



2023

I versus We: Social Regulations Exacerbated Tension Between Individualism and Collectivism during China's Twenty-first Century Public Health Emergencies

Duan Wang

Follow this and additional works at: <https://digitalcommons.colby.edu/honorstheses>



Part of the [Science and Technology Studies Commons](#)

Colby College theses are protected by copyright. They may be viewed or downloaded from this site for the purposes of research and scholarship. Reproduction or distribution for commercial purposes is prohibited without written permission of the author.

Recommended Citation

Wang, Duan, "I versus We: Social Regulations Exacerbated Tension Between Individualism and Collectivism during China's Twenty-first Century Public Health Emergencies" (2023). *Honors Theses*. Paper 1420.

<https://digitalcommons.colby.edu/honorstheses/1420>

This Honors Thesis (Open Access) is brought to you for free and open access by the Student Research at Digital Commons @ Colby. It has been accepted for inclusion in Honors Theses by an authorized administrator of Digital Commons @ Colby.

I versus We: Social Regulations Exacerbated Tension Between Individualism and Collectivism
during China's Twenty-first Century Public Health Emergencies

An Honors Thesis

Presented to

The Faculty of the Department of Science, Technology, and Society

Colby College

In partial fulfillment of the requirements for the

Degree of Bachelor of Arts

By

Duan Wang

Waterville, Maine

May 12, 2023

Abstract

Since 2020, the COVID-19 pandemic has been a global public health problem, which stimulated restrictions like lockdowns, public service closures, and strict border controls that disrupted individuals' life patterns to mitigate the potential transmission within communities. Intriguingly, with its adherence to the “zero-COVID tolerance” policy, China represented a unique case in the overall global reopening trend after three years of the pandemic. Such an unwavering, uncompromising stance reflected conflicts between individuals and the Chinese government regarding COVID regulations, which exposed the tension between individualism and government-proposed collectivism.

This thesis investigates strict social regulations and the exacerbated tension between individualism and collectivism in China during the COVID-19 pandemic. To examine this topic, I research the dynamics between technology and society in the context of the STS field and Chinese society. The concepts of individualism and collectivism are also explored. Then the thesis analyzes such dynamics with China's twenty-first-century public health emergencies as case studies, which are the 2003 SARS epidemic, the 2009 H1N1 pandemic, and the COVID-19 pandemic. For the unprecedented COVID-19 pandemic, surveillance technologies and public health sciences were applied as the instrument and authorizations for authoritarian social control measures. Such a novel application galvanized the public to express critiques and enact protests against the collective ideology and associated impingement on individual civil liberties. Thus, the strict social regulations unveil the exacerbated tension between individualism and collectivism, which also hint at the adverse implications on China's social stability and democratic humanity.

Acknowledgements

This research project reflected a group's efforts to make it happen. I would like to thank Professors Ashton Wesner and Kara Kugelmeyer for their year-long support and help. Every comment I received was indispensable for the completion of this year-long project. I also want to thank Professor Aaron Hanlon, the STS department chair, for navigating me through the STS major. Additionally, I want to thank Professor Lijing Jiang, formal STS faculty, for igniting my interest in the field of STS.

Outside the STS department, I am so grateful to have support from Professor Chaoran Wang, Professor Hong Zhang, Professor Gail Carlson, and Professor Susan Childers. I could not imagine reaching this milestone in my academic endeavor without your encouragement and assistance in many forms.

Moreover, I would like to thank all the interviewees, who generously offered their insightful thoughts. Your sincerity and honesty encouraged me to complete this honor thesis project.

Finally, thank you to my parents for being the “angel investor” of my life. I would not be able to reach my current position without your support.

Table of Contents

Table of Contents	2
Introduction	3
Methods	5
Literature Review	7
1. Science, technology, and society concepts	8
2. Authoritarian State and China’s Politics Review	12
3. Individualism and Collectivism	17
Case Studies: Major Public Health Emergencies in China	19
1. The First Hit: The 2003 SARS Epidemic	19
2. The Second Trial: The 2009 H1N1 Influenza Pandemic	23
3. The Unexpected Attack: The COVID-19 Pandemic	27
A Closer Look: COVID-19 Pandemic Interview Analysis	32
1. Life disruption under different periods	33
2. Feelings as the mirror of attitudes	39
3. Confrontations Between Individuals and the System as Typical Scenes	41
4. Speculations of the Unusual Experience	45
Discussion	51
1. Continuations in Social Regulations and Outcomes	52
2. Differences Stimulated by the COVID-19 Pandemic in China	53
3. Intersections of Science, Technology, and Politics in Chinese Society	57
Conclusion	59
References	61
Appendix: Supplementary Figures for Interview Analysis	66

Introduction

Since the emergence of the novel SARS-CoV-2 Virus in December 2019, it has quickly spread and disrupted the ordinary dynamic for individuals and communities. Soon it became a predominant health concern globally. On March 11, 2020, the WHO declared the novel coronavirus outbreak a global pandemic (WHO, 2022). Strict control measures like quarantine, month-long lockdowns, and public space closures were implemented quickly to contain possible community transmission under the government's guidance in many countries (Zweig et al., 2021). The fear and uncertainty naturally fermented along with the unpredictable disease's development. After three years of the pandemic, the advancement of scientific knowledge about the virus's nature, the specific medical treatment, and the variants' decreasing virulence prompted many countries to uplift strict social regulations. A symbiotic relationship between people and the SARS-CoV-2 virus represents the general trend.

However, the ongoing COVID-19 pandemic stimulated a unique situation in China. The Chinese government firmly adhered to the “zero-COVID tolerance” policy with a solid ambition to eradicate COVID-19 infection and associated health risks. Accordingly, the Chinese government applied unwavering city-wide lockdowns, strict quarantine measures, routine PCR testing for whole communities, and persistent big data-based contact tracing to minimize community transmission. The strict social regulations contributed to effective control of the pandemic status in China, but they also resulted in unprecedented interferences with the established individual living patterns and the social order. Under such circumstances, clashes between individuals and the government occurred in the later phase of the COVID-19 strict control

in China, rendering an intricate, discordant dynamic between individuals and the Chinese social system.

To understand the underlying association between individuals, technology, and Chinese society during the COVID-19 pandemic, the main research questions embodied in this work are threefold: first, how were the pandemic-induced social regulations applied, and what were their claims and actual effects on individuals and society? