomes through consumption. Indeed, for Chinese society, it is 'important for parents to feel

that they have tried everything possible to ensure a fair chance for their only child' (Kuan, 2015, p. 183). Children have become a market segment in their own right and corporations conduct market research, even engaging experts to develop child-centric products while marketing campaigns equate consumption with good parenting (Yu, 2014). With this concerted shift towards parental determinism powered by consumerism, coupled with the quest for social mobility, contemporary Chinese families have never been more deeply invested in their children's academic endeavours.

The country's rigidly standardised pathways of academic progression have unyielding standards and impose considerable stress on parents and children alike, along the child's entire educational journey. At the preschool stage, five- and six-year-olds compete for the best urban primary schools by taking entrance tests and fielding interviews (Chu, 2017). The next major milestone to clear is the National High School Entrance Exam or *zhongkao*. Although 16–18 million students sit the *zhongkao*, fewer than 8 million will be accepted into academic high schools that qualify them to take the *gaokao* exam for entry into university (Chu, 2017), of which elite institutions such as Peking, Tsinghua, and Fudan Universities are especially coveted (Ryan, 2019). Chinese parents' eagerness to involve themselves in their children's academic endeavours is therefore understandable considering such fierce competition in the *gaokao* race.

Indeed, the stakes involved in the *gaokao* are overwhelmingly high. An intense multiple-choice exam taken over three days, it is heavily reliant on memorisation and is a 'terrible source of anxiety' (Rocca, 2015, p. 68), with most students spending 13 or 14 hours a day preparing for it during their final year in school. As Ash (2016, p. 31) recounted of a schoolgirl's 'coming of age' experience:

> When Xiaoxiao started middle school, everything changed. Her dolls were taken away, TV was restricted and the fruit storeroom she played in became off bounds. The shift was so sudden that Xiaoxiao remembers thinking she was being punished for an unknown crime. Overnight, the pampering she was used to transformed into the true legacy of the only-child generation: crippling study pressure. Early childhood is a protected time, but the fairy tale crumbles as soon as you are old enough to hit the books twelve hours a day.

For a sense of the collective anxieties surrounding the *gaokao*, consider how various consumer brands have launched campaigns to boost students' morale during the critical period (Jarrett, 2023). Food delivery company *Meituan* offered practical support through its 'errand-running' service, delivering

snacks, beverages, and daily necessities within an hour to meet exam takers' needs, even reminding them to pack their identification cards, stationery, and medication for the exam. To foster in exam takers a sense of shared struggle thereby relieving feelings of isolation, *Douyin* introduced 'Solutions to the *gaokao*', featuring pep talks from speakers who have successfully passed the exam. Notable figures, such as Peng Kaiping from Tsinghua University, addressed concerns about life after passing the exam, while others, like Wang Huyi, shared their experiences of taking the exam multiple times without being accepted into their dream schools (Jarrett, 2023). Several other brands, including dairy company *Yili*, consumer electronics giant *Meizu*, and even fast-food chain KFC, have promoted special offers or released advertisements specifically designed to uplift exam takers' spirits. Indeed, the *gaokao* is viewed as an onerous undertaking that necessitates enhanced additional support, with some families hiring '*gaokao* nannies' for personal tutoring and to handle cooking and cleaning tasks in the lead-up to the test.

Over the years, national efforts have been made to mitigate the stress of the *gaokao*. In 1988, 2000, and 2010, the Chinese government launched multiple rounds of campaigns known as 'Reducing the Study Load' (*jianfu*) with the aim of alleviating excessive academic pressure on young students (Yochim, 2018). Consequently, there was a substantial reduction in school hours, an increased need for parental involvement and technological support in completing homework, as well as growing emphasis on students' overall 'quality' (*suzhi*) in school admissions and evaluations. This broader evaluation of quality encompassed both academic achievements and extracurricular engagements (Yochim, 2018). These educational policy changes have further shifted the burden of responsibility for children's development from public schools to individual families and parents. Household expenditure has risen sharply for children's out-of-school education via after-school classes or private tutoring, with parents spending much more on out-of-school classes that are academic related than interest based (Chi & Qian, 2016).

In July 2021, China announced a rather extreme 'double reduction' (*shuangjian*) policy (Xue & Li, 2023), ostensibly aimed at easing students' academic load and lowering parents' expenditure on extra tuition (Chen, 2021b). This government intervention virtually disrupted the USD300 billion tuition industry overnight with government officials taking steps to restrict online tutoring. It comprised rules such as forbidding online education providers from teaching core curriculum subjects, banning classes on weekends and public holidays, and imposing limits on the fees charged by edtech companies (Lim & Wang, 2021a). Despite initial claims of success, illegal tutoring has actually thrived, with around 3,000 firms found to be secretly operating

in the second quarter of 2022 because parents are still prepared to pay for such illegal services (Ye, 2022). Although the ministry of education has exhorted schools to discourage families from engaging such private tutoring services, media reports indicate that parents continue to do so because they remain insecure and anxious about their children's academic performance (Ye, 2022). Rather than alleviate the academic pressure on students and address the growing disparity between affluent and underprivileged families therefore, evidence suggests that the tuition ban has triggered a surge in online tuition which has in turn exacerbated inequalities (Zhao et al., 2024). Well-off families can afford better devices, superior online education programmes, and provide better guidance as parents are more digitally literate, thus widening digital inequalities with less affluent households.

It is against this chequered landscape of societal expectations, parental aspirations, and children's exertions that digital parenting in China is undertaken, imbricated by the oppressive demands on academic achievement. Technological tools are marshalled to ensure that parents and children do not lose sight of any educational tasks, and children's device use that undermines academic performance is also closely monitored.

WHY THE CHINESE EXPERIENCE MATTERS

Of course, parenting and digital parenting are by no means unique to China, and many insights from these urban Chinese families' experiences can be distilled for parents elsewhere. In many ways, middle-class parents from different countries share a multitude of desires, aspirations, and anxieties that bear distinctive local characteristics but also bind them to their global counterparts (Heiman et al., 2012). From Hangzhou to Helsinki, Bangalore to Brooklyn, parents principally wish to see their children grow up to lead happy, prosperous lives, and view themselves as key architects who pave their children's paths towards personal fulfilment and professional success.

The degree to which parenting can shape these outcomes has long been a subject of societal and academic interest. In the face of modernisation and societal transformation, families have evolved and so too has parenting. Investigations into the evolution of parenting offer a nuanced sociological backdrop, laying the foundation for a multifaceted understanding of parenting. Within this expansive landscape, various Western-originated notions like intensive parenting, concerted cultivation, paranoid parenting, parenting out of control and transcendent parenting intersect with and inform the discourse around parenting, finding resonance in the Chinese experience. Over time, the trope of

parental determinism has elevated the role of parents, deeming their influence paramount in shaping the trajectory of their children's lives. The concept of intensive parenting, first proposed by Sharon Hays in her landmark work *The Cultural Contradictions of Motherhood* (1996), continues to hold relevance today. This approach is characterised by a child-centric focus, expert guidance, emotional investment, labour-intensive efforts, and significant financial commitment. Hays argues that intensive parenting has become a cultural script, a normative standard that imposes considerable pressure on parents to adhere to lofty and unyielding expectations. Annette Lareau (2003) enriched the discussion with a sharpened focus on socioeconomic differences in parenting by introducing the concept of 'concerted cultivation' in *Unequal Childhoods: Race, Class, and Family Life*. She highlighted how middle-class parents deftly navigate educational systems, endowing their children with significant advantage. They also have the wherewithal to nurture their children to be more confident and assertive of their rights and to adopt speech and behaviour that helps them strategically embed themselves within social networks and institutions. In contrast, poor and working-class parents simply lack the resources or know-how to grant their children similar privileges, be they material or symbolic.

Beyond parents' own behaviours that accord with the shift towards parental determinism, scholars have also questioned broader societal shifts that encourage growing endorsement of parental over-involvement in children's lives. Frank Furedi's (2008) critique in *Paranoid Parenting: Why Ignoring the Experts May Be Best for Your Child* takes issue with the turn towards parental determinism, labelling it an unhealthy trend that fosters excessive parental interference. He also noted the emergence of a 'culture of paranoid parenting' where every aspect of a child's life is perceived as being fraught with risk, prompting parents to seek expert guidance extensively, and to monitor their children to an undesirable degree. Indeed, such concerns about 'hyperparenting' have prompted empirical assessments, with scholars like Ungar (2007, 2009) observing overprotective parenting trends in urban middle-class families. This phenomenon, despite the world being demonstrably safer in many ways, is attributed to parents' rising aspirations for children's success and perceptions of an increasingly dangerous world in which to raise them. Ungar argues that overprotective parenting may manifest in children internalising their parents' worries or even seek risk outside parental oversight. The notion of risk consciousness, articulated by Lee (2014), adds another layer to the discourse, framing children as vulnerable to various adverse possibilities. This perspective has gained momentum since the 1970s, driven by risk entrepreneurs who promote specific risks to sell their expertise, stoking parental anxieties about issues ranging from nutrition to online harms.

Indeed, risk perceptions in parenting have risen against the backdrop of growing technologisation and digitalisation of family life across the world, significantly influencing childcare practices. Numerous scholars have observed widespread use of digital technology by parents in their daily caregiving routines, including tasks such as checking on their children's wellbeing, maintaining online communication with their children, and managing various aspects of their children's education including seeking childcare information (Clark, 2013; Dworkin et al., 2018; Lim, 2020; Livingstone & Blum-Ross, 2020; Nelson, 2010). Margaret Nelson's (2010) *Parenting Out of Control* identified hyper-vigilance in American parents who actively use technological aids such as baby monitors, smartwatch trackers, and mobile phones to keep tabs on their children's wellbeing. Indeed, as the prevalence of dual-income families grows, leading to an increased reliance on external caregivers or institutions for childcare, a variety of technological advancements have emerged to give parents that sense of assurance (Lim, 2021).

In Lynn Schofield Clark's (2013) *The Parent App: Understanding Families in the Digital Age*, she noted how smartphones and their numerous applications play an increasingly crucial role in assisting parents in managing the daily activities of the family. However, these apparent aids pose more demands on parents, requiring them to continuously update and synchronise schedules among all family members. Through her emphasis on social class, she found a diverse range of family experiences in digital media usage, arguing that media use reinforces distinct parenting styles prevalent in the United States. Middle- and upper-class parenting tends to endorse an individualised, career-focussed 'expressive empowerment ethic', marked by restrictions on perceived 'time-wasting' media. These families encourage the use of digital tools for creative expression and scheduling, often delinked from social connections and some parents may even engage in 'helicopter parenting', by digitally surveilling their children in their rooms. On the other hand, lower-income parents exhibit less discrimination with media use, prioritising safety and keeping their children indoors. They uphold an 'ethic of respectful connectedness', expecting children to express appreciation for family bonds through their media choices, favouring family-oriented entertainment over individualised educational or expressive activities. She points out that parenting in the digital age entails a significant amount of emotional labour, where parents must delicately navigate the balance between involvement and interference.

As mobile communication flourished with technological advancements including the advent of the smartphone, digital parenting and parent–child connectivity has taken on additional dimensions as Sun Sun Lim (2020) argued

in *Transcendent Parenting: Raising Children in the Digital Age*. Through her study of digitally connected families in Singapore, she introduced the concept of transcendent parenting, not as a form of parenting in and of itself but as a parenting practice of the mobile age (Lim, 2020) that is enabled and exacerbated by mobile communication's growing ubiquity and taken for grantedness (Ling, 2012). She notes that transcendent parenting has three facets: Initially, parents aim to overcome the physical distance separating them from their children by leveraging the connectivity of mobile communication, ensuring their 24/7 availability for support and protection. Additionally, beyond overseeing their children, parents endeavour to socialise them, providing guidance for both online and offline interactions with peers and teachers. Observing the digital traces of their children's online interactions, albeit negotiating the child's desire for privacy, allows parents to gain insights into potential issues, offer advice, instil values, and nurture life skills. Face-to-face interactions may also spill over into the digital realm, as some parents use online platforms to resolve offline conflicts or advocate for their children in cases of perceived injustice. Consequently, parents must navigate seamlessly between various online and offline environments that their children transit through. Furthermore, beyond the direct connection facilitated by mobile communication, an increasing number of channels enable parents to interact with caregivers, teachers, and other parents. Platforms such as home-school conferencing apps, parent–parent chat groups, online grade-books and homework helper apps necessitate and empower parents to actively participate in their children's educational endeavours. In this context, parents are intimately and extensively linked to their children's needs, regardless of whether their children are by their side or out of sight. Transcendent parenting is characterised by its defiance of temporal constraints, requiring parents to navigate parenting duties continuously, transcending the traditional boundaries of time and space. The utilisation of digital technology and media extends beyond the distinction between online and offline environments in childcare, resulting in parents being consistently accessible to their children and continuously involved in caregiving responsibilities (Lim, 2020).

In *Parenting for a Digital Future: How Hopes and Fears About Technology Shape Children's Lives*, Sonia Livingstone and Alicia Blum-Ross (2020) explore diverse families' interactions with digital technologies, delving into parents' perspectives and strategies in navigating their children's experiences with these technologies. The authors adopt the theoretical framework of the 'risk society', illustrating a shift in parenting practices within modern post-industrial society, characterised by the mobilisation of individual resources to prepare children for an uncertain future. Livingstone and Blum-Ross explore this mobilisation in the context of

an increasingly digitalised world with evolving digital jobs. Despite the subtitle suggesting hopes and fears about technology shaping children's lives, the authors posit that there is a shift towards hopes over fears in contemporary discourse. This shift aligns with structural changes in the post-industrial nation, particularly in education, where students are placed at the forefront of technological change through mainstream coding classes. In the face of pervasive and seemingly inevitable change, discussions about digital technology in families have moved beyond the simplistic 'screen time' debate. The authors argue that family approaches to digital technology now involve ongoing negotiations on how to maximise its benefits in various realms of life. While different social classes may not have distinct expectations for their children regarding digital technology, social, cultural, and economic capital contribute to significant disparities in how low income and high income families derive benefits from it. The authors highlight differences in the physical technological landscapes of working-class and middle-to-upper-class homes, encompassing not only the abundance of devices but also gaps in parental knowledge, experiences, and connections. These variances extend from the ability to regularly update devices to being able to afford the latest coding classes. In conclusion, the authors offer policy recommendations emphasising parents' active participation in designing, practising, and mediating digital environments.

Ultimately, this rich trove of research on parenting underscores the important position children occupy in their parents' lives. Although 'economically worthless', children are emotionally priceless and the considerable emotional investment parents pour into children becomes inseparable from parents' social and moral identities (Furedi, 2008; Zelizer, 1994). In the Chinese context, children's academic accomplishments are inextricably linked to parents' sense of self, making the emotional and resource commitments of parenting even more ponderous. The digitalisation of parenting in China has been met by families with equivocation, at once rich with bounteous gains yet deleterious with considerable costs. With China's remarkable technological prowess earning it the position of a global artificial intelligence (AI) superpower (Lee, 2018), its rapid digitalisation journey holds lessons for other societies going through similar transformations. The ascendance of Chinese technology companies including Alibaba, ByteDance, Tencent, and Shein has facilitated technologisation in all realms of life at an astounding speed and scale (Chen, 2022). There has been positive momentum in applying cutting-edge digital technology across various B2C sectors, particularly in education. Consequently, there is intense competition for educational technological innovations in the

country, with both parents and schools readily embracing or investing in applications that could enhance their children's learning experiences. As a result, China serves as a hub for some of the most advanced experiments in the implementation of educational technology (Feijóo et al., 2021). By scrutinising the Chinese experience, we can grasp and anticipate the implications of technologisation for family life, digital parenting, and child development and take a proactive stance towards managing them.

This page intentionally left blank

2

DIGITALISATION OF FAMILY LIFE IN CHINA

In the popular 2016 Chinese television drama *Xiao Bieli*, one of the most formidable tiger mothers portrayed in the series buys her daughter an electric globe that lights up and explains key facts about different countries as you touch them. The young girl, already an academic overachiever, is visibly crushed as she regards the gift as yet another apparatus in her mother's oppressive arsenal of gadgets meant to enslave her to her academic pursuits.

As this depiction of childhood in China reveals, there is strong enthusiasm for any technological aid that can help children thrive in their studies and boost their chances of a glorious academic career. It is in this sociocultural context that digital devices like the Dali lamp we introduced in Chapter 1, apps like DingTalk, and social media like WeChat have been firmly incorporated into family routines and parenting practices, especially those that can support their children's educational endeavours. Indeed, it has been astutely observed that in China, 'parents willingly adopt any technological innovation that could help their children, and schools as well, since they are judged on their pupils' success' (Feijóo et al., 2021, p. 2). Given the waves of technological innovation that China has witnessed in the last couple of decades, research from multiple disciplinary perspectives has sought to capture and reflect on how family life in China has been digitalised in significant ways, especially those with school going children. In this chapter, we present a broad picture of the varied digital technologies urban Chinese families are adopting in their everyday lives to meet different needs. Following which, we delve into those they deploy specifically for parenting, from parent communication platforms over social media, to online discussion forums and class management apps and edtech platforms. We also discuss how online education intensified during the extraordinary COVID-19 pandemic period when schools were closed.

After putting this background in place, we articulate our research questions and explain our research process. In Chapters 3 and 4, we explain our research findings.

DEVICES, SUPER APPS, AND MINI-PROGRAMMES

As 'factory to the world', China manufactures scores of electrical and electronic devices for top global technology companies and hence boasts a vibrant domestic consumer market for such gadgets. Consequently, urban Chinese homes are littered with a rich panoply of devices to cater to various needs and creature comforts, be they for cooking, cleaning, recreation, or education. Indeed, the diffusion of appliances such as washing machines and televisions and devices such as computers and mobile phones in urban China has been swift in recent decades with the rise in household incomes and the declining cost of consumer goods (Han et al., 2022).

The corresponding improvements in household digital connectivity have been especially transformative for daily household routines. The widespread popularity of smartphones, coupled with their growing affordability, have led to their ubiquity. As the main conduits for online access, smartphones and tablets have become an integral part of daily life in urban China, and even people with limited prior internet experience can easily utilise the internet to fulfil both work-related and leisure activities (Loo & Wang, 2018). Before 2005, variations in the adoption of mobile phones among consumers in various income brackets were still notable, but post-2010, these differences have diminished significantly (Han et al., 2022).

Consequently, time spent online has risen significantly over time, with social media use dominating. According to the *52nd Statistical Report on China's Internet Development* published by the China Internet Network Information Centre (CNNIC), as of June 2023, China had 1.079 billion netizens, up 11.09 million over December 2022, and its internet penetration has reached 76.4%. The average weekly online time per capita for Chinese internet users increased by 2.4 hours compared to December 2022, reaching a total of 29.1 hours (CNNIC, 2023). As of June 2023, there were 1.047 billion users of instant messaging (97.1%), 1.044 billion users of online videos (96.8%), 943 million users of online payment (87.5%), 841 million users of search engines (78.0%), and 765 million users of livestreaming (71.0%) (CNNIC, 2023). Social media use is avid, and the number of social media users has reached 989 billion (CNNIC, 2023). As of the third quarter of 2022, the top five social media platforms by percentage of Chinese internet users are WeChat (81.6%),

Douyin (72.3%), QQ (61.6%), *Baidu Tieba* (57.6%), and *Xiaohongshu* (49.5%) (Thomala, 2023b). Far from merely serving social or recreational needs, social media use is in fact critical to daily functioning in China.

CHINA'S TOP FIVE SOCIAL MEDIA PLATFORMS

WeChat is the most intensively used due to its multifunctionality and has the largest number of users at about 1 billion monthly as of 2022 (Thomala, 2023b). Widely seen as the archetypal 'super app' (Lim, 2024), WeChat is, for many Chinese consumers, indispensable for daily chores, helping them perform tasks such as paying bills, ordering food, and hailing taxis, thus making it close to indispensable and 'super sticky' (Chen et al., 2018). WeChat also hosts a thriving ecosystem of mini-programmes or 'sub-applications' that offer enhanced functionalities including e-commerce, virtual store tours, task management, coupon services, and various other capabilities. Besides these transactional uses, WeChat is also a lively venue for social interaction and network building. Its Moments feature allows users to post social updates for sharing with WeChat contacts and its pro-visual design steers users towards sharing photos rather than plain text (Chen et al., 2018). WeChat Groups allow groups of people to form closed 'friend circles' (*pengyouquan*) although this is used for both social inter-action and work-related communication. Numerous government agencies and organisations also maintain official WeChat accounts for disseminat-ing information to citizens relating to government policies, state decisions, and information relevant to daily life and welfare (Zhang et al., 2021). During the COVID-19 pandemic, the platform played an especially vital role in sharing details about lockdowns and quarantine regulations and even grocery deliveries and welfare services.

Douyin is a short-form video app that was specifically tailored and initially released to the Chinese market in 2016 by its parent company, Chinese tech giant ByteDance which also owns TikTok, its global coun-terpart. As of March 2022, Douyin and Kuaishou, China's two largest short video platforms, controlled about 54.4% of the short-form video market (Thomala, 2023a). The platform uses sophisticated AI algorithms to personalise the user experience by curating a feed of videos that aligns with individual preferences and viewing behaviours (Zhao, 2021). This technology is key to the app's addictive nature, as it keeps users engaged by continuously presenting them with content tailored to their interests (Chu, 2022); 65% of its users are under 35 years old although Douyin's user base

is expanding into other age groups (GMA, 2023). The platform is known for various trending topics, including dance, comedy, babies, life hacks, food, pets, pranks, and stunts. Douyin has become a leading platform for brands selling to Chinese consumers, revolutionising the way users spend time on social media platforms, interact with each other, and shop.

QQ is an instant messaging software service and web portal developed by the Chinese technology company Tencent and was originally known as Tencent QQ. In the third quarter of 2023, QQ had about 558 million monthly active users, decreasing from around 574 million in the same quarter of 2022 (Thomala, 2023c). QQ offers services that provide online social games, music, shopping, microblogging, movies, and group and voice chat software (Tencent Cloud, 2023). One of QQ's unique features is its integration function, where customers can combine other services and platforms such as social networks, emails, and other entertainment websites under one user ID, making it the country's most popular instant messenger (Pang, 2022). Topics discussed on QQ resemble those on other major social media platforms, reflecting popular culture, current events, and user interests.

Baidu Tieba, a Chinese online forum like Reddit, was established on 3 December 2003, by Chinese web services company and search engine giant Baidu. Over the years, Baidu Tieba has seen significant growth – accumulating 45 million monthly active users and 1.5 billion total registered users as of December 2021 – and is one of the most popular platforms in China (GMA, 2023). Baidu Tieba offers a range of services, including the ability for users to participate in discussions and share information on a variety of topics. One of its distinctive features is its focus on user-generated content, which means that the vast majority of content on the platform is created by the Chinese online community rather than official sources or brands; consequently, many Tiebas revolve around popular culture phenomena such as gaming, TV shows, and celebrities (GMA, 2023).

Xiaohongshu, often referred to as China's version of Instagram, stands out as one of the most widely embraced 'Content + E-commerce' social media platforms in the country. It was originally established in 2013 as a Hong Kong shopping guide for affluent female travellers but has since matured into a platform with 200 million users who use the app to share tips on health, fitness, and relationships. As of July 2020, it boasted a substantial user base of 100 million monthly active users globally (*Xiaohongshu*, 2023). It emphasises images and short video clips as the primary modes of content sharing. Like other social media platforms,

Xiaohongshu thrives on social interaction, offering 'Like' and 'Favour-ites' buttons with a recommendation system based on those metrics (Guo, 2022). It features user-generated content primarily targeted at the younger demographic who use it to share shopping-related information with their online community. It aims to facilitate users in both discovering and acquir-ing products while fostering the exchange of recommendations, advice, and tips. *Xiaohongshu* is frequently employed for product research, offer-ing in-depth evaluations and tutorials contributed by its user base. Users can save posts they find appealing, engage with other users and their con-tent, generate their own posts, connect with brand pages, and more. Other distinctive features of *Xiaohongshu* include its in-app purchase functions, the availability of longer, more comprehensive blog-style content, and a stronger sense of community.

PARENT CHAT GROUPS

With social media claiming such a critical role in daily life in China, these very same platforms are also heavily leveraged for parenting-related tasks and are appropriated as parent communication platforms. Parents use the likes of WeChat and QQ to communicate with their children, their children's teach-ers, and other children's parents, or to seek information and advice about par-enting. In these platforms, the ability to forge groups facilitates community building and knowledge sharing.

Studying mainly expectant mothers or those with infants and toddlers, Zhao and Ju (2022) found that online communities such as WeChat groups offered these women a critical support structure especially during the pan-demic period. They bonded and commiserated over pregnancy woes, uncer-tainties about COVID-19 including vaccinations, and shared knowledge and tips about parenting practices: 'In various WeChat groups and parenting apps, parenting knowledge is fragmented across the network; this information is enriched, supplemented, borrowed, used, questioned, and absorbed in the exchange among mothers' (Zhao & Ju, 2022, p. 7). These WeChat groups also went beyond offering know-how and building community to mobilising for action, such as when some mothers would band together to lobby schools on issues such as teacher reassignment, curricular design, or safety standards. With social interaction constrained during the pandemic, these online plat-forms offered a valuable lifeline for meaningful exchange despite their isola-tion, allowing these young mothers to offer and enjoy solidarity during a significant stage of their lives.

In another study of WeChat and QQ parent–teacher chat groups, parents observed that the informal and user-friendly nature of parent chat groups made it easier to initiate communication compared to phone calls and expressed a higher level of comfort in asking questions within these chats (Gong et al., 2021). However, both parents and teachers raised concerns about the openness of this channel, allowing parents to freely voice their opinions. Teachers pointed out the disparity in the number of parents and teachers in the group, with a typical group chat comprising around 10 teachers and 50–60 parents. It was common for parents and teachers to feel overwhelmed by the volume of communication. Additionally, the text-based nature of communication in such chats made parents and teachers more cautious about how they phrased their messages, as they feared that imprecise language could lead to misunderstandings and potentially undesirable consequences.

Indeed, as with all communities, social interaction is not without its friction, and WeChat parent groups manifest facets of pressure and performativity by both parents and teachers. Lyu and Zhong (2023) studied the home-school interaction experience of rural-to-urban migrants in Yongkang, a city in Zhejiang province. They found that these migrant parents who tended to be far less educated than their urban counterparts would attempt to involve themselves in these chats, such as when teachers solicited suggestions for school-related matters. However, they consequently found their efforts disparaged by teachers:

> A teacher shared a classroom decoration plan in the WeChat group and requested suggestions. I shared some ideas. Surprisingly, the teacher privately messaged me and advised me to tell her my thoughts privately instead of posting them in the public group next time …. (Lyu & Zhong, 2023, p. 5)

Indeed, the teachers interviewed for the study admitted that they had severe doubts about these rural-to-urban parents' ability to contribute in productive or meaningful ways and tended to rope in urban parents for voluntary activities and the Parent Association. Apparently, social stratification extends to or replicates within these chat groups.

Despite such challenges and tensions, participation in such chat groups is part and parcel of parenting in China. Parents are motivated to participate actively in these WeChat groups because the stakes can be high. Parents actually compete for the teachers' attention and vie to be the first to respond to the teachers' requests. As Chu (2017, p. 38) observed of the WeChat group for her son's primary school:

> It all began to the feel like a race, as if we were playing endless rounds of musical chairs, and the last parent to respond would

have her supports immediately kicked out from underneath her ….
The teachers' own messages came at all hours, and on some days I
counted north of three hundred messages buzzing around the group.

ONLINE DISCUSSION FORUMS AND SOCIAL MEDIA ACCOUNTS

Apart from parent chat groups that tend to be closed to groups of parents affiliated to a particular school and class, more public online forums are also popular as venues for consultation and commiseration with parents who are beyond one's immediate social networks. Across the world, a variety of media spaces serving such purposes, such as discussion forums (Mackenzie, 2018), films (Schweller, 2014), Facebook (Anderson & Grace, 2015), Instagram (Germic et al., 2021), and WhatsApp (Lyons, 2020) have been explored. Such research has shed light on how different media platforms are utilised for the execution, negotiation, and assessment of parenting, delving into themes like identity formation, sense of belonging, knowledge sharing, and community building (Archer, 2019; Orton-Johnson, 2017).

Parents have also been observed to imbibe some degree of social validation or affirmation from their peers through interactions on these forums. They lurk or participate in these forums to solicit or exchange information and forge a sense of community. While the information gleaned and community bonds nurtured can be helpful and empowering, they can also induce negative feelings. In particular, exposure to posts about 'ideal parents' or 'perfect parenting' on social media can cause parents to make social comparisons and experience frustration (Henderson et al., 2016) and even inadequacy (Coyne et al., 2017) with implications for individual wellbeing and spousal relationships (Douglas & Michaels, 2004). Similar trends have also been uncovered in Chinese online communities relating to parenting.

In her analysis of parenting advice offered by WeChat Public Accounts and in-depth interviews with middle- and working-class mothers in Shanghai, Meng (2020) found interesting class disparities. Due to the limited access that working-class mothers have to social media content and fewer resources to engage with parenting advice typically aimed at users of higher socioeconomic status, they exhibit lower levels of anxiety compared to their middle-class counterparts. Additionally, working-class mothers tend to hold more realistic expectations about what constitutes a good life for their children. Her study showed that urban middle-class lifestyles, while enviable, come with their own pressures that are captured in and exerted by dominant social media discourse.

Studies of newer platforms such as *Douyin* and *Xiaohongshu* have found that digital media supports the enactment of motherhood practices, introducing complexities in the interplay between virtual and physical spaces. As has been observed of mothers in other countries, social media is a crucial space where narratives, identities, and actions of mothers undergo scrutiny and redefinition (Orton-Johnson, 2017). *Douyin* has evolved in the same way. He et al. (2022) studied how Chinese stay-at-home mothers document their everyday experiences on *Douyin*, specifically in the form of vlogs, establishing an online arena for the daily performance of their motherhood roles. Similar to *Douyin*, *Xiaohongshu* also features mom vloggers who record and share their daily lives (Shen et al., 2022). *Xiaohongshu* has also been appropriated as a channel for constructing and sharing knowledge about postpartum recovery, as well as for representations of the responsibilities and burdens of motherhood (Liu & Wang, 2023). The content shared by mothers reveals the imperceptible, unpaid work carried out by women within the confines of the private domestic realm, thrusting it into public conversation and converting it into discernible digital labour. This process creates novel avenues for the ongoing digital expression of motherhood through social media. It also underscores the performative nature of motherhood (Butler, 1997). *Xiaohongshu* is especially popular with Gen Z mothers who share news of their pregnancies and infant children and less so with Millennial parents of schoolgoing kids (Na, 2023).

Similarly, Sina Weibo, another popular social media platform in China, has also been the venue for fraught conversations about parenting. Wu et al. (2021) analysed Sina Weibo postings by users on China's two-child policy that was imposed in 2016, marking a significant shift from its long-standing one-child policy which had been in effect for the past 35 years. Social media platforms such as Sina Weibo perform a pivotal role in shaping public responses to this transformative reproductive policy including playing host to crucial discussions on the roles, identities, rights, and responsibilities of contemporary Chinese women. The platform has served as a veritable discursive space where ordinary women can share, document, and capture their daily interactions with societal structures and cultural norms related to childbirth. Although less salient, various perspectives rooted in male roles and interests have also emerged, contributing to the delineation and definition of family ideals.

PARENT–TEACHER COMMUNICATION AND EDTECH PLATFORMS

Besides generic social media and communication platforms that are appropriated for educational needs, there are also those designed expressly for academic settings, providing a wide range of education-related functions including

parent–teacher communication, children's curricular schedules, homework management tools, online courses, and shared drives for downloading learning resources. Prime examples of popular parent–teacher conferencing and class management apps include DingTalk, *Yiqixue*, and *Banji Youhua Dashi*.

Of this proliferation of edtech services, DingTalk has been one of the most prominent and successful, providing an all-encompassing online learning platform with tools and functions to streamline collaborative learning, real-time communication, and access to educational materials. Originally created by Alibaba as a channel for collaborative office communication, DingTalk quickly gained favour for educational purposes during the pandemic. It enables educators and employers to assign tasks, monitor the progress of students and employees, and can even mandate users to post a daily 'check-in' photo within a designated group (Cuthbertson, 2020). For schools, it offers virtual classrooms to facilitate livestreamed lessons, allowing teachers to engage directly with students through video or text communication. Teachers can create class groups and issue students important notifications through sound alerts (Hou & Yu, 2023). Students can attend virtual classes from any mobile device and communicate with the teacher through text or microphone features. All livestream sessions conducted during the course are permanently stored as video recordings, accessible for students to replay and review. Learner data are captured, and teachers have access to comprehensive information on students' participation throughout the course, including the duration of their participation (Hou & Yu, 2023). The platform also allows teachers to issue instructions for homework and provide feedback while students can use it to submit completed assignments with the capacity to accommodate images, audio, and video content.

China's rapid switch to online instruction as the pandemic unfolded was unsurprising considering the country's burgeoning edtech sector in the preceding years. By 2018, the number of online learners in China had reached 172 million, with 142 million engaging in mobile-based learning (Feijóo et al., 2021). The annual expenditure per capita for online K-12 education was RMB16,000 (est. USD2,246). China witnessed a substantial increase in edtech investment in 2018, reaching around €4 billion (est. USD5.8 billion), nearly double the total from 2017. The primary sub-sectors in the Chinese edtech market are K-12 education and language learning, with Science, Technology, Engineering and Mathematics (STEM) education emerging as the fastest-growing sector. Edtech innovations have catered largely to higher education, primarily focussed on STEM subjects, in-class applications, after-school classes, and tools that support the overall education system (Feijóo et al., 2021).

The Chinese edtech market is also frontier pushing, with relatively novel innovations such as facial recognition, drones, and brain headsets to assess

students' attention levels having been trialled in schools (Feijóo et al., 2021). Data on students' in-class behaviour and responses are relayed to the instructor in real-time and shared with parents via mobile applications. Deep learning is then employed for image and pattern recognition and classification, and the collected information is subsequently utilised to generate a performance index for each student. Although the use of such groundbreaking technologies could raise concerns about surveillance and data privacy, Chinese schools do not typically seek consent from parents, and the country has yet to impose tight regulation of biometric information (Feijóo et al., 2021). Furthermore, Chinese parents are in fact likely to welcome a service to help them learn more about their children's learning habits especially since they believe that children's diligence and ability to concentrate are keys to academic excellence.

ONLINE EDUCATION DURING COVID-19

It was in the wake of COVID-19 that edtech platforms realised their broadest application worldwide and China was no exception. The 'China Parenting Report under COVID-19', published by professional parenting platform *Yuerwang* in 2020 noted that the country saw a 22% year-on-year increase in the daily activity of online parenting communities and a surge of 50.58% in the daily activity of online education consultation services during the pandemic (Zhao & Ju, 2022). Indeed, China effectively transitioned to online education as a complementary educational technology during this emergency period. Following an initial bout of panic with some missteps, a coordinated initiative involving government ministries and internet/mobile providers swiftly enabled nearly 200 million targeted students to connect and learn from anywhere at any time (Feijóo et al., 2021). The Chinese Ministry of Education launched the 'Disrupted Classes, Undisrupted Learning' exercise to provide flexible online learning to students in their homes, coordinating 22 online learning platforms that collectively provided 24,000 free and open online courses at the national level (Huang et al., 2020). Additionally, provincial-level schools and educational institutions offered a substantial amount of open learning resources to ensure the availability and flexibility of resources during the lockdown. These resources encompassed filmed lectures and educational games, tailored to meet the characteristics and needs of students.

Schools across all academic levels had to implement new approaches to cater to their students. For instance, Guangzhou International Middle School Huangpu ZWIE introduced a self-inquiry course during the COVID-19 period, allowing students to select topics based on personal interests and strengths

(Huang et al., 2020). Students could then turn in assignments in their preferred formats, such as letters, posters, brochures, videos, songs, or dances, to express appreciation for frontline heroes in Wuhan City, China. Binbei School in Shandong Province initiated a 'Course Supermarket', offering students diverse courses ranging from photography and calligraphy to housework and fitness tasks to nurture self-management skills (Huang et al., 2020). In terms of assessments, No.1 Primary School in Puyang, Henan province, employed a system where students wrote their test answers on paper, took photos of completed answer sheets, and submitted them to instructors via real-time chatting tools such as WeChat (Huang et al., 2020). Instructors manually graded and provided comments on the photos, addressing non-real-time questions and counselling needs. To further support students' inquiries, Beijing launched an online Q&A platform, attracting 13,705 registered instructors by 23 February 2020 (Huang et al., 2020). Grade 3 junior high school students in Beijing accessed the Q&A module of the 'Smart Learning Partner' through computers, mobile apps, or WeChat, uploading questions as text or pictures. Teachers responded with ideas and methods to solve problems, selecting the best answer for each question.

DingTalk, originally designed for enterprises, became widely used by primary and secondary schools during COVID-19. Over five million students from more than 10,000 institutions attended livestreaming classes via DingTalk (Huang et al., 2020). The platform developed a distance education package, offering health reports, online class reports, live interaction, real-time announcements, and notices. DingTalk provided free access to online and live classes, supporting over one million simultaneous learners. These online classes facilitated teaching, homework submission, corrections, examinations, and various learning simulations. For students and families, the main issues around the abrupt switch to online education related to parental pressures for their additional burdens. Notably, a social media post captured the prevailing sentiment among parents during that time. A father from Jiangsu province shared a brief online video where he complained bitterly about his child's teacher instructing parents to review their children's homework (Yuan, 2020). He grumbled in the video's concluding words: 'I teach the children, I correct the homework, and then I have to say in the WeChat group that I appreciate teacher's hard work. But who is the one working hard?'. The video quickly became viral having struck a chord with many online who began to question the role of teachers and indeed the existence of these WeChat parent–teacher groups.

