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Surveillance in Small Acts: Health Code Rituals during the COVID-19 Pandemic in Xiamen, China

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Introduction

I am sitting with Stone's mother during our interview in their apartment on the 43rd floor, enjoying the night view of Dongping Mountain, and the tea she has prepared for me. Stone is doing schoolwork in his room. As his mum is busy today, his father needs to assist their younger son with his homework – a task he is visibly unfamiliar with. We discuss educational surveillance and family education, after the implementation of the double reduction reform (*Shuang Jian*) in the Chinese education system. Suddenly I receive a notification on my phone. I have not yet reported my health status and whereabouts in the university system, and my department administrator reminds me of this task before the daily deadline of 7 pm. Even though sending the report requires only a few clicks and takes a short amount of time, I manifest my annoyance with the procedure.[1]

Stone's mother seems surprised by my reaction. She perceives my annoyance as an artefact of the fact that, 'Western people like freedom too much'. She reports the health data of her entire family to the school every day, and does not share my feelings of exposure and constraint. She calls it '*xiaoshi*' – a small thing, a petty thing, a trivial matter. 'Xiamen is very safe', she stresses several times, a moral logic whereby feeding data into the system will guarantee safety and good health.

This is a form of what I call 'small act' surveillance, during the COVID-19 pandemic in the city of Xiamen, China. I use the term 'small act' to

emphasize that surveillance during the pandemic was not only experienced (in the form of contact tracing and quarantine), but also performed by citizens through a series of quotidian acts. In China, pandemic surveillance consisted of numerous grids of surveillance, various authorities creating 'multiple surveillant assemblages, all linking back to provincially and centrally collected, stored, and analysed information' (Bernot and Cassiano, 2021, p 17). These pandemic surveillant assemblages created their own temporal regimes, visible either as an abrupt expression of state power, as in the case of lockdowns, or as the subtle, almost intangible temporalities of health codes. In line with Peacock (Introduction, this volume), I consider pandemic surveillance not only as constituted by the monitoring practices of the state and its institutions, but as a 'generator' of social life, of ritualized small acts and behaviours conforming to the temporal regimes pandemic surveillance had imposed.

Research background

This chapter is based on my ethnographic research on educational surveillance in Chinese families, conducted during the COVID-19 pandemic in Xiamen. This entailed both participant observation of their lives (in digital spaces and in person), as well as extensive interviews with parents and their school-age children.[2] Online we communicated through social media, particularly on WeChat – a platform deeply entrenched in the everyday lives of Chinese people (Chao, 2017).[3] I also engaged in informal interactions and conversations and shorter interviews with Chinese and foreign residents in Xiamen, who agreed to collaborate as research participants. All participants' names have been changed to English names for ease of reading. In addition, I used policy briefs on pandemic prevention, surveillance instructions, and official news on digital platforms to analyse themes related to the pandemic, surveillance, and other control measures. The research also involved documenting auto-ethnographic traces of my own experiences of living in Xiamen – a perspective framed by the limitations and conditions of being an international student at Xiamen University, living off-campus.[4]

My research participants belonged to the vague designation of the Chinese middle class of a second-tier city (Zhang, 2020).[5] Even if the total income of some of these participants may have decreased during the three years of the pandemic, some benefitted from the window of opportunity that COVID-19 offered, and were able to grow their new businesses significantly.

Chinese people were proud of the effectiveness of their efforts in fighting the virus, and could be disdainful of Western societies defending their freedoms against health surveillance (Liu, 2021). However, it should be noted that my interlocutors did not only take pride in how 'safe' China was compared to the rest of the world, but moreover in how 'safe' Xiamen was

compared to other places in China. Unlike residents of cities like Shanghai, Xi'an, or Wuhan, where strict entire-city lockdowns were enforced, people in Xiamen only experienced a few outbreaks, which were contained relatively quickly. Critical voices against preventive measures were notably scarce. In November and December 2022, during protests in other cities, none of my interlocutors, to my knowledge, ever expressed criticism by posting a photo of a sheet of blank A4 paper (which became the symbol of protest) on their WeChat Moments.

This chapter was assembled more than a year after these interactions took place, when the COVID-19 pandemic was already considered by the World Health Organization (WHO) to be part of history.[6] It is thus a historical exploration of the temporalities surveillance measures produced, and the ruptures they caused in the lives of the Xiamen residents, in the knowledge that these measures did not continue after the formal end of the pandemic.

On temporal regimes of COVID-19 surveillance

Anthropologists have often conceptualized an emergency as a state of exception, whereby the power to impose legal and moral interpretations to reshape economic or political norms belongs to those who control the response. Emergencies have the potential to hence amplify both power, and vulnerability to it. In a state of emergency, norms that govern life may be suspended, and power structures entrenched (Beckett, 2013, MacPhail, 2014, Stellmach and Beshar, 2016, Lakoff, 2017, Jordheim and Wigen, 2018). As Didier Fassin and Mariella Pandolfi argue, 'A temporality of emergency derives from a desire to intervene' (Fassin and Pandolfi, 2010, p 16), emphasizing the 'now time' of action and the roles of those in command of the response. However, it is equally important to recognize that situated experiences may differ from how emergencies are framed by those in power, such as governments (MacPhail, 2014).

Here I employ the term 'ruptures' (Lynteris, 2014), in order to reflect on how the COVID-19 pandemic and its surveillance compelled residents of Xiamen to adopt new ways of experiencing time. Martin Holbraad and his co-authors apply the concept of 'ruptures' (Holbraad et al, 2019), to describe the multiplicity of differently experienced 'nows'. Ruptures look both backward and forward at once, and connote a forceful form of discontinuity. They also relate to memory and how the experiences of past traumas inform the present (Holbraad et al, 2019). Ruptures are venues for transformation, providing a temporal structure for the emergence of change.

I analyse the COVID-19 pandemic in China as a series of ruptures, causing post-disaster dynamics at three levels: national, institutional, and individual. On a national level, after an initial hiatus, the government used the outbreak to strengthen sentiment around the Chinese Communist

Party under the leadership of Xi Jinping. On 10 February 2020, Xi Jinping inaugurated the COVID-19 pandemic narrative by declaring a 'people's war against the novel coronavirus' (The State Council of the People's Republic of China, 2020). Surveillance was the weapon of choice. Institutionally, the Chinese government utilized this epidemic rupture to accelerate the digital transformation of government, economy, and society (Wu et al, 2020). To the repertoire of surveillance measures dating from the time of the SARS outbreak, Xi added digitalizatization of monitoring measures aimed at containment (Zhang, 2020). One aspect of strengthening pandemic control over society was the digitalization of the '*Meiri Jiankang Zhuizong Daka'* – a daily registration of citizen health records (Wu et al, 2020, p 307). On the interpersonal level, while others have examined the socio-temporal implications of outbreaks concerning epidemic surveillance and quarantine (Desclaux et al, 2017; Frankfurter, 2019), I present the surveillance enacted by citizens through digital reporting, as imposing a particular microsocial temporal regime.

What has been called epidemic intelligence is a particular kind of surveillance assemblage. It consists of the swift collection and analysis of disease-related data, in order to reduce the time between detection, diagnosis, and the introduction of control measures. Carlio Caduff argues that epidemic intelligence 'eventualizes' epidemics, producing 'a spectacle of eventfulness while blocking events from happening' (Caduff, 2014, p 41). It is not simply the neutral recording of information, but is an example of surveillance being simulated, in which coded information anticipates an event in order to shape its outcome (Bogard, 1996). In China, the foundation of this was contact tracing through health codes (*Jian Kang Ma*).

Developed as software extensions on two of China's most popular platforms, Alipay and WeChat, as early as February 2020, health codes became the tool of 'proving' one's 'health' status (Sun and Wang, 2022). Even though each province (and many cities) had specific health codes, the operation was similar. Schematically, three kinds of data fed the codes: personal information, users' geo-temporal locations,[7] and the likelihood of contact with virus carriers based on user networks and online transactions (Liang, 2020). The algorithm evaluated the data as safe, risky, or unsafe, and generated one of three colour indicators of the health code: green, yellow, or red. Health codes evolved during the three years of the pandemic, increasing the amount of data they generated and collected. They were sometimes faulty (Liu, 2022), paralyzing entire cities for hours. However, in Xiamen they operated without any major disruption until the end of the pandemic. Besides a health code, a travel code (*Xing Cheng Ma*) infrastructured through mobile network towers, showed counties visited by each user over the last seven days.

During outbreaks, pandemic monitoring was supported by 'special preventive measures': contact tracing extended to the precise movement

trajectories of confirmed cases and close contacts within the city. It resulted in the 'closed loop management' of communities (meaning only registered people could enter or leave communities, company buildings, and facilities); quarantines (in medical facilities); localized lockdowns (such as 'no exit' spaces); the closing down or restriction of services and businesses (such as when restaurants could only serve takeaways); schools transferring to online lessons; and shops limiting the number of customers allowed inside.

During the days, weeks, and months free from the COVID-19 virus in Xiamen city, pandemic surveillance, based on health codes, created temporal regimes that dominated the rhythms of everyday life (Lefebvre, 2004). Mobile phone screens became the key loci of power – distributed in people's hands, empowering them to deter the danger of COVID-19 through acts of checking information, and scanning the codes on their phones. Enacting small act surveillance, they actively participated in 'observation before the fact' (Bogard, 1996). Participation in this simulated surveillance created the shared imagination of living in the 'future–past' (Bogard, 1996, p 34) and of being 'safe' in a 'safe' city.

Through micro-rituals of feeding the data into the system, which themselves set the rhythm of the day, the lives of Xiamen residents were governed by rhythmic multiplicity. What I consider the temporalities of the 'PCR test clock', 'reverse gear', and 'group responsibility' of pandemic surveillance will be described in what follows. In the simulation of pandemic surveillance, where all variations at each step are accounted for in advance, these regimes exhibit characteristics of hypercontrol. The Chinese government's decision to ultimately abolish health codes abruptly ended these ritualistic small acts and caused yet another rupture, with significant temporal and organizational consequences, in the personal lives of Xiamen residents.

The Chinese government has invested heavily in surveillance technology in recent years (Byler, 2022) and state and commercial surveillance are seamlessly integrated and apparent in everyday life. The involuntary nature of pandemic surveillance in China is important to highlight (Macnish and Henschke, 2023); however, as Lyon (2022) has argued, it emerged within an already complex combination of surveillance technologies, both digital and more traditional.

In his work on the AIDS pandemic, Charles Rosenberg (Rosenberg, 1992) introduced the concept of a dramaturgical form to describe the sequential unfolding of an epidemic. The outbreak emerges, develops, and eventually subsides, much like the plot of a theatrical play. Rosenberg's dramaturgy offers a frame through which to understand the chronology of epidemics, and highlights the dynamic and evolving nature of infectious diseases inside a population. It also emphasizes the social dimensions of epidemics, where societal behaviours, governmental responses, and medical interventions all contribute to the overall 'plot'. The following sections illustrate how different

temporalities operated and created multi-layered ruptures during the four acts of the COVID-19 drama in the city of Xiamen.[8]

First act: the introduction to the pandemic

From December 2019 to 16 February 2020

The COVID-19 outbreak in Wuhan in late November 2019 did not happen in a vacuum (World Health Organization, 2021). The SARS 2003 epidemic had left indelible marks on China, creating a template that overwhelmingly shaped the response to COVID-19 (Dolan and Rutherford, 2020). Doctors were already attuned to the signs of epidemics (Li, X. et al, 2020), and authorities created a legal framework for implementing warning systems (Wang et al, 2020). The initial days of the COVID-19 outbreak in December 2019 put these systems to the test, and the failure of reporting mechanisms (Czernin, 2020) resembled the initial stage of denying the SARS outbreak (Eckholm, 2006). Soon afterwards, building on the experiences two decades earlier, the government and local authorities introduced procedures such as quarantine, social distancing, and measures severely restricting movements. Even the slogans of the mass mobilization campaign came from the time of SARS.[9]

Moreover, the news about the outbreak appeared before the Spring Festival holiday period. This temporal coincidence had important consequences, as many residents from Xiamen could spend the initial couple of months of the pandemic, characterized by uncertainty and lowered economic activity, in the safety of their family homes.

Statistically, with a confirmed patient carrying the virus, the COVID-19 pandemic started in Xiamen on 23 January 2020, with three recorded cases (Xiamen City Health Commission, 2020). Learning from the memory of SARS, many believed that they could avoid COVID-19 by self-quarantining. Some parents told me that in order to protect their children, they did not allow them to leave the house from January until the end of April (River, Cliff) or even May (Jasmin). Fear and anxiety stimulated extreme reactions, and the smell of bleach would linger throughout residential buildings for days. This period was characterized by desolate streets, closed restaurants, and almost empty supermarkets and shopping centres. Home delivery became a popular method of getting provisions, materialized by the piles of bags that accumulated at the gates of inner-city compounds and communities. Similar to rituals developed in Hong Kong during SARS (Lee and Wing, 2006), many families started the rituals of bleaching their homes, developing undressing procedures, and pressing elevator buttons with keys to avoid contaminating their fingers (despite the fact that elevators like those in my building were bleached every hour). Unsurprisingly, masks became the most sought-after item and were soon in short supply.