Of course, it was the students taking major exams such as the *gaokao* who were the most stressed about the pandemic's impact on their learning and

academic performance. Nevertheless, despite the challenges, *gaokao* scores from the pandemic period were similar to those in previous years as parents had kept their children occupied with extracurricular online classes or access to mobile educational content (Feijóo et al., 2021). Students also adapted fairly well to online tools and surpassed their teachers who were hampered by their lack of prior training in edtech platforms and the absence of interaction in online classrooms.

RESEARCH QUESTIONS AND METHOD

It was against this broader backdrop of digitalisation of family life in China that we conducted our study. We sought to explore Chinese families' experience of using digital technologies in parenting their schoolgoing children. We conducted individual interviews and guided explorations of the parents' mobile devices, relevant apps, and app content to answer the following research questions:

- What are Chinese parents' experiences of using social media and edtech platforms in parenting their schoolgoing children?

- What is the nature of their interactions with teachers and other parents?

- How do these experiences influence their perceptions of parenting?

We conducted 80 interviews with 60 Chinese parents in two key Chinese metropolises of Beijing and Hangzhou before and during the COVID-19 lockdown. Institutional ethical approval was sought and obtained for both phases of research. Of the 60 participants, 40 were from Hangzhou and 20 were from Beijing. These parents could either be male or female, with at least one schoolgoing child aged 7–18 as of 2019, corresponding to students from the first grade of primary school to the third grade of high school. Among the 60 parents interviewed, 56 were mothers and 4 were fathers. The majority of participants belonged to the middle class, predominantly working as white-collar professionals, while the rest were full-time stay-at-home mothers; 41 out of the 60 parents had only one child at the time of the research, and the remaining 19 had two children. No respondent had more than two children. Respondents had to be users of digital technologies that supported their parenting, including but not limited to platforms designed to help parents with their children's homework, that offer parents the ability to track their children's academic performance, and that facilitate parent–teacher and/or parent–parent communication. The respondents were recruited via social

media platforms such as WeChat, and interviews commenced after written consent had been sought and obtained.

Our first round of fieldwork was carried out in Hangzhou from July to September 2019, where we interviewed 40 parents in Hangzhou face to face. Once the pandemic broke out, we were no longer able to visit families in China to conduct our research and had to pivot to online research methods (Lim & Wang, 2021b). Hence, the second wave of interviews took place online from March to April 2020 during the COVID-19 lockdowns. We conducted follow-up interviews with 20 parents in Hangzhou from the 2019 cohort and recruited 20 Beijing parents for virtual interviews. All interviews were conducted with parents individually in Chinese using semi-structured interview questions and lasted between 60 and 90 minutes. Permission was also sought from respondents for audio recording the interviews and taking screenshots of their mobile devices, including for the use of interview quotes and screenshots in publications and presentations. The screenshots of the platforms they use and their content allow us to obtain a clearer understanding of how our respondents use them in their everyday life and to compare and contrast experiences of different parents and platforms. Respondents received a grocery voucher as a token of appreciation if they completed the entire interview.

Interviews began with questions about respondents' family's background, media use habits, motivations when they first opted to use specific platforms to support their schoolgoing children, their standard modes of use, their positive and negative experiences with them, and any other themes that emerged in the course of the conversation. Throughout the interview, we asked the respondents to show us the platforms as they mentioned them in response to our questions and screenshots were correspondingly taken. Follow-up questions were asked via emails, chat messages, or phone calls only with respondents who had agreed to be re-contacted. Respondents were also asked for referrals to other eligible contacts but were not obliged to do so. Overall, our respondents were open to the interviews and participated actively with a keen interest to share their experiences. Our findings thus offer rich vignettes of family life in urban Chinese households, and we present our analysis along with interview excerpts and visual illustrations in Chapters 3 and 4. To protect their privacy, respondents whose views are reproduced ad verbatim are referred to by pseudonyms and screenshots that are featured have respondents' identifiable information blurred.

This page intentionally left blank

3

PARENTAL ACCOUNTABILITY AND PUNCH-IN CULTURE

In view of the avid adoption of digital technologies we described in the previous chapter, along with societal valorisation of academic achievement, our interview findings reveal that Chinese parents are tightly connected to their children's teachers and to other parents, to the point of being accountable to these parties. A veritable assemblage of smartphones, social media apps, and edtech platforms forms the technological backbone of a social phenomenon that we term 'punch-in' (*daka,* literally, 'punch card') culture. As our interviews demonstrate, this punch-in culture is rooted and embedded within today's digitally connected era, coupled with heightened levels of parental investment in children's academic pursuits.

Indeed, in the digital age, parents' interactions with schools and teachers have shifted from random, occasional exchanges to regular and intense engagement pertaining especially to homework and other significant academic tasks. Originally conceived as reminders or contingency plans in case children forget their assigned tasks, parent–teacher interaction has gradually become routinised and normalised for Chinese parents such that whatever tasks their children are assigned are also extended to them. Arguably, parents are held to a higher standard since they are adults whose responsibility for their children is a given. With digital connectivity facilitating parents' ability to demonstrate accountability and teachers' capacity to verify the same, punch-in culture has become especially pronounced among Chinese parents today.

Much like hourly rated workers who must punch-in their timecards to record when they commence and stop work, Chinese parents must punch-in to indicate to teachers (and other parents) that they have performed their parenting tasks within parent–teacher chat groups on messaging apps and edtech platforms. Over time, punch-in culture has become taken for granted

and unquestioned, with parents submitting to these imposed and mandated expectations. In this chapter, we explain how punch-in culture emerged, its characteristics and manifestations, as well as its broader implications for Chinese society.

ORIGINS, MANIFESTATIONS, AND NORMS OF PUNCH-IN CULTURE

The term punch-in was originally used to refer to the act of recording the time one commences work, usually in a factory or office, with the purpose of monitoring employees' working hours and attendance using a clock or other timekeeping device. Cambridge Dictionary defines punching-in as to 'use a special clock to record the time you start working' and used in sentences such as 'I punched in at 8:00 am', 'I punched in on the time clock', and 'I've been punching in late all this week'.[1]

In the context of parenting, punch-in takes on a metaphorical meaning, as we use it to capture the emerging parenting obligations in the digital age. Just as hourly rated workers punch their timecards to record their working hours, parents are required to use digital tools to punch-in and mark the commencement and completion of various parenting tasks. Whereas one might consider parenting to be a private affair that is unique and exclusive to family members, this metaphor underscores the expectation for urban Chinese parents to publicly record their involvement in their children's education so as to demonstrate their accountability to schools, teachers, and other parents.

Giving life to this metaphor is an expanding slew of punch-in tasks that parents must perform. The most commonly observed one is submitting evidence of one's child having completed schoolwork or proof of parents themselves fulfilling parenting duties as requested by their children's teachers or schools. These punch-in practices typically occur on parent–teacher communication platforms or within parent chat groups. The litany and variety of punch-in tasks is sizeable but fall under several categories which are seemingly distinct but not always mutually exclusive: assignment submission, notification acknowledgement, survey participation, and home-school communication.

In light of the pressure on children to perform well academically, of all the punch-in tasks, parents tend to undertake the submission of assignments most diligently. This is by no means a straightforward or trivial exercise because the assignments come in a multiplicity of forms and thus demand a range of parental competencies. The assignments our respondents shared covered a wide gamut but were mostly academic with a small minority of extra-curricular activities. Parents were requested to turn in every single page of a written

assignment, audio recordings of their child reciting prescribed texts (Fig. 1(a)), video recordings of their child conducting science experiments (Fig. 1(b)), video recordings of their child completing fitness routines at home (Fig. 1(c)), and screenshots attesting to timely completion of online safety education modules (Fig. 1(d)). To further complicate the task, the assignments were issued, and submissions requested via a diversity of platforms, from home-school conferencing parent–teacher communication platforms to parent chat groups to WeChat mini-programmes. Depending on the platform, each child's assignment and feedback from the teacher would be viewable by other classmates and parents, making these assignments rather public in nature.

Acknowledging notifications from teachers was another critical punch-in task even though it was comparatively easy to accomplish. The gravity of this seemingly simple task lies in the premium placed on parents demonstrating responsibility for their children and accountability to the teachers, thereby lubricating the parent–teacher relationship in the child's best interests. That these notifications are issued via 'public' parent–teacher platforms or parent chat groups, all of which are viewable by other parents, ups the ante for all parents to respond in a timely and dutiful manner. For example, after the teacher issues a new study resource for the students, parents

Fig. 1   Examples of Chinese Parents' Punch-in for Children's Assignments.
(a) Parents uploaded audio recordings of their child reciting texts in the WeChat mini-programme *Xiaodaka*. (b) A parent submitted video recordings of her child conducting a science experiment in a parent chat group on WeChat and received feedback from the teacher. (c) Parents submitted video recordings of their children completing a fitness routine at home on DingTalk and the assignments were rated as 'excellent' by the teacher. (d) Parents submitted screenshots attesting to their children's timely completion of an online safety education module in a parent chat group on WeChat.

have to confirm receipt via the online link, following which the platform automatically summarises and names the parents who have already done so (Fig. 2(a)). Similarly, over parent chat groups, parents were requested to acknowledge the teacher's reminder to attend a lecture on parenting skills in the parent chat group (Fig. 2(b)) or to acknowledge receipt of the teacher's request for parents to correct their children's summer vacation homework (Fig. 2(c)). In the latter situation, parents would publicly express gratitude to the teacher for providing answers to the assignment, reflecting a performative dimension to the interactions where parents feel compelled to constantly remain in the teacher's good graces.

On top of these day-to-day tasks are additional expectations placed on parents to be 'good citizens' by participating in polls and surveys. These polls typically relate to more mundane matters such as seeking parents' preferences on which presents to buy for Teachers' Day and what kinds of social activities they prefer for building camaraderie within the parent group. Polls were often conducted via extensible and lengthy message threads termed as 'link dragons' (*jie long*), where each parent would reply to the preceding message by copying the entire list of names before adding his or her name at the end, thereby extending the 'dragon' by making the chain of linked names longer with each reply (see Fig. 2(d) for an example of a 'link dragon'). Besides the

Fig. 2   Examples of Chinese Parents' Punch-in for Acknowledging Notifications and Participating in Polls.
(a) Parents confirm receipt of a study resource issued by the teacher via the online link on DingTalk. The platform automatically summarises the number and names of parents who have confirmed receipt. (b) Parents acknowledge the teacher's reminder to attend a lecture on parenting skills by replying 'noted' in a WeChat parent chat group. (c) Parents acknowledge receipt of the answers to children's summer vacation homework by replying 'noted with thanks' in a WeChat parent chat group. (d) Parents participate in a poll through a 'link dragon' (jie long) to decide on their destination for a picnic in a WeChat parent chat group.

highly public nature of such polling is the sheer quantity of messages that each poll generates, thus adding to the volume of parenting-related tasks and notifications parents must manage. Considering that some parent chat groups could have over 70 or 80 participants, the number of notifications each parent could receive daily is certainly not trivial.

Finally, above and beyond the more public platforms where punch-in tasks are performed in virtual group settings, parents are also required to physically sign a home-school communication book (*jiazhang lianxi ce*). Signed on a daily basis, these books are exclusive to each child and contain information on the daily homework assigned and other important school notifications.

Beyond children's formal education and school life, parents are also obliged to fulfil similar punch-in tasks imposed by other institutions where their children attend after-school tuition classes and interest-based enrichment activities. Specifically, parents bear the responsibility of submitting assignments from tuition teachers on platforms adopted by these centres or chat groups created for these classes. As with the academic activities, confirming receipt of teachers' notifications and feedback and interacting actively with teachers are par for the course. Even for interest-based enrichment classes, be it in sports, arts, or other domains, parents are expected to submit their children's work and provide regular updates on their progress by demonstrating certain skills through various parent–teacher communication channels. For teachers in schools and tuition or enrichment centres, parents punching-in is undoubtedly more efficient and reliable compared to that of children, as parents typically remember requirements more precisely and manage deadlines more effectively. Parents may themselves share this view and advocate for punching-in too. Such behaviour is understandable given the formidable stakes at play in educational achievement. For many parents, punch-in culture grants them valuable insights into their children's schoolwork as well as that of their peers. Therefore, they tend to be accepting of these additional parenting obligations, albeit not without concerns about overloaded parental obligations. Mrs Fang, mother of a 9-year-old third-grade primary school student in Hangzhou, discussed the perceived boons and banes of punching-in:

> *I don't have an issue with daka (punch-in) tasks. You know, my daughter is still young, and sometimes misses this and that. When the teachers make punch-in requests, I can help her remember. In this way, I can also have a better understanding of what they are learning – what needs to be memorised and mastered. After punch-ins, teachers often assess parents' performance in group chats, praising those who do well, and summarising their general progress and the number of mistakes made on average. Basically, you will*

know whether your child is performing fine … However, parents'
burdens are quite heavy. Parents must punch-in after finishing any
task. It's really difficult if parents are busy with work. For double
income parents, it's highly likely that they are still working on
punch-in tasks late at night.

As parental punch-in culture becomes accepted across multiple realms, it is then intensified by teachers as a trusty means to secure parental support and internalised by parents as a necessary yoke they must bear. Once punch-in culture becomes ingrained in a school or parent group, it goes beyond fulfilling mandatory tasks but instead turns into an idealised habit that parents volitionally pursue. Many parents start to practise punch-in parenting of their own accord, going above and beyond what is officially requested or stipulated by teachers and schools. Notably, some parents take the initiative to join online punch-in groups or programmes created for advancing children's learning objectives, be it in reading, writing, or English. In such groups, parents voluntarily punch-in with their children's work in accordance with these groups' norms and regulations with a view towards seeking feedback on their progress. For example, one respondent chose to submit her child's handwriting practice sheets in a WeChat mini-programme named *Xiongmao Lianzi* (Panda Practises Writing).

PUNCH-IN CULTURE DURING THE COVID-19 PANDEMIC

As the COVID-19 pandemic unfolded, triggering the shift to online learning for schoolgoing children, there was growing demand from schools, teachers, and society at large for parents to take ownership of their children's education (Villano, 2020). In particular, given the common perception that the quality of online learning pales in comparison to in-class learning, parents were expected to closely monitor their children's schoolwork and be highly engaged in their online learning (Zhang, 2021; Zhu et al., 2022). The common trope was that it was parents' prime responsibility to ensure that their children's learning remained on track, and punch-in culture took on a newfound ferocity in the pandemic period.

Comparing our two waves of interviews with Chinese parents in 2019 versus in 2020 when the pandemic had occurred, we could discern a clear intensification of punch-in culture. In 2019, before the pandemic's onset, punch-in practices were not universally mentioned by all respondents. For those who had been involved in punch-in tasks, the remit was narrower and

usually restricted to occasional acknowledging of notifications and submitting assignments for specific disciplines (such as arts and sports) and limited types of homework (such as video recordings of children's recitations and fitness routines). Come 2020, punch-in culture had become significantly more visible and pronounced, adopted by schools of all levels from preschool through to high school as a formal parenting and learning practice. Parental punch-in tasks had also been integrated into almost all aspects of education. Correspondingly, many parents who reported never or only occasionally engaging in punching-in during the 2019 interviews had developed intensive and regular punching-in routines by the time of our follow-up interviews in 2020.

Indeed, in the throes of the pandemic and its accompanying turn towards online learning as described in Chapter 2, virtual approaches became the only viable means of teaching and parent–teacher communication, and parents' punch-in support became essential to sustaining some routines of school life. This transition understandably contributed to a boom in punch-in culture. As traditional offline interactions became impossible and punching-in increasingly formalised, normalised, and routinised, parents found themselves shouldering additional and more onerous punch-in duties. In the first place, most of the typical punch-in tasks we introduced earlier, including assignment submission, notification acknowledgements, and participation in polls continued and, in fact, intensified. To make up for reduced teacher–student communication, parents were encouraged and, in some cases, mandated to share extensive details about their children's home learning progress with teachers. Parents had to therefore contend with more homework punch-in tasks, encompassing multiple disciplines and diverse assignment genres. Figs. 3(a) and 3(b) illustrate examples of a list of assignments posted by teachers on DingTalk during online learning and parents' page-by-page submissions of their child's homework, respectively.

Their responsibilities also broadened beyond the mere submission of children's assignments to include correcting these assignments before submission and guiding their children through personal, hands-on teaching. New punch-in tasks were also created in the extraordinary pandemic circumstances with one crucial task being the health punch-in (*jiankang daka*), where parents had to report their children's body temperature and health status daily (see Fig. 3(c) for an example of health punch-in). Yet another punch-in task that assumed great importance during the pandemic was attendance taking for children's online classes (see Fig. 3(d) for an example of notifications for online classes attendance taking). Whereas older

Fig. 3   Examples of Chinese Parents' Punch-in Tasks During Children's Pandemic Online Learning.
(a) A list of the day's assignments for children on DingTalk, encompassing multiple disciplines, with each having multiple items to complete. (b) Parents submitted every page of their child's written assignments and the teacher provided corrections and feedback on the photos of these assignments on DingTalk. (c) The health punch-in form for parents to report their children's body temperature and health status on DingTalk. (d) A notice reminding parents to take attendance for children's online classes in the afternoon.

children could independently record their attendance before online classes on livestreaming platforms, parents frequently mentioned having to record attendance on their younger children's behalf. Even ceremonial events that migrated online took on a punch-in dimension. Mrs Guan, mother of a 15-year-old third-grade junior high school student in Hangzhou, reported having to submit a video recording of her daughter for the online 'Oath Taking Ceremony for the *Zhongkao (Senior High School Entrance Examination)*' to share in the parents' group as it was required of every student. As highlighted by Mrs Guan, special punch-in activities like this ceremony were intended to preserve the traditions of school life despite the disruptive changes brought about by the pandemic, thereby 'maintaining the sense of ritual and morale in this challenging environment'.

Evolving in tandem with the proliferating parental punch-in tasks were the tools designed for facilitating them. As the pandemic wore on, a multitude of parent–teacher communication platforms and functionalities emerged that were specifically designed to meet the demands for more systematic, professional, and automated punch-in practices. These parent–teacher communication platforms, including DingTalk, QQ Class, *Banji Youhua Dashi*, and *Hangzhou Jiaoyu*, generally offer a wide and comprehensive range of functions tailored to online classes and punch-in practices including livestreamed

classes, homework submission and feedback viewing, notifications, attendance taking, chat groups, and so on.

DingTalk was undoubtedly the most widely used platform for punching-in, adopted by almost all the parents we interviewed in Hangzhou and more than half of those in Beijing. Many parents considered DingTalk a 'lifesaving' tool that helped them survive the surge in punch-in tasks during the online learning period. Compared to 'manual' punch-in within parent chat groups, DingTalk provides many automated, convenient, and user-friendly functions for parents to more easily manage pending punch-in tasks and complete these tasks with only a few clicks. For example, for assignment submissions, DingTalk offers a clear list of assignments for all classes. Each assignment includes submission or re-submission buttons, submission status (submitted or pending), review status (whether the teachers have reviewed it or not), and feedback from teachers. It also provides auto-reminders for pending tasks and displays the number of submissions from others.

Many parents expressed a preference for DingTalk over WeChat groups because they found it more convenient and better customised for managing punch-ins. As Mrs Zhou from Hangzhou, mother of an 11-year-old daughter in the fifth grade, explained, assignment submission via WeChat was very messy because the chain of messages from other parents' submissions and acknowledgements would run very long, and it was a hassle to retrieve or check on one's own submission thereafter. By contrast, DingTalk had dedicated features for managing each assignment submission. However, the popularity of edtech platforms such as DingTalk did not signify the decline of parent chat groups, typically on WeChat or QQ, in sustaining the punch-in culture. As we will elaborate in later sections of this chapter, parent chat groups continued to play a significant role, especially in issuing reminders for punch-in tasks and for dynamic parent–teacher interactions.

Towards the conclusion of our fieldwork in 2020, many schools and other educational institutions in both Beijing and Hangzhou had reverted to conventional face-to-face classes. Nevertheless, the pervasive punch-in culture and associated habits that emerged during the pandemic persisted and extended into post-pandemic parenting lives of Chinese parents. For instance, heightened parental engagement in children's education and extensive requests for parental punch-in continued, albeit not as intensively as during the lockdown. But there were definite signs that punch-in culture had entrenched itself. Post-pandemic, edtech platforms such as DingTalk continued to be the predominant punch-in channel, employed for punch-in functionalities and general parent–teacher communication.

PUNCH-IN CULTURE ECOSYSTEM AND ITS
REWARD–PUNISHMENT REGIME

As punching-in intensified during the pandemic, a veritable media ecology had emerged to undergird this parenting culture, comprising both integrated and disparate platforms. In this sociotechnical ecosystem, the fulfilment of each punch-in task usually involves a main platform for punching-in and several auxiliary platforms for sharing additional information and materials, providing reminders, and facilitating parent–teacher interactions. For example, edtech platforms such as DingTalk and QQ Classroom were designed for home-school conferencing and equipped with bespoke punch-in functionalities and compartmentalised services. Auxiliary platforms, most typically WeChat parent groups, often served as a backup system to ensure that important messages are conspicuous to parents and that official information is not easily overlooked.

For instance, when a teacher assigns homework, s/he posts it on DingTalk, triggering automatic notifications to parents. Meanwhile, the teacher disseminates the same homework information in the relevant WeChat group(s) as a formal teacher–parent notification in case some parents overlook automated DingTalk alerts Figs. 4(a) and 4(b) illustrate a typical case in which a teacher posted the day's assignments on *Banji youhua dashi*, followed by sharing the same homework information and requesting parents to monitor children's assignment correction in a WeChat parent group. Parent representatives may subsequently share this information in other informal parent groups. As the assignment deadline approaches or passes, if there are missing or late submissions, the teacher and parent class representatives issue reminders, specifying the number of parents yet to punch-in. In cases where reminders fail to work, the teacher or parents may either privately contact the parents who have not punched-in or publicly list their children's names or student numbers in chat groups to exert additional pressure for submission or explanation. Fig. 4(c) provides an example of a teacher publicly listing the names of students who had not submitted their maths homework on time in a WeChat parent group.

In this complex punch-in ecosystem, parents are effectively subjected to a tacit reward–punishment regime. Just as employees receive salary bonuses for good attendance and deductions for multiple absences when punching timecards, parents receive praise from teachers and other parents for excellent fulfilment of punch-in tasks. Correspondingly though, they must endure reprimands for underperformance. By the unwritten rules of punch-in culture, parents must, at the barest minimum, punch-in on time as instructed, such as by uploading children's completed assignments before their deadlines.

Fig. 4   Examples of the Punch-in Ecosystem and the Reward–Punishment Regime.
(a) The teacher posted the day's assignment on *Banji youhua dashi* for students or their parents to submit. (b) The teacher shared the same homework information as in (a) in the WeChat parent group, along with the assignment answers for parents to check their children's corrections. (c) The teacher publicly listed the names of students who had not submitted their maths homework on time in a WeChat parent group. (d) The teacher posted two lists with names of well and poorly performing students, respectively, with the former list labelled as 'Improvement Billboard' (*Jinbu Bang*) and the latter list labelled as 'Little Black Hut' (*Xiao Hei Wu*).

Parents who fail to meet baseline expectations are likely to face peer pressure and public shaming as punishment for violating punch-in rules. Even when parents successfully complete punch-in tasks on time, they can still face adverse consequences if the teachers deem their submissions unsatisfactory. Parents who surpass expectations by achieving additional outcomes, such as ensuring that their children turn in high-quality assignments or participating actively in optional punch-in tasks, earn commendation from teachers and fellow parents for themselves and their children. For example, over DingTalk, teachers would select and highlight excellent homework with lavish praise which could be viewed by all students and parents. Teachers would also, via WeChat parent groups, post names of students who had shown improvement in their homework, but at the same time publicly list students whose performance was lagging. One teacher labelled the list of better performing students as 'Improvement Billboard' (*Jinbu Bang*) and conversely the list of underperformers as 'Little Black Hut' (*Xiao Hei Wu*), a term used to describe a solitary confinement room where one should engage in self-reflection (Fig. 4(d)).

   Nevertheless, the reward–punishment regime was not completely unyielding since as mentioned earlier, parents typically received notifications for completing punch-in tasks through multiple channels and several rounds of reminders. Parents were thus granted many opportunities to make up

for occasional lapses or errors, failing which, they had to bear the brunt of symbolic punishment from teachers or fellow parents. These typically included being publicly named in parenting communities or being openly and pointedly criticised. For example, if a parent forgets to punch-in for their child's homework, teachers or fellow parents responsible for tracking submissions may tag or specifically mention such parents in the chat group using an '@', prompting them to complete the task as soon as possible. Indeed, respondents noted that some of these vigilant parents tracked non-submissions volitionally and undertook the task with utmost seriousness. Parents called out for their failure to punch-in would then feel obliged to publicly apologise to the teacher and/or fellow parents, underlining the pressure of accountability that they perceived. Such public apologies were laden with the emotional labour of 'performative parenting' that we will discuss in the next chapter.

But punch-in culture is not forged, experienced, and navigated by parents alone. Teachers are a key pillar of the ecosystem and play a significant role in shaping punch-in culture, also bearing the weight of rules and expectations and engaging in complicated interactions with parents on a daily basis. As teachers assign punch-in tasks to parents and oversee parental compliance, they too participate actively in and shoulder the burdens of these tasks. As the main initiators and regulators of punch-in tasks, teachers have to ensure that the tasks are duly and satisfactorily executed. In particular, they are obliged to constantly track the progress of any overdue or perfunctorily completed tasks, as failure to do so would be regarded as irresponsibility or incompetence on their part. Therefore, it is not uncommon to witness teachers facing significant pressures as they consistently 'chase' parents through various approaches, often repeatedly, with the aim of meeting punch-in expectations. Indeed, according to a research article released in 2022 by the *Journal of Xinjiang Normal University*, which surveyed schools in 13 provinces across China, the principal sources of stress for homeroom teachers are workload and class management (White Night Workshop, 2023). This finding resonates with prior research on Chinese parent chat groups which found that teachers increasingly feel the need to maintain work-life boundaries through tactics such as creating a WeChat account specifically for school issues, muting the chat group or only checking messages from these chats at specific times (Gong et al., 2021).

Teacher burnout is real and concerning. For instance, during the pandemic, urging parents to complete the health punch-in for their children was one of the most challenging experiences for teachers because this was heavily policed by the authorities. Some schools ruled that children could not attend classes without first reporting their health status. Head teachers, along with other

relevant staff members, were held responsible for any consequences arising from a student's failure to report. As one respondent shared, a Hangzhou school required that the head teacher for each class report their students' health conditions by 7:30 a.m. every day. As the deadline approached and there were still parents who had not completed the health punch-in, the teacher made over 10 phone calls even as he was driving to work to ensure that these parents punched-in.

Besides such tedious administrative tasks, teachers are also expected to actively respond and provide feedback on tasks completed by parents and be readily available to address any questions and concerns parents raised. Furthermore, much like the expectation for parents to report their children's learning experiences at home to teachers, teachers are increasingly expected to reciprocate by sharing insights on the children's school life with their parents. Therefore, teachers also feel the need to regularly punch-in to highlight their personal competence and responsibility. Figs. 5(a) and 5(b) illustrate an example of a teacher intensively sharing class content, photos of students in class, excellent class notes of students, and more with parents in the WeChat group. In addition, one respondent shared that her child's head teacher created and personally ran a public WeChat account to update parents on her students' daily performance, share feedback, and assign homework (Figs. 5(c) and 5(d)).

Fig. 5 Examples of Chinese Teachers' Punch-in Practices.
(a) The teacher shared photos of children attending a Chinese class in a WeChat parent group. (b) The teacher shared and commended students' notes taken in the class in a WeChat parent group. (c) A head teacher of a class ran a public WeChat account to update parents on her students' daily school activities and performance. (d) The teacher as in (c) updated the day's homework and items to pack for the next day in the public account.

The practices of parents and teachers thus mutually reinforce each other, engendering parent–teacher reciprocity that reinforces and amplifies the mutual sense of accountability underpinning punch-in culture. In providing support and assistance to facilitate parents' fulfilment of their punch-in tasks, be it through constant reminders or extensive sharing, teachers anticipate higher engagement and improved performance from parents. By the same token, as parents diligently fulfil punch-in tasks, they expect teachers to provide more helpful feedback and better teaching outcomes in return. Both parties consequently hold each other to lofty standards and tough expectations.

IMPLICATIONS OF PUNCH-IN CULTURE FOR PARENTS AND CHILDREN

The prevalence of punch-in culture in urban China signifies a trend towards heightened parental accountability for children's education. As parents become more deeply involved in their children's schoolwork through the swelling panoply and rising intensity of punch-in tasks, they inevitably feel like they are shouldering disproportionate responsibility for their children's academic endeavours. With pressures of punch-in culture mounting, parenting feels like a digitally connected and multi-sited, 24/7 job where edtech platforms and parent chat groups are tantamount to workplaces and punch-in tasks are their key performance indicators. In this demanding role, parents have to be constantly connected and unfailingly responsive. They are obliged to spring into action once they receive punch-in requests and must ensure timely and effective completion of all tasks anytime and anywhere, be they working, on vacation, or about to retire to bed.

As Mrs Weng, mother of a 14-year-old daughter in the second grade of junior high school shared, she could silence work-related WeChat notifications from colleagues but could not afford to do likewise for the parent chat groups for fear of missing key notifications. Hence, she always set her phone to receive instant notifications from these parent chat groups. As vigilant as she was to parenting requests, there were still occasions when she was not as responsive to punch-in notifications or reminders as expected. She recalled at least two instances when she was in a meeting or working on the computer without her smartphone, and she was mentioned by the teacher in the parent chat group because either her daughter was late for an online class or she had failed to punch-in an assignment on time. She found such experiences anxiety inducing. With the pandemic and online learning further drawing parents into various realms of children's academic endeavours, Mrs Weng, like many other

Chinese parents, described parenting as an endless, exhausting job that made them feel like they 'start owing debts the moment they open their eyes every day' (*meitian zhengyan jiu qianzai*).

Parents also admitted to feeling overwhelmed by the profusion of diverse punch-in tasks and notifications given the need to juggle multiple parenting platforms daily and manage punch-in requests with varied requirements. Some parents described this hectic and exhausting parenting life as *piyu benming* (fatigue and rush) and resorted to using checklists or calendar apps to cope. Working parents in particular found the parenting burden especially hefty and decried their loss of work–life balance. Indeed, respondents who were working parents lamented that they were often distracted from work by notifications from parenting platforms and chat groups, necessitating that they suspend work to attend to parenting duties. Consequently, respondents noted that some parents quit their jobs entirely to focus exclusively on managing their children's schooling.

Fundamentally, punch-in culture exacerbates the notion of parental determinism and imposes on Chinese parents a sense of absolute responsibility for their children's success and failure. Furthermore, the toll of navigating the complexities of parental punch-in culture – relentless anxiety over uncompleted tasks, self-doubt when punished by teachers or peers, self-recrimination when children underperform and are publicly shamed – makes parenting an emotionally fraught endeavour, dulling any residual joys that remain. It also behoves us to consider how socioeconomic inequalities play out in punch-in culture since parents' access to resources and skills can have significant implications for how competently they punch-in and help their children punch above their weight. With the rise of parentocracy in urban China (Meng, 2020), set against the increasingly frenzied punch-in culture we have observed, gaps are likely to emerge between children whose parents devote considerable time, energy, and resources to support their children's education, and those whose parents are unable or unwilling to do so.

As our respondents recounted, such gaps were especially apparent during the pandemic when parents had to play a role in teaching their children and grading their work, for which some parents were simply better equipped to be surrogate teachers. A typical scenario was when teachers sent both assignments and answers to parents and instructed them to monitor their children's learning and correct their assignments before punching-in. In such situations, children's learning outcomes virtually became examinations for parents. Responsible parents actively supervised their children's home study and would dutifully teach or guide them in areas where they needed to improve. In contrast, less motivated or competent parents allowed their children to simply copy the answers, resulting in them 'learning nothing at all'.

And what of the implications for children themselves? As punch-in culture elevates parental involvement in children's education, children inevitably become marginalised and to varying degrees, lose autonomy and control over their own academic pursuits. Punch-in culture has allowed children to legitimately rely on parents for learning such that they no longer take independent ownership in terms of planning schedules, noting down homework, and reflecting on why they have made certain mistakes. All of these are essential learning skills and capabilities that children need to develop over time. With parents held accountable to teachers for homework submissions and other tasks, children will instinctively relegate these responsibilities to parents while their sense of autonomy and self-regulation gradually atrophy. As Mrs Wei from Hangzhou, mother of a 15-year-old daughter in junior high recounted, her daughter had failed to punch-in despite having completed her homework and the teacher had messaged Mrs Wei via DingTalk to alert her. After this incident, she resolved to guide her daughter to take greater responsibility for her own studies. Some respondents also shared that their children found their parents' constant reminders annoying and even disruptive to their own learning rhythms, thus introducing tensions that strained the parent–child relationship.

Yet another adverse implication of punch-in culture for children is their loss of privacy and loss of face. The publicness and information richness of parent–teacher communication and edtech platforms and parent chat groups have seemingly accepted norms of open commendation and public shaming. These permit children little reprieve from public scrutiny of their academic efforts. Previously, children could conceal aspects of their academic lives that they preferred not to share with their parents but with punch-in culture, everything is visible to everyone. Moreover, parents' intimate knowledge of minute details about their schoolwork, such as the specific mistakes they had made and feedback from their teachers, could lead to children experiencing shame and guilt for disappointing their parents.

NOTE

1. The definition of 'punch-in' in the Cambridge Dictionary can be accessed at: https://dictionary.cambridge.org/dictionary/english/punch-in.

4

PERFORMATIVE PARENTING AND PEER PRESSURE

With punch-in culture assuming growing importance in the daily lives of urban Chinese families, we must delve deeper into its socioemotional facets. An especially challenging aspect of punch-in culture is its very publicness that parents must complete their assigned tasks under the glare of peer scrutiny. Whether on edtech platforms or social media parent chat groups, the ability to view other parents' efforts while yours are also open to examination escalates peer influence and peer pressure to an unprecedented level. Since the majority of these parenting behaviours are now visible to teachers and other parents, parents feel increasingly compelled to leave a 'perfect' impression on all these audiences. In highly interactive parent chat groups, careful self-presentation and strategic performativity are therefore tacit, yet stern requirements. Parents have to be cautious about their words and actions and to exercise care over when and how to say what to whom, as well as the use of appropriate tones and emojis in different contexts. Over time, performativity has become an essential parenting skill and part and parcel of everyday life for these parents.

In this chapter, we probe into performative parenting as a key facet of punch-in culture and examine how parents engage in self-presentation and impression management in digital forums. We also probe into peer dynamics, discussing how parents strategically manage their relationships with teachers and other parents, asserting but also experiencing peer influence and even peer pressure.

RULES, NORMS, AND ROLES ON PARENTING'S 'FRONT STAGE'

As discussed in Chapter 2, prior research has focussed on how parents, especially mothers rather than fathers, appropriate various technology platforms

to seek support and share parenting experiences in a bid to manage their own parenting challenges. Such interactions often have a public dimension involving interaction with known acquaintances but also with unknown publics. As parents seek insights into the parenting experiences and cultures of a wide range of online peers, their own parenting practices are simultaneously being observed. Parenting therefore takes on a public dimension and occurs under the spotlight of the 'front stage' (Goffman, 1969), which necessitates the effort of performativity.

Performative parenting is characterised by strategic and appropriate self-presentation and impression management in daily parenting practices. Instead of parenting by instinct, personal inclinations or trial and error, parents choose to follow the 'templates' of good parents. In so doing, they shape their parenting decisions and actions based on the established rules and expectations of the parenting culture they are part of, along with the perceived or imagined judgements of others. Performative parenting is driven by both the symbolic value of gaining recognition and pragmatic purposes of relationship building and information acquisition with teachers and other parents (see also Turkle, 2011; Vitak et al., 2015). With effective performativity, parents can garner attention, earn respect, build relationships, and even attain power and privilege within their communities, ultimately aiming to secure advantage for their children. Conversely, failure to adhere to consensus, rules, and expectations of performative parenting may result in disapproval and alienation, even potentially disadvantaging their children. For Chinese parents enmeshed within the punch-in ecosystem, performative parenting is motivated by the need to build social capital with teachers and other parents and the desire to gather useful knowledge to benefit their children. However, peer dynamics must be carefully managed, and our respondents shed light on the unwritten rules and expectations they strive to adhere to. Indeed, performative parenting in the Chinese context unfolds across diverse venues, ranging from parent–teacher communication via edtech platforms, to parent chat groups in social media platforms.

In exclusive parent–teacher communication such as via WeChat or the private message channel of edtech platforms like DingTalk, parents strive to leave a positive impression on the teacher. Besides remaining vigilant and responsive to notifications and requests which as we previously explained is the minimum expectation, parents use these private communications to build a cordial relationship with the teacher in their child's best interests. For example, our respondents showed us how they would use such communication to personally apologise for their children's underperformance and reiterate to the teacher their efforts to discipline their children. They would also promptly

and actively respond to teachers' feedback and express gratitude for their hard work, guidance, and encouragement.

As we already saw in Chapter 3, it is in the 'public' interactions over Ding-Talk and WeChat[1] that parents are held to the reward–punishment regime for excellent or errant behaviour. In such interactions, the stakes for performative parenting are significantly raised depending on the structure and composition of the chat groups. There are in general three main types of parent chat groups: school-based parent–teacher groups, school-based parent–parent groups, and spontaneous parent groups created to address various parenting needs and aspirations. All these chat groups serve a dual function by enabling parents to stay updated on their children's daily or even hourly school activities, while also facilitating the establishment and enhancement of relationships with teachers and/or fellow parents.