On 2 February 2020, the Xiamen city government introduced 'close loop management': prohibiting non-residents from entering buildings they were not registered to live in. Entering any venue required recording all personal information in special community registry books after having one's temperature taken. This temperature check was sometimes comical and eerie: guards would use 'thermometer guns' that were frequently faulty, resulting in imprecise measurements. To rectify this, guards would press the 'thermometer gun' against foreheads for a more accurate reading, pragmatically ignoring the potential presence of the virus and its 'distancing' and 'no contact' premises to fulfil the obligations of data collection. The yet-to-be-digitalized 'closed loop management' imposed on residents proved effective: within three weeks – by 16 February – the infection curve had flattened in Xiamen, with a total of just 35 cases.

Second act: proliferation

From 16 February 2020 to 30 July 2021

In Rosenberg's dramaturgy (1992), during the second act the epidemic spreads, and gains momentum. Xi Jinping's 'people's war against the novel coronavirus' proved to be effective, and from April to July 2020 there were no new cases reported in China. Afterwards, many regional clustered outbreaks occurred in different cities and surrounding areas, and the Chinese government chose to adopt an elimination strategy, the so-called 'Zero-COVID policy', described as 'active case finding and management' (Li, Z. et al, 2020). Zero-COVID became the collective framework for explaining and dealing with the disease.

After the initial containment in Xiamen, and for the next 18 months, the COVID-19 virus was absent in the city.[10] Companies and factories gradually restarted operations in March, and schools resumed in-person classes in May 2020. What was called 'getting back to a new normal' required huge caution. People applied a 'common sense' approach: children and grown-ups started to pay more attention to hygiene, washing their hands frequently (soap appeared in many public toilets), and ventilating rooms. Small gel alcohol bottles hung on students' backpacks. Due to the news of outbreaks that had started in logistic centres processing imported food, I was warned on many occasions against eating Norwegian salmon or Chilean cherries (Chen, 2021).

Masks were obligatory on public transport and in public space, and most people wore masks on the streets. Masks were also obligatory in schools, and, at first, even during physical education classes. Over time, despite biomedical reasoning that the virus would spread more easily in a crowded classroom of 50+ people than outdoors, students often discreetly removed their masks in the classroom – to breathe more comfortably, eat, or simply

play – but continued to wear them in parks and on the streets. They felt they could trust their classmates more than strangers on the street, because each of them proved they were well each day by sending their health codes to their teachers (Sage).

Daily reporting and the sending of codes began in February 2020, when kids were confined to their homes attending classes online. Parents had to send two kinds of codes – health codes and travel codes – of all people living with them under the same roof on a given day. This blurred definition included parents, grandparents, and other relatives, including siblings (even though they were already linked to the parent's health code). In wealthier families, codes of 'stay-at-home helpers' had to be sent too. When travelling was permitted, visiting relatives' codes were also expected to be sent.

Sending codes set up a daily ritual for families, a new quotidian rhythm shared by all children attending educational institutions in Xiamen. Every day, Monday to Sunday, between the time children were out of school and 8:00 am the next day, mothers measured temperatures, collected codes, and uploaded data into the systems. Depending on each district, there were two time slots when parents had to submit the data: before 6:00 pm or before 8:00 am. In theory, pupils whose parents failed to send this data were not allowed to attend school. It was not made easy for them to forget. Teachers were responsible for gathering all the information, and were actively 'reminding' parents who did not fulfil their duties in time, by singling them out with the '@' sign in the class group chats.

The whole performance did not usually take long. If everyone in the extended family answered with their codes quickly, collecting the codes and uploading them in the system would only take a couple of minutes. Parents submitting the data to the school felt that this was a 'small matter' that took only 2–3 minutes of their day. 'Because every day I only need to spend 2–3 minutes to submit the data, for me, it doesn't have any impact', says Stone's mother. Another mother, from the working district, where data had to be submitted before 8:00 am, complained about the burden of taking temperatures from sleeping daughters and collecting the codes from sleeping in-laws before work. She was not happy with the arrangement; however, she did not oppose the idea of providing the information. This ritual, the active participation in the simulation of surveillance, simultaneously created a shared imagination of being safe from the virus, a simulation of pupils being safe in the school, and, consequently, of everyone being safe across the city.