School-based parent–teacher groups are the most formal and organised, and from a pragmatic perspective, the most crucial groups that parents must join. These groups are often structured to resemble a 'mini society' or workplace. Teachers will assume the role of leaders or administrators, while parent committees or parent representatives serve as middle managers connecting teachers and other parents. The latter tends to constitute a silent majority of 'rank and file' parents who engage in the chat with varying degrees of enthusiasm. Such groups are typically created by the head teacher (*ban zhuren*) of a class and comprise the parent(s) of every student in the class. The primary purposes of these groups are disseminating notifications, fostering parent–teacher connections, conveying tasks and requests, and organising school events, among others. Classes can range in size from a dozen to about 50 students, but chat participants could number 70–80 if both parents in some families choose to join in, thus offering an indication of the volume of messages that can be potentially exchanged if everyone must punch-in. Interactions within these groups are typically guided by a series of relatively stringent rules and tacit expectations which are set and upheld by teachers, with the support of the parent representatives. For example, parents are required to input their names in the chat according to a strict format, such as Mother/Father of (Name of Child). The sharing of personal experiences, frivolous or irrelevant information, or engaging in casual small talk are generally discouraged in these groups.

School-based parent–parent groups are formal chat groups comprising parents whose children are in the same class. These are often mandatory and considered essential by many parents. They are either led by the parent committee or parent representatives or run organically in a decentralised manner. They serve as platforms for parents to engage in open discussions about

educational or school-related issues, pose questions and concerns, or partici-
pate in punch-in tasks without flooding the parent–teacher groups and causing
inconvenience to the teachers. Parent representatives usually assume the role
of teachers' assistants and manage punch-in tasks by securing parental com-
pliance. These parent–parent groups typically function as auxiliary groups
to parent–teacher groups, and parent representatives will forward important
notifications and requests from the main groups and convey questions and
concerns from parents back to relevant parties. Compared to parent–teacher
groups, interactions in parent-only groups tend to be more flexible and casual,
with less stringent rules and regulations to follow. Spontaneous parent groups
are relatively informal and casual and tend to arise from parents with similar
interests, needs, or aspirations gathering volitionally. Parents usually join such
groups of their own accord, and the groups are run in a decentralised fashion.

Parent chat groups stand out as one of the most important and closely
scrutinised 'front stages' for the enactment of performative parenting. The
minimum expectations every parent must fulfil are to remain responsive,
acknowledge receipt of notifications in a timely fashion, and respond posi-
tively to requests to participate in activities. Beyond that, the basic level of
performativity expected of all parents is to be genial and supportive members
of the community, helping to forge a convivial *esprit de corps*. Hence, these
chats are often peppered with expressions of gratitude and praise for teachers
or fellow parents for their assistance and efforts (see Fig. 6(a) for an example
of parents expressing gratitude to teachers in a parent group). The positivity
also extends to offering congratulations when teachers or other parents share
news about children's achievements or other uplifting announcements (see
Fig. 6(b) for an example of parents extending congratulations to children
who won awards in a parent group). This prosocial atmosphere is further
underlined by expressions of contrition such as parents apologising for their
children's misbehaviour or their own failure to punch-in. As explained in
Chapter 3, the reward–punishment regime does have a humane side. When
such apologies are accompanied by reasonable justifications such as health
woes, parents will chime in with kind words of support and offers of assis-
tance, thus accentuating the affirming atmosphere. Fig. 6(c) illustrates a sce-
nario where a mother apologised in a parent group for failing to punch-in for
a fitness routine assignment due to her child falling sick, followed by other
parents in the group expressing empathy and compassion.

In another interesting instance of performativity, a teacher sent a long
apology message in the parent group reflecting on the inappropriateness of
her behaviour. She had been suspected of inflicting physical punishment on
her students and wrote to seek the parents' forgiveness and understanding.

Fig. 6   Performative Parenting in Parent Chat Groups.
(a) Parents in a WeChat parent group express gratitude to the teachers as the semester comes to an end. (b) Parents in a WeChat parent group extend congratulations to two students who won awards in a writing competition. (c) A parent apologises for failing to punch-in for a fitness assignment due to her child falling ill. Other parents in the group express empathy and compassion. (d) After the teacher sends a long apology message in the parent group reflecting on the inappropriateness of her behaviour, parents respond with expressions of moral support.

She concluded her message with her intentions to improve, eliciting encouraging replies from parents such as 'let's strive together' (*yiqi nuli*) (Fig. 6(d)). Indeed, a key ideal of performative parenting in punch-in culture is careful and considerate use of language and expressions. Positive words and pleasant emojis expressing upbeat sentiments such as gratitude and solidarity are the most favoured and widely used. In the formal parent–teacher groups in particular, parents tend to use polite but simple expressions such as 'noted with thanks' (*shoudao, xiexie*) or 'thanks for your hard work' (*xinku le*). Parents would also refrain from using emojis or just include non-descript ones since the parent–teacher groups are reserved for serious matters and must help maintain the sense of gravitas.

With temperance and harmony so heavily prized in such groups, resolving misunderstandings and tensions, avoiding direct confrontations, and engaging in mature conflict resolution were also implicit rules. As Mrs Guo, mother of a fourth-grade boy in Hangzhou, herself a preschool teacher explained that she would set the ground rules for parent–teacher groups during her opening meetings with parents:

> Parents can quarrel if they choose to, but not in the parent chats.
> They can do so over private messages or in person, find a setting

to sit down and work out their differences. If there are issues, just
raise them face to face, right? But for all negative messages, please
don't share them in the parent chat.

Our findings revealed that indeed, when parents encounter disagreements during online chats, most of them choose to swallow their frustrations and avoid direct confrontations for fear of leaving a bad impression and adversely affecting their children. In such a climate, losing one's temper or being overly emotional were in fact frowned upon.

Apart from these conventions on what not to do, there were clearly other commendable behaviours that parents were encouraged to display, whether at the teachers' behest or from observing other parents' positive response. Notably, participating constructively in group discussions and interactions, actively sharing information and relevant experiences, enthusiastically answering questions and solving problems of other parents, and sensitively offering emotional support were generally well-received acts. Some parents would be especially motivated by such opportunities to demonstrate their value, often in a bid to earn attention, respect, and perhaps 'formal positions' such as the role of parent representative. After all, serving as the 'official' conduit between parents and teachers would allow them to foster a special connection with the latter and such social capital was extremely valuable indeed. As admitted by Mrs Fang, a Hangzhou mother of a 9-year-old daughter in third-grade, her initial motivation to join the parent committee was to 'earn a good impression and get her daughter more attention from the teachers', which is a common perception shared by parents whether or not they were performing the parent representative role.

Yet other parents aspired, whether consciously or unconsciously, to be opinion leaders in the group. While not an 'official' position akin to parent representatives, these parents could wield influence over other parents because their views were seen to carry more weight and tended to receive greater affirmation. The status as opinion leaders is typically gained through active participation in group discussions, extensive sharing of information and experiences, as well as exhibiting responsive and helpful assistance to fellow parents' questions or problems. However, purposeful performativity in pursuit of attention and respect can sometimes gravitate towards over-performance where these parents may overwhelm teachers and their peers with excessive information and enthusiasm. Additionally, the emergence of such opinion leaders can also elevate invisible yet palpable rivalry that heightens perceptions of peer pressure and parental anxieties about 'not doing well enough compared to other parents'. Just as employees in some workplaces compete over who arrives at the office earlier, works longer hours, achieves

higher key performance indicators (KPIs), and receives more praise from the boss, parents in group chats may similarly try to exceed others by responding more swiftly, participating more actively, and being perceived as more helpful, competent, and praiseworthy by the teachers and fellow parents.

Another widely used platform for informal connections among parents and teachers is social media posts via their own social networks (that could include other parents and teachers), and these are independent of school parent chat groups. Many Chinese parents frequently share their parenting experiences on Moments, a feature within WeChat. These posts typically include a mix of text, photos, and videos, covering various aspects of daily life such as their children's school and extracurricular activities, food they have prepared for their kids, and family vacation snapshots. Besides personal anecdotes, parents may also exchange valuable information and engaging stories relating to children, education, and parenthood that they discover online, while regularly checking other parents' Moments to find out what others are doing. Such interactive sharing sees parents and even teachers actively liking and commenting on each other's posts. This ongoing interaction allows them to build and reinforce their relationships through continuous, albeit peripheral, engagement. As Mrs Xue from Hangzhou, mother of a 10-year-old son and a 4-year-old daughter explained, '"Liking" others' posts is a way to maintain relationships'. While this can lead to positive cycles of mutual affirmation and validation, there is also potential for one-upmanship and envy, which may result in feelings of alienation, yet another adverse side effect of performative parenting.

PEER PRESSURE: PERCEIVED, EXPERIENCED, AND IMPOSED

Indeed, when every parent is engaging in impression management and putting forward their best selves in these public forums, the overall picture is one of extreme parental involvement and high parenting efficacy. Nevertheless, the grim reality is that not all parents will be equally competent in parenting, or performative parenting for that matter, and some will invariably come across as being far more adept at orchestrating successful outcomes for their children. These are the parents who are the most avid in punching-in, whose children are constantly lauded by teachers, and who seem to have enrolled their children in the most highly touted tuition centres or enrichment programmes. Such parents appear to raise the bar on parenting, stoking admiration at best and envy and resentment at worst. Inevitably, as punch-in culture intensifies, parents are exposed to a constant barrage of parenting-related information that may give rise to peer pressure through daily online interactions.

Before the advent of such digital connections and online visibility, parents would experience peer pressure through more occasional, direct encounters such as when they attended children's parent–teacher meetings or by interacting with fellow parents in their respective neighbourhoods and workplaces. But with constant exposure to other parents via edtech and parent–teacher communication platforms and parent chat groups, parents now have a ceaseless flood of reminders revealing how (well) their peers are performing. For example, on platforms like DingTalk, the systematic reminders for punch-in tasks and notifications of how many parents have not punched-in might translate into peer pressure for parents who are falling behind and constantly deluged with pending tasks. With performative parenting in action, peer pressure is further heightened by the increasing visibility of other children's academic performance, such as through teachers' public naming of the most improved versus underachieving students, examples of excellent homework showcased by teachers in parent chat groups, or Moments posts of other parents sharing children's educational progress and achievements. Indeed, some expressed concern that the intensification of peer comparisons and peer pressure on public platforms makes educational challenges increasingly daunting. Social media thus offers parents unprecedented insights into the activities of other parents. They therefore face not only peer pressure from their close family and friends, and their children's classmates' parents, but also contend with a proliferation of online content from across and beyond China on what constitutes 'good parenting'.

In this regard, technologically mediated punch-in culture and the performative parenting that grows out of it have also transformed the normative standards and expectations of 'good parenting'. Parental obligations have expanded far beyond the traditional parenting role of caregiving in the domestic sphere to include complicated education and relationship management in both offline and online realms. Parents are now pressured to practise transcendent parenting, where they must constantly transcend the physical distance between them and their children, strategically navigate myriad parental apps and groups, and make connections with all the relevant people and resources that might benefit their children's education and development (Lim, 2020). This new 'good parenting' norm is significantly more unforgiving, where even minor parenting oversights such as inappropriate speech in a parent chat group or overlooking alerts from a child's teacher may be taken against parents and diminish their standing in others' eyes. The bar has also been raised on which parents are considered to be going the extra mile for their children. Parenting practices once considered admirable are now fundamental obligations for every parent. For instance, a parent who checks a

child's homework daily was once seen as responsible while parents with no idea of what the child was learning at school were deemed uninvolved. Today, the former is a basic expectation of every parent (by at least one parent per household), while the latter is criticised as highly irresponsible and negligent.

This bar for 'good parenting' is being raised yet further with new trends that emerge. One anxiety-inducing development for Chinese parents is that of 'advanced learning' (*chaoqian xuexi*), where children are pushed to learn academic subjects ahead of the formal school education schedule, and to pursue extra learning objectives beyond the standard curriculum of China's education system. For instance, it is common for urban Chinese children to attend tuition classes designed for students who are one, two, or even more grades higher than theirs, especially for subjects like English where school programmes tend to be disparaged as being 'too easy'. There is also a growing prevalence of children being hothoused with content beyond their standard curricula, such as preparing for international tests like the Cambridge Preliminary English Test or American SAT or attending tuition classes offering the curricula of other countries such as the United States and Singapore. In the case of Mrs Liu from Beijing who had a daughter in primary school, she had learnt from her parent chat group that many of her child's classmates were engaging in advanced learning. Feeling highly inadequate in comparison, she decided to place greater pressure on herself and her daughter to avoid 'being left behind'. She subsequently enrolled her daughter, who was in the second grade at the time of our fieldwork, in an English class designed for fourth- or fifth-grade students. She also planned to register for more advanced maths classes for her daughter, feeling that the maths taught at school was also too basic. Peer pressure had had a clear influence on her parenting choices.

Several respondents also felt that they were caught in a vicious cycle where punch-in culture impels them to be more involved and performative, but the heightened peer pressure simultaneously stressed them and made them less confident of their own abilities. Specifically, they confided that extensive information shared by teachers, fellow parents, and educational institutions tends to trigger a sense of panic, leading them to be consumed by guilt, self-doubt, and inadequacy. Their self-esteem then suffers as they view themselves as 'irresponsible', 'incompetent', and 'not as good as other parents'. This cycle of panic can be self-reinforcing, as every parent is under the same impression, or illusion, that 'others are doing better than I am'. Consequently, they tend to punch-in more actively and engage in greater performative parenting, striving to prove to themselves and others that they are exerting their best efforts. Paradoxically, such effort further induces panic among their peers. When parents realise or believe that other parents and children are performing better than

them, they try to catch up by adopting even more ambitious *jixue* ('chicken blood'/intensive parenting) practices. As their achievements are spotlighted to other parents via digitally mediated performative parenting, they in turn crank up peer pressure for others, further perpetuating the vicious cycle. At the same time, it is likely that peer pressure among parents will have knock-on effects on teachers as well. Research conducted by the Beijing Academy of Educational Sciences indicates that parents who perceive deficiencies in their own ability to support their children's studies tend to reach out to teachers more frequently (White Night Workshop, 2023).

Peer pressure and the anxieties it sets off can also have adverse implications for children and parent–child relationships but different parents experience and evaluate punch-in culture differently. Some parents complained about additional burdens of punch-in culture, while others appreciate the opportunity to manage their children's education and (potentially) derive benefits. Parents who fall sway to intensive peer pressure admit to being in awe of successful 'kids of other families' (*bierenjia de haizi*) and consciously or unconsciously compare their children to these imagined role models. This inevitably affects parental perceptions of their own children's performance, thus provoking stress and frustration, marring parent–child relationships and damaging the children's self-esteem. Some parents, recognising that peer pressure is stress-inducing, consciously develop coping strategies to manage their children's emotional welfare as well as their own. Other parents go one step further to rationalise the value and benefits of peer pressure. For these parents, extensive exposure to 'ideal parents' as role models of desirable parenting practices provides opportunities for them to learn from their peers, encourage and motivate themselves, as well as acquire useful information and support. As Ms Li articulated, she had initially experienced feelings of stress but got used to the pressure over time and would instead use content shared in these groups to motivate herself and her child:

> For those jiwa ('chicken blood kid'/children of pushy parents) parent chat groups, I treat them as a driving force to motivate myself. I do feel that the pressure is tremendous but living under a certain degree of pressure may conversely be better. Otherwise, once we relax, it will be very difficult to catch up. Even if I don't perform as well as those jixue jiazhang ('chicken blood parents'/ pushy parents), at least I know what their calibre is and have some insights.

While such attempts at self-consolation may help some parents make sense of the challenges of peer pressure, they also lay bare the detriments of the

hyper-competitive nature of punch-in culture and performative parenting. Indeed, ambitious *jixue* parents (chicken blood/pushy parents) admit to being grateful for punch-in culture (especially during online learning), which allows them to better understand their children's academic progresses and school life. They then build on these knowledge and insights to boost their children's potential with more targeted and concerted support. In contrast, for parents who do not want to involve themselves so extensively in their children's academic lives, punch-in culture undoubtedly introduces extra burdens, anxiety, and self-doubt.

EMOTION WORK AND CONTEXT COLLAPSE

Above all, what makes performative parenting and peer pressure even more overwhelming is the emotion work it entails and the complexities of punch-in culture they must navigate. In practising performative parenting, parents must assume different ideal personas depending on the context. Be it parent–teacher platforms, parents-only chat groups, or social media, each context imposes different rules and expectations for performative parenting. Parents must nimbly and adaptably take on multiple roles, convey different images, and craft messages using language catering to diverse contexts. Performative parenting is not merely a symbolic exercise but necessitates practical effort in the form of having to be constantly connected, highly responsive at all times and prepared to dedicate substantial time and energy to craft a well-groomed image for one's networked audiences. As described by Mrs Zheng, a Beijing mother of an 8-year-old son, parenting is 'another full-time job, with endless overtime and the obligation to please everyone except ourselves'. Moreover, as other parents openly brandish their children's accomplishments on these platforms and seek to gain favour with teachers for special treatment, digitally connected parents find themselves involved in significant emotional labour.

In this highly interactive, densely networked environment therefore, even while Chinese parents may benefit from more extensive and varied connections, they also face the perpetual stress of appropriate self-presentation and strategic image management in a state of constant publicness. Since posts on social media are publicly visible to large networks of teachers, parents, as well as other acquaintances and even strangers, they usually feel obliged to share high-quality, carefully curated content that presents a positive, well-groomed, and competent image to these audiences. For instance, before sharing photos on social media, many parents spend a lot of time selecting the best-looking photos and embellishing them with editing software. Similarly, parents are

also careful to avoid potentially controversial topics and disclosure of overly negative emotions in social media posts. In such circumstances, when parents' inner emotions and feelings do not align with these rules, they are obliged to bottle up their negative feelings to maintain a perfect image for teachers and other parents.

Mrs Jing from Hangzhou, mother of a 9-year-old boy in the third grade, explained how participating in these chats can be an emotional minefield. In the earlier case of the teacher who had apologised for her inappropriate behaviour, one parent had suggested via the parents-only chat group to demand that the school appoint a new teacher. However, most other parents recommended giving the teacher a second chance as they felt that she was generally pleasant and considerate, did well in most areas, and could be excused for an occasional lapse of judgement. The dissatisfied mother argued for her stance over several messages, but Mrs Jing felt that she probably suppressed her own feelings and gave in. This eventual compromise was likely driven by her desire to follow the broader consensus and not stoke conflict to avoid being singled out for being 'odd, picky and small minded'.