It seemed that people were already used to being surveilled, being 'visible' to the state to such a degree, that this act of collecting codes and updating every day, seemed natural, even banal. As noted by Lyon, since the population in China are more used to constant ranking, the health code could be seen as just one more platform-assisted form of rating and ranking citizens (Lyon, 2022).

In their article about China's response to the pandemic, Cassiano et al (2021) explain how the surveillance ecosystem in which health codes are embedded gives smartphone users a degree of autonomy and personal flexibility, allowing them to make individual decisions about their activities. During this second act, when there was no virus in Xiamen and everyone's code was green, everyone accepted it as a tool of pandemic prevention, guaranteeing safety. However, when the COVID-19 virus was present in the city, these performed small acts of pandemic surveillance created multiple ruptures in the everyday lives of Xiamen residents.

Third act: stabilization and negotiating the public response

From July 2021 to December 2022

In the third act, the epidemic reaches an equilibrium. This does not mean that the disease disappears, but it becomes a constant partner to the affected population. Measures are implemented to control or manage the disease. When communities respond, it becomes another dramaturgical aspect of the epidemic, 'measures to interdict an epidemic constitute rituals, collective rites integrating cognitive and emotional elements' says Rosenberg (1992, p 285).

One month before the third act started, in June 2021, the health codes in Xiamen were upgraded. The first health code, used in the early stages of the pandemic prevention, showed only that a given person 'didn't have abnormal findings' as a green code. The second health code contained information about one's health status (again 'no abnormal findings' as a green code), vaccination status (a gold border surrounding the barcode), and the results of PCR tests in the last seven days. Then, in April 2022, the third version of the code was introduced. It showed 'low level of health risk' as a green code, vaccination status, as well as the numbers 24, 48 or 72 indicating how many hours had passed since the latest PCR test, and a 'scan' button to scan QR codes of every public venue a person had visited.

On 30 July 2021, when the first outbreak since the initial containment of the virus started in Xiamen, preventive measures were introduced that substantially transformed people's everyday lives. The imposed, non-negotiable Zero-COVID policy, sent many into quarantine facilities, which determined the rhythm of daily life for weeks. Here, however, I focus on the ruptures enacted by the discreet, almost invisible, small acts performed through the health codes, rather than the large-scale ruptures of lockdowns themselves.

With the epidemic situation changing rapidly, no one could be sure if a neighbour, a fellow passenger on a bus, another client in a store, a co-worker, or just a passer-by was not a potential 'case' – contact with whom might result in changing the colour of one's health code. One person infected in

a compound could bring all residents into quarantine. This mechanism of what I call 'group responsibility' also worked through the new temporalities, undermining the autonomy that health codes were intended to provide.

Parents learned that having one yellow or red code in a family would cause the student to be banned from school. The mother of Rose, a third-grade middle school student, realized one day that her code had turned yellow. The daughter – healthy and having a green code herself – was forbidden to enter her school and forced to learn from her classmate's notes, as if she were sick. Only by repeating clear PCR tests every day for five days the mother's code returned to green, and the daughter to attend classes in person. After this experience, Rose's mother claimed she had no plans for upcoming holidays: 'I'm scared, what if my code turns yellow? I don't dare to go out because if my code becomes yellow, my daughter can't go to school [again].' Within a few minutes of conversation, Rose's mother mentioned being 'scared', 'anxious', 'feeling bad about it', and 'being too afraid to leave the house'. Group responsibility is an oft-neglected aspect of COVID-19 surveillance, which created another layer of temporal regimes: even though the student's own code was green, she could not go to school because of her mother's yellow code.

As previously mentioned, in addition to health codes, parents were required to submit travel codes that documented the counties they had visited over the previous seven days. Due to the rapidly shifting situation, counties classified as 'case-free' one day could be declared 'high-risk zones' the next. Given the biological temporality of the virus (Lynteris, 2014), the travel codes of those who had visited these areas could be retroactively affected. This ability to alter the past meant that no one's health status was ever truly 'safe', disrupting time as a form of linear progression. It was like briefly shifting a car into reverse, creating a new 'past' that altered how present and future were navigated. This reverse gear mechanism could suddenly change the health code status of even a passer-by, requiring additional screenings or even quarantine. The reverse gear temporality illustrated how the health code system changed the very concept of past and future, and influenced experiences and decision-making.