Such fraught scenarios involve the burden of 'emotion work' (Hochschild, 1983) where individuals must conceal or consciously negotiate their true feelings to 'please others' so as to maintain harmonious relationships within the group. Given the public nature of punch-in culture and the child's interests riding on performative parenting, our respondents tried their best to maintain cordial relations even if it went against their natural instincts. As Mrs Zhu from Hangzhou, mother of an 11-year-old daughter in the fifth grade and a 2-year-old boy lamented:

> I really can't bear it anymore. I said why is there so much homework? Other parents agreed with me. Even though the teacher is working hard (on the platform), we parents are also exhausted. When the teacher openly criticises our children, we feel ashamed because it is our problem, and we worry about what our children's poor performance means for their future. The teachers often do this. They name and shame the children …. But this teacher is responsible … And even if you have been criticised by the teacher, you still have to say, 'Thank you for your hard work'. I don't know whether other parents actually mean that sincerely. Anyway, in the parent chat, everyone says such things.

Furthermore, as earlier mentioned, different contexts have different rules and expectations for performative parenting. When parents must simultaneously juggle multiple platforms each with its own unique norms,

performative parenting becomes more complicated. Hence, parents feel duty bound to develop a sharpened awareness of different audiences, preferred topics, and interaction styles on different platforms and tactically adjust their online activity to project their best selves (Wang & Lim, 2021). Parents may further experience 'context collapse' (Davis & Jurgenson, 2014) when they fail to share the 'right' content on the 'right' platform, which could undermine their reputation in certain contexts and even wreak misunderstanding and conflicts. For example, one parent had the awkward experience of sharing a video in the parent chat group before being promptly admonished by a parent representative that such content was not welcome. The parent had to apologise and explain that she had sent the message by mistake. Parents therefore need to diligently, vigilantly, and creatively take on different roles in different platforms and contexts, construct different images of themselves, as well as craft messages using different languages across diverse contexts.

NOTE

1. Among our sample of respondents, neither *Douyin* nor *Xiaohongshu* was extensively used for parenting. Participants generally perceived Douyin as a digital platform primarily for leisure and entertainment, while *Xiaohongshu* is more commonly used by expectant or young mothers with infant children rather than those whose children are of schoolgoing age.

This page intentionally left blank

5

DIGITAL PARENTING BURDENS AND FAMILY WELLBEING

As we write our concluding thoughts long after the pandemic lockdowns have ended, Chinese families' zeal for digitalisation and educational technologies have hardly receded but only intensified. With the advent of alluring innovations such as generative AI, Chinese consumers have seized upon new technological fads (Cheung, 2023; Kaur, 2024). Since ChatGPT broke onto the scene, Chinese students have been quick to utilise it to reduce the time spent on their homework (*Straits Times*, 2023). Despite restrictions within China's 'Great Firewall', students have found ways to access the service by obtaining foreign phone numbers or utilising virtual private networks to circumvent limitations and access the platform, using it to compose essays, tackle science and math problems, and generate computer code (*Straits Times*, 2023).

Relatedly, an AI-powered chatbot in the guise of a red-haired American woman named Annie became an overnight sensation when Chinese parents began to share instructions for turning the chatbot into a substitute English tutor for their children (Shu, 2023). The Call Annie app allows users to converse with the ChatGPT-powered bot via FaceTime, giving the children an opportunity to practise spoken English, its popularity further boosted by the Chinese government's ban on tutoring. The hashtag #CallAnnie garnered over 1.3 million views on *Xiaohongshu* and videos providing advice on leveraging Call Annie for success in the IELTS English language proficiency test have also amassed thousands of likes on the platform (Shu, 2023). The learners, knowing that Annie is a bot, apparently felt more confident and less stressed about making mistakes when speaking English.

As discussed in earlier chapters, urban Chinese families' enthusiasm for technology, especially those which shore up children's educational performance, is avid. Across the suite of digital technologies that have been

embraced, from devices such as smartphones and intelligent lamps to edtech platforms and parent chat groups, parenting practices have incorporated and adapted to them. Our evidence suggests various implications of the digitalisation of family life in urban China and in our concluding chapter, we discuss them with a view towards insights for parenting in other parts of the world that are similarly technologising. We review similar digital parenting challenges in other parts of the world through a comparative lens and reflect on what the Chinese experience portends for digitally connected families around the world. We also reflect on the lessons we can draw for how these increasingly commonplace everyday technologies should be designed, set against the broader ongoing debate on AI ethics and children's digital rights, and concerns about growing digital mediation of interpersonal communication.

GROWING DIGITALISATION OF FAMILY LIFE

With smartphones, tablets, computers, and many other devices proliferating in urban Chinese homes linking households across dense digital networks, it is clear that these families' existences are far from isolated or insular. Instead, they are well connected to institutions and other families, engaging in a multitude of online interactions that supplement, complement, and augment their offline lives. Our interviews with parents of schoolgoing children have revealed that their interactions with schools and teachers have evolved from sporadic and occasional exchanges to regular and intensive involvement enabled by these digital connections, principally concerning academic tasks. Originally designed as reminders or contingency plans in case children forget their assignments, parent–teacher interaction has gradually expanded in use, becoming pedestrianised and normalised for Chinese parents. The rising intensity of these digital parenting tasks and the standards and expectations surrounding their completion has culminated in the emergence of punch-in culture and norms of parental accountability.

As digital connections starkly capture parents' (in)ability to demonstrate accountability and teachers' capacity to verify the same, punch-in culture has become oppressive and wearisome by dint of its publicness. The sheer visibility of punching-in or failure to do so in accordance with best practices puts parents under an almost panoptic gaze. The performativity that punch-in culture entails, principally to smoothen strategic relationships with teachers and other parents to accumulate social capital for their children, accentuates the challenge of the endeavour. Since parents are required to complete their assigned tasks under close examination by their peers, the ability to observe other parents' efforts while one's actions are subject to scrutiny amplifies peer

pressure to an unprecedented level. The majority of these parenting behaviours are observable by teachers and other parents, making parents feel increasingly compelled to present a 'perfect' image to all these audiences. In highly interactive parent chat groups, careful self-presentation and strategic performativity become implicit yet rigid requirements. The digitally connected parent, observing how their peers showcase their children's achievements and endear themselves to teachers, must thus engage in substantial emotion work. Parents must be mindful of their words and actions, exercising caution regarding when and how to convey information, as well as which tones and emojis to use in what contexts, further compounding their stress and sense of burden.

Furthermore, the portrayal of parenting trends on social media significantly shapes parents' self-perceptions, their interactions with their children, and societal norms regarding effective parenting. With each post and message, these public digital platforms gradually establish norms surrounding 'ideal parenting', setting benchmarks for what is perceived as exemplary parenting. The scope of basic and essential parenting duties has also been widened with digitalisation as online learning allows parents to take classes together with their children and deepens their involvement in the children's academic endeavours. Most of the parents we interviewed expressed the desire to be fully and resolutely dedicated to moulding their children into competent and successful individuals through helping them achieve academic excellence. And yet parental involvement – escalated by the use of edtech and social media platforms –has notable implications both for children's development and for parent–child relationships. In the digital age, ceaseless connectivity extends parental involvement surveillance and control, potentially resulting in overinvolvement in children's lives (Lim, 2020; Nelson, 2010). Persistent interventions may, over time, restrict children's autonomy and hinder personal growth, consequently adversely affecting both their development and relationships with their parents (Lim, 2020). We must also consider how a heavily parent-centric educational environment can exacerbate disparities in children's academic performance and make the quest for upward mobility a more uneven playing field than it already is. As prior research has shown, socioeconomic differences can manifest in diverse parenting practices and stratified outcomes (Clark, 2013; Lareau, 2003; Livingstone & Blum-Ross, 2020). Schisms are likely to arise between children whose parents invest significant energy and resources to support their education and those whose parents are unable or unwilling to do so. In a demanding landscape of punch-in culture and performative parenting, parents who are adept at task and time management, savvy about impression management and proficient in academic subjects will undoubtedly give their children a significant leg-up in the educational rat race.

GLOBAL PERSPECTIVES ON DIGITAL PARENTING

But by no means is digital parenting and its intensification uniquely Chinese. Indeed, as digital technologies increasingly take centre stage in home routines and family life around the world, every society is grappling with the digitalisation of family life. In many respects, parenting across different countries is a universalising experience, bound more by similarities than differences. Middle-class families across the globe share a multitude of wants, wishes, and worries that are specific to their respective contexts (Heiman et al., 2012). Parents' desire to give their child every advantage for a bright future, especially through academic achievement, is a common middle-class aspiration. The rising deployment and indispensability of digital technology in everyday life is yet another commonality among urban middle-class families worldwide. This confluence of trends is what makes the Chinese experience of digital parenting an invaluable one to examine and ponder over.

Indeed, especially within Asia, the valorisation of academic success appears more heightened than ever within the region's burgeoning urban middle class, as the thriving market for tuition and enrichment classes clearly shows (Bray & Lykins, 2012). Just as in China, schools in Asian metropolises are increasingly adopting various digital communication platforms to facilitate learning and home-school conferencing. In India, for example, a growing number of schools are embracing locally developed apps like Teno to expedite home-school conferencing in response to parents' demands (EdTechReview, 2016). Mirroring the Chinese situation, Indian parents exert pressure on their children due to the intense competition for admission to reputable institutions (Ghatol, 2017). The prevailing unemployment situation in India further contributes to parental insistence on improved performance from their children. Furthermore, some parents seek to fulfil their own unrealised aspirations through their children, creating additional stress for adolescents who must navigate the demands of both school and private tutors. A significant number of parents engage three to four or more private tutors for their children, and even on days without academic tuition, there are additional commitments such as art or music lessons (Ghatol, 2017). At the same time, parents take to social media platforms to showcase their children's accomplishments in ways that severely amplify peer pressure. This involves sharing images of their children's high-score report cards, contributing to the establishment of a culture characterised by continuous comparisons (Bandyopadhyay, 2017). Similarly, a comparative study of mothers in Singapore and the United States found that mothers who subscribe to intensive parenting norms are especially motivated to seek educational

information in order to give their children an edge (Chae, 2022). However, the information provides fodder for social comparison which induces in them a disquieting sense of competitiveness.

Korea's equivalent of pushy parents, known as the Gangnam Mums, named after the most developed metropolitan area in Seoul, are renowned for their micromanagement of their children's academic success because of the country's highly competitive academic environment (Park et al., 2015). Just like in China, once the child enters school, a substantial portion of parental care shifts towards their academic achievements, driving up demand for a wealth of education-related information. Online instant messengers such as WhatsApp and Kakao Talk serve as platforms for personal individual or group contacts, facilitating the sharing of information about extracurricular lessons, their nature, experiences with schooling children, and arrangements for offline meetups (Park et al., 2015). This proliferation of academic resources breeds an intense educational atmosphere, placing a significant burden on mothers to select the right information to guide their children for academic success. Again, peer pressure is an inevitable and unfortunate side effect.

Conflicts also occur in these chats, often mirroring underlying issues within the school environment as one study of parent chats in Moscow, Russia, revealed (Bylieva et al., 2023). Moreover, school-related events and holidays that demand parental involvement, particularly those involving challenging or unclear tasks, occasionally serve as triggers for heightened anxieties and discord. Relatedly, a study of WhatsApp parent chat groups in Chile also uncovered instances of the emotion work involved in conflict resolution (Moyano Dávila et al., 2023). In these conflicts, one frequently employed tool is the use of 'laughter', often expressed as 'haha'. Laughter is typically utilised as a means of apologising for misunderstandings or not comprehending specific instructions conveyed through the chat. Parents strategically use emoticons to convey feelings and emotions that help to swiftly defuse potential conflicts. There was also an instance of teachers imposing pressure on parents who had not responded to a poll, resonating with the Chinese experience of punching-in. The study also found that 'to be a good parent means being aware of and complying with the established deadlines and the formats of the tasks entrusted to them' (Moyano Dávila et al., 2023, p. 560). The challenge of navigating parent chat dynamics in WhatsApp has also been the subject of debate in Australia. As one educator found from her survey of parents and teachers who follow her Instagram account, 77% agreed that the advantages of such WhatsApp groups are outweighed by their drawbacks (Milledge, 2023). In parallel with the Chinese parents who were subjected to a reward–punishment

regime and peer pressure in their WeChat groups, some Australian parents had suffered eviction or abuse from groups because they defended the school or teacher or when they resisted unreasonable group expectations (Milledge, 2023).

The intensification of communication between parents and teachers and parental over-involvement has also been flagged as a concern elsewhere. British parents are reportedly inundated with notifications relating to their children including school newsletters, school apps, WhatsApp groups, ClassDojo accounts, school websites, and apps for tracking children's development, as well as hardcopy letters (Henderson, 2018). However, teachers also suffer from the flood of messages and feel like they are 'under surveillance' and caving under late-night emails from anxious parents that swell their workloads (Jacobs, 2019). Notably, British parents have been known to use closed messaging features in apps such as Bambizo, ClassDoJo, and Edmodo to contact teachers over concerns large and small (Budden, 2018). These range from more trivial tasks such as asking teachers to relay messages to their children, to demanding that teachers justify the low scores they gave their children. All these instances of parental over-involvement further erode children's independence and autonomy. In the afore-mentioned Australian report, teachers lamented of parent chats: 'They have been a cause of great angst for myself and my colleagues' and 'Parents have told me that the WhatsApp is "hopping" about a decision I've made. It's definitely contributed to work anxiety as a teacher'. In another column by an Australian mother about the toxicity she had witnessed on parents' WhatsApp groups in their behaviour towards teachers, she observed that they had become a 'digital, interactive, mobile version of Regina George's Burn Book from the film Mean Girls' (Hendley, 2023). In Ireland, principals have also had to take action against parents who publicly victimise teachers over social media platforms (Horgan, 2021). A study of Israeli teachers also found that they were aggrieved at how parents were very disrespectful towards them in parent–teacher chats (Wasserman & Zwebner, 2017). This undermined their positions of authority and hampered their ability to control the group.

In summary, the shared experiences across various countries are increasingly characterised by the dense weaving of digital connections into everyday life, reflecting growing challenges and uncertainties parents face while raising their children in a rapidly evolving world. This assertion is supported by mounting evidence indicating the emergence of digital parenting burdens globally, driven by significant shifts in home-school conferencing from elementary to university levels in response to heightened connectivity.

WELLBEING THROUGH POLICY AND DESIGN

There are many lessons we can distil from the Chinese experience but perhaps the most significant one relates to the wellbeing of both parents and children. Understanding the socioemotional dimensions of parental wellbeing is crucial because the welfare of parents not only affects them individually but also has implications for child development, fertility, and the overall health of society (Nomaguchi & Milkie, 2020). Hardships of parenting, characterised by difficulties and conflicts within the parental role, along with low parental wellbeing, can have notable effects on children's developmental outcomes (Mackler et al., 2015). Additionally, a decrease in subjective wellbeing following birth of the first child reduces the likelihood of having more children (Margolis & Myrskylä, 2015). Therefore, examining societal trends in how parenthood and parenting impact adults' wellbeing is crucial for scaffolding parenting journeys.

Parenting is a complex experience encompassing both edifying and challenging aspects (Musick et al., 2016). While parenting brings joy, meaning, and fulfilment, it also involves significant trials and onerous caregiving responsibilities as we observed in our Chinese respondents, as well as in parents elsewhere as evidenced by research from other countries. Scholars emphasise that the balance between the demands and rewards of parenting vary across social statuses and life stages, with parenting challenges and resources distributed unevenly (Musick et al., 2016; Nomaguchi & Milkie, 2020). According to the Stress Process Model (SPM), stress can be regarded as a process, the core components of which are stressors, resources, and stress outcomes, and it is valuable to understand differences in the nature and intensity of parenting stress (Nomaguchi & Milkie, 2020; Pearlin, 1989).

Stressors are rooted in major life events or chronic problems and may stem from social roles like parenting strain, marital strain, or work strain. Resources encompass coping strategies, social support, and personal resources such as mastery – the perception of one's efficacy in meeting demands. Since resources help to mitigate the adverse impact of stressors on wellbeing, the availability and utilisation of resources determine the effects on wellbeing. Besides individual resources such as personal time and intellectual and financial wherewithal, institutional resources offered by governments, workplaces, or other organisations can also help alleviate stress. Stress outcomes encompass mental, physical, and subjective wellbeing. The SPM emphasises the interconnectedness of stressors, as they can bleed into other life domains, leading to financial strain, time constraints, and conflicts with partners. These additional

stressors can further undermine health and subjective wellbeing among parents. Furthermore, the SPM underscores that social statuses, including social class, gender, sexuality, marital status, race/ethnicity, and immigration status, influence every component of the stress process. Bearing in mind these dimensions of stress can facilitate a more productive analysis of sources of parenting stress and create inroads for possible ameliorative measures.

For parents in particular, SPM identified chronic stressors relating to the parenting role: role overload, interpersonal conflict, role captivity, and interrole conflict (Nomaguchi & Milkie, 2020). Role overload refers to perceptions of feeling swamped by childcare needs that far exceed one's ability while interpersonal conflict relates to parent–child and spousal conflicts. Role captivity is feeling entrapped and unable to extricate oneself from parenting duties while interrole conflict arises from the inability to reconcile one's work and parenting duties. Nomaguchi and Milkie (2020, p. 202) emphasise that 'Besides the conventional forms of stressors, research has advanced through examining unique stressors that parents experience today' and that '(f)uture research that addresses new types of parenting strain that emerge in changing social and cultural contexts is needed'. Our findings show that punch-in culture and performative parenting that arise from intense digital connectivity in an academically competitive environment constitutes an emergent form of parenting strain. Societies must therefore tackle such sources of strain because if we choose to ignore them, efforts to foster societies with fulfilled parents, independent children, and resilient families will be severely hamstrung. For the Chinese parents we interviewed, role overload, role captivity, and interrole conflict appeared to be the most salient and gruelling stressors. There was also evidence of interpersonal conflict between parents and children as the latter see the parents' reminders about schoolwork as tiresome and unwelcome. Although our study did not uncover spousal tensions, most of our respondents were in fact women, reflecting that mothers likely shoulder the bulk of parenting duties as research in other countries has echoed (see Lim, 2020; Wang & Lim, 2020). Gendered norms around parenting obligations have cultural or even religious roots as reflected in a study of parent chats of an Islamic school in Indonesia where only mothers participated (Mayangsari & Aprianti, 2017). Prior research has also found an uneven distribution of digital responsibilities within urban Chinese households, with mothers predominantly shouldering the digital parenting workload (Peng, 2022). The study further noted that this contemporary division of domestic digital labour between spouses is restrictive and exploitative towards women and needs to be better addressed. Fundamentally, when viewed through the lens of stress,

our study shows that digital parenting burdens exact socioemotional costs on familial harmony, spousal parity, work–life balance, children's positive maturation, and, fundamentally, individual and collective wellbeing.