Stone's mother, who stressed the banality of sending daily health codes to school, admitted that it had had a great impact on her family life.

> Like before, his father went back to his hometown and when he was about to come back, in the afternoon the school sent a notice that if any student or a parent came back from that county, the child could not go to school. So, before his father came home, I told him not to. I said, don't come back, go and stay in a hotel. (Stone's mother)[11]

This way she did not have to upload his travel code to the system, and her sons could attend school. Stone's mother lost family time as a consequence

of this small act. In another example, Iris's father, a factory owner in the neighbouring county of Quanzhou, decided to stay three weeks at the factory in order not to impact his daughter's school attendance, when COVID-19 cases were confirmed in Quanzhou in October 2022.

Travelling to visit parents was a risky endeavour, as the reverse gear of prevention measures could affect reported codes. Moreover, even during the summer holidays, teachers and children were 'advised' to stay in Xiamen, and strongly discouraged not to leave Fujian province. Pike's mother wanted to visit her elderly parents in Zhejiang, a virus-free province at the time, during the summer holidays of 2021. She was angry that her application for permission to travel was rejected. 'Nothing can be done', she told me, annoyed. As River's mother stated when discussing the issue of sending the health code: 'I've hardly seen my mother these three years. Even though she lives in Jinjiang, nearby[12] I couldn't visit her. She understands though.'

In times when the pandemic situation was changing fast, it was easier to 'play it safe'. As Stone's mother says, 'It was my birthday, and then my brother's wife's birthday. My parents wanted to come to visit, but I told them not to come as there was an outbreak [in the county they live in].' Once, during the course of fieldwork, I attended a wedding where the bride's parents could not be present as they were quarantined instead, because the risk status of their hometown had changed while they were en route to Xiamen.

As Wren's mother said, 'Now, moving around the city requires using your instincts. Luckily, yesterday we didn't pass by X neighbourhood, we crossed the street and walked on the other side. Otherwise, our code might have been yellow by now.' Another man, Alex, passed by a metro station where a person later confirmed as COVID-19 positive had bought breakfast at McDonald's that day. The next day he received a message calling for seven PCR tests within seven days, restricting him from leaving the house unless necessary, and not allowing him to use public transportation. As he described it, 'I don't even remember where I was yesterday, but they can tell me where I was at any moment in time'. Here there is a direct contrast between the information-gathering of the epidemic prevention system, directing his movements, and his own lack of knowledge and immobility.

The mechanisms of 'group responsibility' and reverse gear introduced disruptions into the fabric of time, extending beyond the original purpose of the system and resulting in unintended consequences. This phenomenon, known as function creep (Koops, 2021, see also Peacock, Chapter 8, this volume), occurred as the system, initially designed to ensure health and safety, expanded beyond its initial objectives. Surveillance, which was originally meant to provide safety guarantees for families and businesses, began to heavily intrude on and restrict family life. The health codes imposed novel

temporal regimes, fostering self-regulated behaviours, as similarly exemplified by the PCR test clock.

The PCR test clock

By March 2022, PCR testing became commonplace, even without the presence of an outbreak. As one local beach security officer explains after checking my PCR test validity and registering me for a special permit to swim in the sea, 'The pandemic doesn't recognize borders'. In the last update of the health code, the code was showing not only a three-colour health and vaccination status, but also displayed how many hours passed since the last PCR test. From then on, the numbers 24/48/72 determined people's public lives. Different venues established their requirements for negative PCR test results and their validity: theatres, 48 hours; police stations, 24 hours; hospitals, 24 hours; hotels, 48 hours; parks, 72 hours; and swimming pools, 48 hours (or PCR tests done within 24 hours). This was seriously delimiting, requiring not only the passive sharing of information, but also active steps to get PCR testing done.

The validity of PCR tests became crucial in organizing daily life in Xiamen, as the scope of activities depended on how much time had passed since the last test. Much like a 24-hour clock governs routines – limiting what and how long one can do certain things – the PCR clock imposed similar constraints. People had to schedule their activities based on how long they had until the validity of a test 'expired' for a given venue. In this way, the PCR clock dictated not only what people could do, but also when, structuring daily life around the tests' validity.