Beyond the family unit, a key institution in the lives of these families is clearly schools. In the face of growing evidence of the adverse effects of punch-in culture and performative parenting on parents, children, and of course teachers as well, schools can play a critical role in advancing a more salubrious state of being. They can seek to maintain the cohesion of these chat groups while preserving the numerous advantages of increased parent–parent and parent–teacher connectivity. They should introduce codes of conduct or pledges for teachers and parents in their use of these edtech platforms and parent chat groups. This code or pledge should outline the acceptable and unacceptable behaviours within such groups, encouraging parents to engage in respectful interactions and cultivate an atmosphere of mutual support. By making parents and teachers take a pledge, perhaps after reading a pithy infographic or taking a short online course on appropriate conduct on such platforms, they will be sensitised to how they should use them, as well as behaviours to avoid. There must be a collective effort to prevent these digital platforms from intensifying parental accountability for children's academic endeavours and letting phenomena like punch-in culture entrench itself. Furthermore, to avoid compounding the gendered distribution of digital parenting labours, schools' communication with families must be addressed to both fathers and mothers to ensure that they are equally involved and well apprised of their children's progress. In addition, public naming and shaming of parents and students and the showcasing of excellent or poor assignments should be rethought and families polled for their preferences and comfort levels. School policies must strive to be more humane and cognisant of the strains that teachers and families are experiencing in light of the growing use of these digital communication platforms. Failing which, digital parenting burdens will only become weightier with greater digital connectivity and loftier familial aspirations for children's academic achievements.

Beyond policies, the very design of these platforms, be it edtech or social media, must seek to vest in users greater agency over their actions, online visibility, and digital footprints. As Davis (2022) argues in her study of the role of technology in children's different developmental stages, the design and production of their digital experiences should grant them agency and facilitate meaningful interaction with their significant others. She stresses that a child-centred design approach should cater to children across the spectrum of cognitive and physical abilities, meet the needs of children from different socioeconomic backgrounds, and involve key members of their community

such as their parents, teachers, and paediatricians. This argument could well be extended to the design of digital platforms and services for parents as well. In view of them being so immersed in their children's lives, the emergence of trends such as punch-in culture and its adverse effects on parental wellbeing and child development strongly suggests that the design of parents' digital experiences also needs to be examined and reimagined. The logics and features of edtech and home-school conferencing platforms must take into account the affective load involved in parenting and give users the option of determining their online visibility in more granular ways. Privacy settings should not assume a blanket 'all or nothing' approach but should allow parents to set their preferred levels of visibility, perhaps only to teachers and parent representatives but not to all parents. This will help to ease the burdens of punch-in culture and peer pressure while also respecting the privacy of parents and children. The automated notifications issued about punch-in tasks should also be sent out at reasonable times and not round the clock to avoid elevating parents' and children's anxieties. They should also be phrased in more moderate tones to make these parenting duties less stress inducing. Technology companies should also be more conscious of the potentially adverse impact of their products and services and engage in more sustained consumer research to refine their products and canvas the views of teachers as well as families across the socioeconomic spectrum. They should not focus only on highly educated and well-resourced parents who can ably and comprehensively support their children's educational endeavours.

CONCLUDING THOUGHTS

Ultimately, the emergence and intensification of phenomena like punch-in culture and performative parenting should give us pause because of the emotional toll and stress they have been shown to impose on families. Furthermore, we should guard against such trends being accepted as ineluctable as societies technologise. Strains and stressors in parenting, whatever their source, should not be accepted as part and parcel of everyday life but should be mitigated in the interest of happy and resilient parents and children. We must also take on board the cautionary warnings against 'techno-social creep' (Frischmann & Selinger, 2018) and anticipate future consequences of prevailing techno-social engineering practices. In other words, engineering practices that shape specific norms and conventions in one realm can bleed into others in unexpected and undesirable ways. Will punch-in culture and online visibility extend into student groups, workplaces, or into personal health and even relationship

management apps and programmes? Will the unquestioned tracking and quantification of our behaviours and our exposure to peer surveillance be considered par for the course in digital networks? If these are potential scenarios that we cannot bear to countenance, we need to resist such emerging logics to avert complacency and habituation.

The Chinese experience has been illuminating for grasping how an especially intense and highly public form of digital parenting can have positive but also deleterious implications for parental wellbeing. In examining digital parenting with Chinese characteristics, we have seen how these families exhibit a strong interest in technology, particularly those tools that contribute to their children's educational success. We have been able to appreciate how the adoption of various digital technologies, including smartphones, intelligent devices, edtech platforms, and parent chat groups, has become integral to parenting practices. Importantly too, we have seen these digital transformations of family life on an experiential level – from the perspective of parents – and the attendant burdens they must bear. Rather than yield to these seemingly inexorable and inescapable shifts in the digitalisation of family life, we must seek to manage unsalutary trends and practices that could undermine the wellbeing of parents, children, and families. Despite the limitations of our study, our research is a modest effort in that direction. We invite our academic colleagues, policymakers, educators, and technologists to join us in this critical undertaking.

This page intentionally left blank

ABOUT THE AUTHORS

Sun Sun Lim is Vice President, Partnerships & Engagement, and Professor of Communication and Technology at the Singapore Management University. She has extensively researched the social impact of technology, focussing on technology domestication by families, future of work, and artificial intelligence ethics. A prolific scholar, she has over 100 academic publications including *Transcendent Parenting: Raising Children in the Digital Age* (Oxford University Press, 2020) and *The Oxford Handbook of Mobile Communication and Society* (Oxford University Press, 2020). Her articles have been published in top journals such as *Nature*, *Journal of Computer Mediated Communication* and *Big Data & Society*. She is a Fellow of the International Communication Association and winner of the inaugural Top 50 Asia Women Tech Leader Award 2024. From 2018 to 2020, she was Nominated Member of the 13th Parliament of Singapore, raising issues such as governance of the use of big data, priorities in digital literacy education, and digital rights for children. She frequently offers her expert commentary in international outlets including *Wall Street Journal, Bloomberg, Guardian, Scientific American*, and *South China Morning Post* and writes a monthly technology column in Singapore's largest circulation broadsheet *The Straits Times*. She has won eight awards for excellent teaching.

Yang Wang is a Research Fellow in Asia Research Institute at National University of Singapore. She received her PhD in Communications and New Media from National University of Singapore, and master's degree in Mass Communication from Peking University. Her research interest lies at the intersection of information and communication technologies (ICTs), family, gender, and migration. She has conducted research on household ICT domestication, transnational communication and mediated intimacy, mobile parenting, workplace digital transformation, digital inequality, as well as social media and online community building. Her research integrates insights from multiple disciplines, including media and technology studies, sociology, anthropology, human geography and migration studies, cultural studies, psychology, social

work, and organisational and management studies. She has published in leading international journals including *Journal of Computer-mediated Communication*, *New Media and Society*, *Journal of Children and Media*, and *Frontiers in Psychology.*

GLOSSARY OF CHINESE TERMS

Banji Youhua Dashi (班级优化大师): A mobile application for class management and parent–teacher communication used by some Chinese teachers and parents.

Ban zhuren (班主任): The head teacher or class teacher of a specific class who is responsible for the overall management of the class, the wellbeing of the students in the class, and communication with students' parents or guardians.

Bierenjia de haizi (别人家的孩子): Literally 'children of other families'. This expression is often used to highlight the accomplishments, talents, or good behaviours of someone else's child, in contrast to one's own child. This expression is commonly used to express admiration, envy, or make playful or humorous comparisons between children of different abilities.

Chaoqian xuexi (超前学习): Literally 'advance learning' or 'learning ahead'. In the context of education for schoolgoing children, this term describes a learning style where students study subjects, topics, or materials ahead of their current grade level or scheduled curriculum.

Dali deng (大力灯/大力智能学习灯): An eyesight-friendly smart desk lamp designed for school-age children and produced by ByteDance, it is equipped with smart functions such as intelligent dimming, parent–child conferencing, online dictionaries, and more.

Daka (打卡): Literally 'punch-in card' or 'check-in', typically involving individuals recording or confirming their presence at a specific location, event, or activity. In the context of this book, *daka* is used to describe Chinese parents' parenting tasks within parent–teacher chat groups on messaging apps and edtech platforms.

DingTalk (钉钉): An enterprise communication and collaboration platform developed by Alibaba Group. DingTalk has been widely adopted by primary and secondary schools in China as a parent–school communication tool since the pandemic-driven shift to online learning in 2020.

Douyin (抖音): The mainland Chinese counterpart of TikTok, which is a short-form video hosting service owned by ByteDance.

Gaokao (高考): An abbreviation of *gaodeng jiaoyu ruxue kaoshi* (高等教育入学考试) in Chinese, which translates into 'National Higher Education Entrance Examination' in English. *Gaokao* is a crucial standardised test in China that determines the eligibility of students for admission into higher education institutions, such as universities and colleges.

Hangzhou Jiaoyu (杭州教育): Literally 'Hangzhou Education', an official class management and parent–teacher communication platform launched by the Hangzhou government.

Jiankang daka (健康打卡): Literally 'health punch-in'. In the context of the COVID-19 pandemic, *jiankang daka* refers to a system or practice where individuals were required to provide information about their health status regularly, often implemented by schools, workplaces, or public institutions to monitor and manage the health of individuals.

Jiaxiao lianxi ce (家校联系册): Literally 'home–school communication book'; this is a physical book which is used to facilitate communication and information exchange between parents or guardians and teachers to foster mutual cooperation in guiding the child's educational and personal development.

Jianfu (减负): Literally 'reduce burdens' in order to alleviate pressure in the context of China's stressful education system. *Jianfu* is used as a catchall term to refer to the reforms established by the Chinese government to lighten students the academic workload and pressure to excel, primarily through the reduction of excessive homework assignments.

Jielong (接龙): Literally 'linking dragons', which originally referred to a word chain or word-linking game where participants take turns saying words that are connected through shared characters or meanings. In online chat groups or messaging platforms, *jielong* is used to describe a process in which participants take turns registering or signing up for an event, a activity, or a particular item in a sequential order. Typically, they reply to the preceding message by copying the entire list of names before adding his or her name at the end, thereby extending the 'dragon' by making the chain of linked names longer with each reply.

Jinbu Bang (进步榜): Literally 'Improvement Billboard' or 'Progress List', referring to a list or chart that recognises and acknowledges the progress or improvement made by individuals in a certain skill, subject, or area.

Jiwa jiazhang (鸡娃家长): Literally 'parents of chicken blood kids'. The term 'ji 鸡(chicken)' is derived from *Jixue* (鸡血 – see next item in Glossary), referring to a practice of urging or pressuring someone to fulfil a certain objective. '娃(wa)' is a colloquial term for 'child' or 'kid', and '家长(jiazhang)' is parents.

Jiwa jiazhang is commonly used to describe pushy parents who are overzealous and obsessive about their children's academic achievements.

Jixue (鸡血): Literally 'chicken blood', which is often used colloquially to describe a state of heightened excitement, intense enthusiasm, or excessive energy, conveying the idea of someone being overly idealistic or hyperactive. In the context of parenting or education, *jixue* is often used to describe a parenting approach that is overly demanding or pressuring, placing great emphasis on pushing children to excel academically or in various extracurricular pursuits such as arts or sports.

Pengyouquan (朋友圈): Literally 'friend circles', the Chinese name of 'Moments', a social media feature on WeChat where users can share updates, photos, videos, and posts with their selected contacts.

Piyu benming (疲于奔命): Literally 'exhausted from running around' or 'wearied by endless toil'. This expression is used to convey the idea of being extremely busy, tired, or overworked due to a hectic and demanding schedule.

Pinma (拼妈): Literally 'competitive mothering', which describes a social trend in China where mothers are playing increasingly crucial role in children's achievements and wellbeing. The core concept of *pinma* is that mothers with better parenting skills, higher aspirations, and greater dedication to children's education are able to raise children with superior academic achievements.

Shuangjian (双减): Literally 'double reduction' which is related to the glossary item *Jianfu* above. It is a truncation of *jianfu jianya* (减负减压) which is literally 'reduce burden and reduce stress'. In the context of education in China, *shuangjian* refers to a policy aimed at reducing the academic burden on students so as to relieve academic pressure.

Weibo (微博): Chinese translation of 'microblog'. In the contemporary Chinese context, Weibo commonly refers to Sina Weibo, which is one of the most popular social media and microblogging platforms in China.

Xiao heiwu (小黑屋): Literally 'little black hut' or 'small dark room'. In educational or school settings, *xiao heiwu* is commonly used metaphorically to describe a disciplinary measure where students are temporarily isolated or separated from their peers as a form of punishment and for them to reflect on their actions and misdeeds.

Xiao Huangdi (小皇帝): Literally 'Little Emperor', a term which is widely used in Chinese culture to describe the single child of many Chinese families born under the one-child policy that was in effect in China from 1979 to 2015. The term highlights the fact that these only children are often doted on

like little emperors within their families, enjoying pampering, indulgence, and a strong sense of entitlement.

Xiaohongshu (小红书): Literally 'Little Red Book'. Xiaohongshu is a popular Chinese social media and e-commercial application that is visually oriented and is similar to Instagram.

Xiaoxuntong (校讯通): Literally 'School Information Portal' or 'School Information Platform', which refers to a communication and information system used by Chinese schools to connect students, parents, and teachers for home-school conferencing.

Yiqixue (一起学): A mobile application for class management and parent–teacher communication used by some Chinese teachers and parents.

Yuerwang (育儿网): A Chinese online platform designed to provide a wealth of information and resources related to parenting, pregnancy, and child development (website: http://www.ci123.com/).

Zhongkao (中考): An abbreviation of *Zhongxue Jieduan Xueye Shuiping Kaoshi* (中学阶段学业水平考试), which translates as 'High School Stage Academic Proficiency Examination'. *Zhongkao* is a significant standardised examination taken by students in China typically at the end of their junior high school, determining eligibility for admission to different types of high schools. See *Gaokao* above.

REFERENCES

Anderson, W., & Grace, K. (2015). "Taking mama steps" toward authority, alternatives, and advocacy: Feminist consciousness-raising within a digital motherhood community. *Feminist Media Studies*, *15*(6), 942–959. https://doi.org/10.1080/14680777.2015.1061033

Archer, C. (2019). Social media influencers, post-feminism and neoliberalism: How mum bloggers 'playbour' is reshaping public relations. *Public Relations Inquiry*, *8*(2), 149–166.

Ash, A. (2016). *Wish lanterns: Young lives in new China*. Pan Macmillan.

Bandyopadhyay, K. (2017, April 26). *Parents who are obsessed with social media are giving their kids an unhealthy complex*. Quartz. https://qz.com/761953/parents-who-are-obsessed-with-social-media-are-giving-their-kids-an-unhealthy-complex/

Bray, M., & Lykins, C. (2012). *Shadow education: Private supplementary tutoring and its implications for policy makers in Asia*. Asian Development Bank.

Budden, B. (2018, September 16). *Parents: Stop misusing class messaging apps. Tes News*. https://www.tes.com/news/parents-stop-misusing-class-messaging-apps

Butler, J. (1997). *Bodies that matter*. Routledge.

Bylieva, D., Lobatyuk, V., & Novikov, M. (2023). Parent chats in education system: During and after the pandemic outbreak. *Education Sciences*, *13*(8), 778.

Chae, J. (2022). Comparison, competition, and consumption: The 3Cs of contemporary motherhood in the context of children's education. *Sex Roles*, *87*(11–12), 550–564.

Chen, L. Y. (2022). *Influence empire: The story of Tencent and China's tech ambition*. Hachette.

Chen, T. M. (2021a, February 5). *Don't outsource your parenting to a spy lamp: ByteDance's new Dali childminder misses the mark*. TechNode. https://technode.com/2021/02/05/bytedance-dali-spy-lamp/

Chen, T. M. (2021b, August 31). *Edtech will survive China's crackdown, but it won't be the same*. TechNode. https://technode.com/2021/08/31/edtech-survive-chinas-crackdown-but-it-wont-be-the-same/

Chen, Y., Mao, Z., & Qiu, J. L. (2018). *Super-sticky WeChat and Chinese society*. Emerald.

Cheng, C.-T. (2015). The technologicalisation of education in China: A case study of the home–school communication system. In J. Vincent, S. Taipale, B. Sapio, G. Lugano, & L. Fortunati (Eds.), *Social robots from a human perspective* (pp. 117–127). Springer.

Cheung, R. (2023, March 2). *The Chinese market is crazy about ChatGPT. But the government, not so much*. Vice. https://www.vice.com/en/article/pkg7jm/chatgpt-china-openai-baidu-ernie-censorship

Chi, W., & Qian, X. (2016). Human capital investment in children: An empirical study of household child education expenditure in China, 2007 and 2011. *China Economic Review*, 37, 52–65.

China Internet Network Information Centre (CNNIC). (2023). *52nd statistical report on China's internet development*. https://www.cnnic.com.cn/IDR/ReportDownloads/202311/P020231121355042476714.pdf

Chu, F. (2022, September 15). *Why Douyin's growth is soaring in China*. SmartBrief. https://www.smartbrief.com/original/why-douyins-growth-is-soaring-in-china

Chu, L. (2017). *Little soldiers: An American boy, a Chinese school and the global race to achieve*. Hachette UK.

Clark, L. S. (2013). *The parent app: Understanding families in the digital age*. Oxford University Press.

Coyne, S. M., McDaniel, B. T., & Stockdale, L. A. (2017). "Do you dare to compare?" Associations between maternal social comparisons on social networking sites and parenting, mental health, and romantic relationship outcomes. *Computers in Human Behaviour*, 70(5), 335–340. https://doi.org/10.1016/j.chb.2016.12.081

Cuthbertson, A. (2020, March 9). Coronavirus: Quarantined school children in China spam homework app with 1-star reviews to get it kicked off app

store. *The Independent*. https://www.independent.co.uk/tech/coronavirus-quarantine-children-china-homework-app-dingtalk-a9387741.html

Davis, J. L., & Jurgenson, N. (2014). Context collapse: Theorizing context collusions and collisions. *Information, communication & society*, *17*(4), 476–485.

Davis, K. (2022). *Technology's child*. MIT Press.

Douglas, S., & Michaels, M. (2004). *The mommy myth: The idealisation of motherhood and how it has undermined women*. Free Press.

Dworkin, J., Rudi, J. H., & Hessel, H. (2018). The state of family research and social media. *Journal of Family Theory & Review*, *10*(4), 796–813. https://doi.org/10. 1111/jftr.12295

EdTechReview. (2016). Teno App – Changing the Way Schools in India Communicate with Parents. *EdTechReview*, June 20. Accessed on May 30, 2018 from http://edtechreview.in/trends-insights/trends/2412-teno-app-schools-india-communicate-parents

Faircloth, C. (2014). Intensive parenting and the expansion of parenting. In E. Lee, J. Bristow, C. Faircloth, & J. Macvarish (Eds.), *Parenting culture studies* (pp. 25–50). Palgrave Macmillan.

Feijóo, C., Fernández, J., Arenal, A., Armuña, C., & Ramos, S. (2021). *Educational technologies in China* (edited by M. Cabrera Giraldez, I. Maghiros, Y. Punie, & R. Vuorikari). Publications Office of the European Union. ISBN 978-92-76-32626-7. https://doi.org/10.2760/604641

Frischmann, B., & Selinger, E. (2018). *Re-engineering humanity*. Cambridge University Press.

Furedi, F. (2002). *Culture of Fear: Risk-taking and the Morality of Low Expectation*. Continuum. Revised edition published.

Furedi, F. (2008). *Paranoid parenting: Why ignoring the experts may be best for your child*. Continuum.

Germic, E., Eckert, S., & Vultee, F. (2021). The impact of Instagram mommy blogger content on the perceived self-efficacy of mothers. *Social Media + Society*, *7*(3), 1–19. https://doi.org/10.1177/20563051211041649

Ghatol, S. D. (2017). Academic stress among higher secondary school students: A review. *International Journal of Advanced Research in Education & Technology*, *4*(1), 38–41.

GMA. (2023, April 20). *Baidu Tibe explained*. GMA. https://ecommerce chinaagency.com/baidu-tieba-explained/

GMA. (2023, September 8). *Douyin statistics and trends shaping China's social eCommerce market*. GMA. https://marketingtochina.com/douyin-statistics-and-trends/

Goffman, E. (1969). *The presentation of self in everyday life*. Allen Lane.

Gong, J., Yao, Z., Lu, Z., Ding, Q., Zhang, Y., Zhang, L., & Wang, Q. (2021, May). All in one group: Current practices, lessons and challenges of Chinese home-school communication in IM Group Chat. In *Proceedings of the 2021 CHI conference on human factors in computing systems* (pp. 1–12).

Gu, X. (2021). Introduction: The value of children and social transformations in Asia. *Child Indicators Research*, *14*(2), 477–486.

Guo, J. (2022). The postfeminist entrepreneurial self and the platformisation of labour: A case study of Yesheng female lifestyle bloggers on Xiaohongshu. *Global Media and China*, *7*(3), 303–318. https://doi.org/10.1177/20594364 221095896

Han, X., Poblete-Cazenave, M., Pelz, S., & Pachauri, S. (2022). Household energy service and home appliance choices in urban China. *Energy for Sustainable Development*, *71*, 263–278.

Hays, S. (1996). *The cultural contradictions of motherhood*. Yale University Press.

He, G., Leurs, K., & Li, Y. (2022). Researching motherhood in the age of short videos: Stay-at-home mothers in China performing labor on Douyin. *Media and Communication*, *10*(3), 273–289.

Heiman, R., Liechty, M., & Freeman, C. (2012). Introduction: Charting an anthropology of the middle-classes. In R. Heiman, C. Freeman, & M. Liechty (Eds.), *The global middle classes: Theorising through ethnography* (pp. 3–29). SAR Press.

Henderson, A., Harmon, S., & Newman, H. (2016). The price mothers pay, even when they are not buying it: Mental health consequences of idealised motherhood. *Sex Roles*, *74*(11–12), 512–526. https://doi.org/10.1007/s11199-015-0534-5

Henderson, F. (2018, September 24). *WhatsApp? Parents are drowning in school info*. Tes News. https://www.tes.com/news/whatsapp-parents-are-drowning-school-info

Hendley, S. (2023, August 2). Help! My school WhatsApp group is making me hate other parents. *Sydney Morning Herald*. https://www.smh.com.au/lifestyle/life-and-relationships/help-my-school-whatsapp-group-is-making-me-hate-other-parents-20230802-p5dtey.html

Hessler, P. (2023, June 26). The double education of my twins' Chinese school. *New Yorker*. https://www.newyorker.com/magazine/2023/07/03/the-double-education-of-my-twins-chinese-school

Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. University of California Press.

Horgan, J. (2021, August 31). Playground politics: The truth of parents' WhatsApp groups. *The Irish Times*. https://www.irishtimes.com/news/education/playground-politics-the-truth-of-parents-whatsapp-groups-1.4651913

Hou, Y., & Yu, Z. (2023). The unified theory of acceptance and use of DingTalk for educational purposes in China: An extended structural equation model. *Humanities and Social Sciences Communications*, *10*(1), 1–12. https://www.chinahighlights.com/travelguide/article-qq.htm

Huang, R., Liu, D. J., Tlili, A., Yang, J., & Wang, H. (2020). *Handbook on facilitating flexible learning during educational disruption: The Chinese experience in maintaining undisrupted learning in COVID-19 outbreak*. Smart Learning Institute of Beijing Normal University.

Jacobs, E. (2019, May 21). The playground politics of the parents' chat group. *Financial Times*. https://www.ft.com/content/7a0034ce-7590-11e9-be7d-6d846537acab

Jankowiak, W. R., & Moore, R. L. (2017). *Family life in China*. Polity Press.

Jarrett, M. (2023, June 8). *Brands wish China's gaokao-takers good luck*. Dao Insights. https://daoinsights.com/news/brands-wish-chinas-gaokao-takers-good-luck/

Kaur, D. (2024, February 1). *China unleashes AI wave, approves 14 LLMs for commercial use*. Techwire Asia. https://techwireasia.com/02/2024/ai-breakthrough-china-approves-first-wave-of-llms-in-2023/

Kipnis, A. B. (1997). *Producing guanxi: Sentiment, self, and subculture in a north China village*. Duke University Press.

Kuan, T. (2015). *Love's uncertainty: The politics and ethics of child rearing in contemporary China*. University of California Press.

Lareau, A. (2003). *Unequal childhoods: Class, race, and family life*. University of California Press.

Lee, E. (2014). Introduction. In E. Lee, J. Bristow, C. Faircloth, & J. Macvarish (Eds.), *Parenting culture studies* (pp. 1–24). Palgrave Macmillan.

Lee, K. F. (2018). *AI superpowers: China, Silicon Valley, and the new world order*. Houghton Mifflin.

Lim, S. S. (2020). *Transcendent parenting: Raising children in the digital age*. Oxford University Press.

Lim, S. S. (2021, July 8). Shedding light on children's digital rights. *Asia Global Online*. https://www.asiaglobalonline.hku.hk/shedding-light-childrens-digital-rights?fbclid=IwAR3LMGK7XxR32l2eKbZvH4TanxJRxL12xbWeS WNfg9lXNfe3y81X_HniIbc

Lim, S. S. (2024). Super apps in mobile first societies: Contemplating 'transactionalism creep'. In G. Goggin & L. Hjorth (Eds.), *Routledge companion to mobile media*. Routledge.

Lim, S. S., & Wang, Y. (2021a, September 23). In China, the state is regulating children's work and play – To what end? *Asia Global Online*. https://www.asiaglobalonline.hku.hk/china-state-regulating-childrens-work-and-play-what-end?fbclid=IwAR1wrt42z7pBmKB8DdWCCk Je_a5U2QIUHxEc2iiYQDoXkOmzoc67t_EbxPQ

Lim, S. S., & Wang, Y. (2021b). Lessons from our living rooms: Illuminating lockdowns with technology domestication insights. *Journal of Children and Media*, *15*(1), 17–20.

Lim, S. S., & Wang, Y. (2024). Social media and performative parenting. In M. M. Skoric & N. Pang (Eds.), *Research handbook on social media and society* (pp. 2–11). Edward Elgar Publishing.

Ling, R. (2012). *Taken for grantedness: The embedding of mobile communication into society*. MIT Press.

Liu, Y., & Wang, W. (2023). Discipline and resistance in the representation of motherhood: Postpartum recovery discussion on Xiaohongshu. *Feminist Media Studies*, *23*(5), 2286–2302.

Livingstone, S., & Blum-Ross, A. (2020). *Parenting for a digital future*. Oxford University Press.

Long, Q., Rothenberg, W. A., Liu, Q., & Chang, L. (2021). Four domains of parenting in China. In J. E. Lansford, W. A. Rothenberg, M. H. Bornstein, & V. Gubbins (Eds.), *Parenting across cultures from childhood to adolescence* (pp. 22–40). Routledge.

Loo, B. P., & Wang, B. (2018). Factors associated with home-based e-working and e-shopping in Nanjing, China. *Transportation*, *45*(2), 365–384.

Lyons, A. (2020). Negotiating the expertise paradox in new mothers' WhatsApp group interactions. *Discourse, Context & Media*, *37*, 100427. https://doi.org/10.1016/j.dcm.2020.100427

Lyu, K., & Zhong, C. (2023). Self-selection or self-disqualification? Chinese rural-to-urban migrant parents' involvement imaginaries in home–school interaction. *International Journal of Educational Research*, *122*, 102266.

Mackenzie, J. (2018). *Language, gender and parenthood online: Negotiating motherhood in Mumsnet talk*. Routledge.

Mackler, J. S., Kelleher, R. T., Shanahan, L., Calkins, S. D., Keane, S. P., & O'Brien, M. (2015). Parenting stress, parental reactions, and externalising behaviour from ages 4 to 10. *Journal of Marriage and Family*, *77*(2), 388–406. https://doi.org/10.1111/jomf.12163

Margolis, R., & Myrskylä, M. (2015). Parental wellbeing surrounding first birth as a determinant of further parity progression. *Demography*, *52*(4), 1147–1166. https://doi.org/10.1007/s13524-015-0413-2

Mayangsari, I. D., & Aprianti, A. (2017). Understanding communication among parents and teachers in WhatsApp. Case study in Bandung, Indonesia. *Malaysian Journal of Social Sciences and Humanities*, *2*(2), 18–23.

Meng, B. (2020). When anxious mothers meet social media: WeChat, motherhood and the imaginary of the good life. *Javnost-The Public*, *27*(2), 171–185.

Milledge, T. (2023, August 24). *"They made me physically sick": An educator on the problem with parent class WhatsApp groups*. Mamamia. https://www.mamamia.com.au/toxic-parent-whats-app-groups/

Musick, K., Meier, A., & Flood, S. (2016). How parents fare: Mothers' and fathers' subjective wellbeing in time with children. *American Sociological Review*, *81*(5), 1069–1095. https://doi.org/10.1177/0003122416663917

Moyano Dávila, C., Rojas-Navarro, S., & Domenech, R. (2023). Silenced conflict: Surveillance and normalisation using WhatsApp groups at school. *Family Relations*, 72(2), 547–564.

Na, Q. (2023, June 8). *How does China's Gen Z make pregnancy more self-fulfilling and less about sacrifice?* Dao Insights. https://daoinsights.com/opinions/how-does-chinas-gen-z-make-pregnancy-more-self-fulfilling-and-less-about-sacrifice/

Naftali, O. (2016). *Children in China*. Polity Press.

Nelson, M. K. (2010). *Parenting out of control: Anxious parents in uncertain times*. NYU Press.

Nomaguchi, K., & Milkie, M. A. (2020). Parenthood and well-being: A decade in review. *Journal of Marriage and Family*, *82*(1), 198–223.

Orton-Johnson, K. (2017). Mummy blogs and representations of motherhood: "Bad mummies" and their readers. *Social Media+ Society*, 3(2), 1–10. https://doi-org/10.1177/2056305117707186

Pang, K. (2022, August 21). *How to use WeChat and QQ in China*. China Highlights. https://www.chinahighlights.com/travelguide/article-qq.htm

Park, S., Lim, H., & Choi, H. (2015). Gangnam moms: A qualitative study on the information behaviours of Korean helicopter mothers. In *iConference 2015 proceedings*.

Pearlin, L. I. (1989). The sociological study of stress. *Journal of Health and Social Behaviour*, *30*(3), 241–256. https://doi.org/10.2307/2136956

Peng, P. (1997). *China family planning encyclopaedia* (Zhong guo ji hua sheng yu quan shu). China Population Press (Zhong guo ren kou chu ban she) (in Chinese).

Peng, Y. (2022). Gendered division of digital labour in parenting: A qualitative study in urban China. *Sex Roles*, *86*(5–6), 283–304.

Peng, Y. (2023, April 8). For China's mothers, Big Tech can be a burden. *Sixth Tone*. https://www.sixthtone.com/news/1012669

Rocca, J.-L. (2015). *A sociology of modern China*. Oxford University Press.

Ryan, J. (2019). *Education in China*. Polity Press.

Schweller, L. (2014). *Motherhood 2.0: Digital motherhood as visual culture*. University of California.

Shen, B., Zhou, Z., & Xia, C. (2022). *More than a wife and a mom: A study of mom vlogging practices in China*. arXiv preprint arXiv:2206.11843

Short, S. E., Fengying, Z., Siyuan, X., & Mingliang, Y. (2001). China's one-child policy and the care of children: An analysis of qualitative and quantitative data. *Social Forces*, *79*(3), 913–943.

Shu, X. (2023, October 27). How a red-haired chatbot became China's new favourite English tutor. *Sixth Tone*. https://www.sixthtone.com/news/1013961

Straits Times. (2023, March 8). China's students leap over 'Great Firewall' to get homework help from ChatGPT. *Straits Times*. https://www.straitstimes.com/asia/east-asia/chinas-students-leap-great-firewall-to-get-homework-help-from-chatgpt

Stright, A. D., & Yeo, K. L. (2014). Maternal parenting styles, school involvement, and children's school achievement and conduct in Singapore. *Journal of Educational Psychology*, *106*(1), 301–314. https://doi.org/10.1037/a0033821

Sun, Y. (2016, March 8). WeChat is extending China's school days well into the night. *MIT Technology Review*. https://www.technologyreview.com/s/600943/wechat-is-extending-chinas-school-days-well-into-the-night/

Tencent Cloud. (2023) *Get more with Tencent Cloud*. https://cloud.tencent.com/?mobile&lang=en

Thomala, L. L. (2023a, January 24). *Market share of short video service providers in China as of March 2022*. Statista. https://www.statista.com/statistics/250546/leading-social-network-sites-in-china/

Thomala, L. L. (2023b, November 6). *Most popular social media in China Q3 2022*. Statista. https://www.statista.com/statistics/250546/leading-social-network-sites-in-china/

Thomala, L. L. (2023c, November 22). *MAUs of QQ messenger Q4 2019-Q3 2023*. Statista. https://www.statista.com/statistics/1318070/china-tencent-number-of-monthly-active-accounts-of-qq/

Turkle, S. (2011) *Alone together: Why we expect more from technology and less from each other*. Basic Books.

Ungar, M. (2009). Overprotective parenting: Helping parents provide children the right amount of risk and responsibility. *The American Journal of Family Therapy*, *37*(3), 258–271.

Ungar, M. (2009). *Too safe for their own good: How risk and responsibility help teens thrive*. McClelland & Stewart.

Villano, M. (2020, March 16). *How 'regular school' parents can homeschool their kids*. CNN. https://edition.cnn.com/2020/03/16/health/homeschooling-during-coronavirus-wellness/index.html

Vitak, J., Blasiola, S., Patil, S., & Litt, E. (2015) Balancing audience and privacy tensions on social network sites. *International Journal of Communication*, *9*, 1485–1504.

Wang, Y., & Lim, S. S. (2020). Digital asymmetries in transnational communication: Expectation, autonomy and gender positioning in the household. *Journal of Computer-Mediated Communication*, *25*(6), 365–381.

Wang, Y., & Lim, S. S. (2021). Nomadic life archiving across platforms: Hyperlinked storage and compartmentalised sharing. *New Media & Society*, *23*(4), 796–815. https://doi.org/10.1177/1461444820953507

Wasserman, E., & Zwebner, Y. (2017). Communication between teachers and parents using the WhatsApp application. *International Journal of Learning, Teaching and Educational Research*, *16*(12), 1–12.

White Night Workshop. (2023, December 30). Learning curve: Young teachers strive as class leaders. *Sixth Tone*. https://www.sixthtone.com/news/1014351

Wu, Q. L., Liu, X., & Yuan, E. J. (2021). Debating the two-child policy on Sina Weibo: A study of social media as symbolic space in China. *Journal of Broadcasting & Electronic Media*, *65*(5), 699–723.

Xiaohongshu. (2023). *About us*. https://www.xiaohongshu.com/protocols/about

Xiong, B. (2023, December 13). *'Mompetition' reflects burden on mothers.* China Daily. https://global.chinadaily.com.cn/a/201811/21/WS5bf493dca310eff303289f57.html

Xu, J. (2017). *The good child: Moral development in a Chinese preschool*. Stanford University Press.

Xue, E., & Li, J. (2023). What is the value essence of "double reduction"(Shuang Jian) policy in China? A policy narrative perspective. *Educational Philosophy and Theory*, *55*(7), 787–796.

Yan, A. (2023, March 23). 'Parents have homework again': Father in China expelled from chat group by teacher for saying assignment for child means work for him, prompting official probe. *South China Morning Post*. https://

mcdn.i-scmp.com/news/people-culture/trending-china/article/3214265/
parents-have-homework-again-father-china-expelled-chat-group-teacher-
saying-assignment-child-means

Ye, Z. (2022, December 14). China is cracking down on 'hidden' tutoring
schools. *Sixth Tone*. https://www.sixthtone.com/news/1011889

Yochim, L. G. (2018). *Navigating the aspirational city: Urban educational
culture and the revolutionary path to socialism with Chinese characteristics*. Brill.

Yu, L. (2014). *Consumption in China*. Polity Press.

Yuan, C. (2020, November 2). *Trending in China: The 'Tyranny' of parent
teacher social media chat groups*. Caixin Global. https://www.caixinglobal.
com/2020-11-02/trending-in-china-the-tyranny-of-parent-teacher-social-
media-chat-groups-101622054.html

Zelizer, V. A. (1994). *Pricing the priceless child: The changing social value of
children*. Princeton University Press.

Zhai, Z., Zhang, X., & Jin, Y. (2014). Demographic consequences of an
immediate transition to a universal two-child policy (Li ji quan mian fang
kai er tai zheng ce de ren kou xue hou guo fen xi). *Population Research (Ren
kou yan jiu)*, *2*, 3–17 (in Chinese).

Zhang, M. (2018, July 2). Hangzhou, China's answer to 'Silicon Valley',
is a hit with returning graduates, study finds. *South China Morning
Post*. https://www.scmp.com/business/companies/article/2152935/
hangzhou-chinas-answer-silicon-valley-hit-returning-graduates

Zhang, M., Xu, P., & Ye, Y. (2021). Trust in social media brands and
perceived media values: A survey study in China. *Computers in Human
Behaviour*, *127*, 107024. https://doi.org/10.1016/j.chb.2021.107024

Zhang, T. (2021). Chinese parents' perception of emergency remote K-12
teaching-learning in China during the COVID-19 pandemic. *Asian Journal
of Distance Education*, *16*(1), 16.

Zhao, R., & Ju, G. (2022). How do Internet moms raise children? The
reshaping of Chinese urban women's parenting psychology by COVID-19
online practices. *Frontiers in Psychology*, *13*, 933582.

Zhao, X., Lim, S. S., Yang, C., & Huang, H. (2024). Navigating paradoxes:
Uneven digital domestication under the double reduction policy in
China [Paper presentation]. 74th annual conference of the International
Communication Association, Gold Coast, Australia.

Zhao, Z. (2021). Analysis on the "Douyin (TikTok) Mania" phenomenon based on recommendation algorithms. In *E3S web of conferences* (Vol. 235, p. 03029). EDP Sciences.

Zhu, J. (2023, September 11). In China, pricey teachers' day presents spark debate on gift-giving. *Sixth Tone*. https://www.sixthtone.com/news/1013709

Zhu, W., Liu, Q., & Hong, X. (2022). Implementation and challenges of online education during the COVID-19 outbreak: A national survey of children and parents in China. *Early Childhood Research Quarterly*, *61*, 209–219.

INDEX