Alex told me about a birthday party when some of the guests could not enter the venue due to 'invalid health codes', as even though their codes were green, the time since their last test was longer than demanded by the hotel. People either had to plan their activities according to the validity of their tests, or arrange time around the testing sites' operating hours to get tested as often as possible. As Nancy said, 'I got used to swabbing my nose. I test whenever I see a testing booth open, just to avoid trouble.' Once, when prevented from entering a police station because my test results were not in date, a guard advised me: 'Do tests more often. It's easy!'

Even though PCR testing centres were set up in many locations in the city at the time, most of them were open only during regular business hours, so that people who had to work office hours could not benefit from them. In the evenings, in front of the few testing sites operating late, there were queues of Xiamen's working residents getting tested for COVID-19. Or, to be more precise, they were updating information about their last PCR test in their apps, in order to have access to public spaces, services, and resources.

In many schools and kindergartens, there were testing sites on the premises to make testing easier for teachers and pupils. Describing her school routine during her lunch break, Marigold said: 'After finishing additional practice, there is 40 minutes to write homework. Then, if you need to do a PCR test, you must spend 10 minutes on testing. Yes, each person needs to do it once a week. Then you have like 30 minutes to nap.' Even though this whole procedure was not complicated, with testing sites inside schools, it took away precious minutes from pupils' rest time during the lunch break. On the other hand, the sense of safety that this simulated surveillance fostered led to paradoxical situations. Since the outbreak in autumn 2021, getting tested became the primary way to prove a 'healthy status', even though results took hours to update. During the next outbreak in the autumn of 2022, coinciding with the Mid-Autumn Festival and National Holiday, people lined up, masked, at testing sites to get swabbed, only to gather in crowds for outdoor activities like hiking, camping, and barbequing. Along the crowded seafront, most ignored social distancing and removed their masks, relying on the certainty provided by the act of performing the PCR test to relax and have a good time.

Fourth act: the end of the pandemic

After 7 December 2022

As Rosenberg articulates, 'epidemics ordinarily end with a whimper, not a bang' (1989, p 8). The COVID-19 pandemic in China was not an ordinary epidemic, as it finished abruptly on 7 December 2022, with the announcement of the decision of the State Council on another 'optimization' of the control mechanisms, this time signifying the 'lifting of protective measures' (The State Council of the People's Republic of China, 2022). On 13 December the health and travel codes went offline. This was received as the end of a historical epoch. As Pike's mother wrote in her WeChat post minutes before the travel code was about to become inoperative: 'The end of an era. Goodbye! Never to be seen again!'[13]

The end of the health code signified the lifting of pandemic monitoring, but not the end of the disease, as partial data published later showed soaring numbers of infections. The last data entry in the official statistical entry for Xiamen of confirmed cases is from 12 December 2022, after which local governments stopped publishing COVID-19 data. On 25 December, the Chinese government stopped publishing information on COVID-19 infections and fatalities.

In Xiamen, after monitoring measures were lifted, and the numbers of infected pupils were soaring, schools ended the semester on 15 December without the final exams taking place. Some parents I knew bunkered down in their homes, not going out from their apartments for weeks.[14] Others,

especially those who were infected early and recovered quickly, behaved as if the pandemic was over, roaming freely through the city, often without wearing masks. Unable to get medical supplies and avoiding overcrowded hospitals, on WeChat, people shared home recipes for pear or orange syrup as a remedy for the COVID-19 cough. Food delivery companies ran out of stock of ingredients such as eggs, brown sugar, and the aforementioned fruit.

Open endings

The COVID-19 outbreak caused a multi-layered series of ruptures in the city of Xiamen. These ruptures appeared because of the presence of the virus, both in its biological form and in the state narrative of war upon the virus. The 'suspension of judgement' caused by the virus, both in the country and in the city, from January to February 2020, brought back the experience of the SARS epidemic. Throughout most of the three pandemic years, the COVID-19 virus was not present in Xiamen, as it was contained in quarantine facilities for inbound travellers. Residents could have experienced Xiamen as a safe haven. However, the official narrative of the pandemic maintained the virus's presence in the lives and the daily acts of its people: moulding experiences of work time, family time, and leisure.

Pandemic surveillance over various periods of time was not only experienced by residents as imposed measures, like quarantines or lockdowns. Health codes reassembled contact-tracing data into multiple assemblages with diverse effects at different periods and social localities. Like the Big Mother animated by this volume (Peacock, Introduction), health code-based surveillance managed the rhythms of life of urban dwellers. It was a generator of the small acts of surveillance due to the requirements of the system itself, imposing its own temporalities.

City residents actively performed small acts to serve the functioning of the monitoring system: scanning QR codes to enter different venues, feeding health code data to school reporting systems, and updating PCR test results. In this way it is important to emphasize that they were not only passive objects of monitoring. Sending health codes to schools made parents become warriors in the war against the COVID-19 virus. The active participation in pandemic surveillance, gave Xiamen residents the experience of living in a COVID-19 free 'future-past' (Bogard, 1996, p 34), in a world 'as if', in which acting 'as if' complying with the requirements of surveillance would guarantee safety (Seligman et al, 2008).

Ritualistic acts were the processes through which people in Xiamen created and engaged in a hypothetical safe world. The small act surveillance functioned as a ritual, serving as an 'orientation to action' (Seligman et al, 2008). People chose to submit to the surveillance acts, believing it was helping to sustain normality. The obligation to send data to schools became

a ritual, 'as if' sending the health codes could guarantee children's safety. People raced against the PCR test clock, as if updating PCR test results in the health code system was the primary way of preserving their health. These became the core instrument for the construction of social relations and shared temporalities. Yet although they brought the feeling of being together in time, they also generated feelings of worry, fear, and helplessness during outbreaks, when the system's function creep (Koops, 2021) retracted the autonomy it promised, and instead imposed these three forms of temporality.

All these ritualistic acts became the content of the pandemic experience. Small act surveillance requirements determined how people understood the pandemic as a reality that came into being, due to these powerful measures implemented by the state. This power was achieved not only through mechanisms of quarantine or restrictions on movement. It was also realized by acts of obedience, adherence to temporal regimes that cut into the fabric of time. Surveillance mechanisms, like the PCR test clock or reverse gear, showed how time was constructed in ways that relied on the verification and validation that state power could offer (Marx, 2016).

Compliance with the requirements of the state that used to provide safety turned out to be useless, when the special measures and surveillance mechanisms ceased to exist on 13 December 2022. The state's narrative about winning the war against the pandemic did not correspond with the experiences of those sick with the virus recording videos, and taking pictures of overcrowded hospitals. 'The end of the pandemic' in the state narrative brought yet another break, another suspension of certainty.

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Notes

1 Daily reporting was an obligatory task of all students at Xiamen University – including international students who were outside China.

2 I conducted 12 of these interviews with parents, and seven with children.

3 WeChat provides messaging, video conferencing, gaming, mobile payment, and the sharing of photographs, videos, files, location, and app extensions for many other commercial services, including health codes and travel codes during the pandemic.

4 Unlike many international students who left for winter holidays (and could not return after the Chinese government cancelled visas in March 2020), I did not leave China during the pandemic.

[5] In China, cities are categorized into different tiers based on factors such as economic development, population size, infrastructure, and overall urbanization.

[6] According to the WHO, the COVID-19 pandemic ended on 5 May 2023 (World Health Organization, 2023) '.

[7] Children (and possibly older people), who did not have phones themselves, had health codes generated in extensions in applications on parents' phones.

[8] As epidemic data released by the National Health Commission of China shows, temporal division into stages for Xiamen city does not match the stages on national level.

[9] 'Millions of hearts with one mind battle against SARS' ('Wanzhong yixin, kangji feidian') and 'Millions of hearts with one mind battle against pandemic' ('Wanzhong yixin, kangji yiqing'), based on Zhang (2006).

[10] It existed in the quarantine system for international travellers.

[11] Stone's mother admitted that not all parents were willing to pay such a price for 'honest reporting' and some used to '*PS yixia*' (meaning using Photoshop-like tools to make alternations in reported codes).

[12] It is located 60–80 kilometres from Xiamen.

[13] 'The end of an era. Goodbye! Never to be seen again!' (yiduanlishi de jieshu! Zaijian! Zai yebujian!一段历史的结束。再见！再也不见！)

[14] Many of those who stayed at home to avoid infection in the early days decided to risk infection during the later phases of winter holidays, being afraid that if kids did not get through COVID-19 during winter break, unavoidably they would get ill during the second semester causing them to lose some school time, like Cliff's mother.

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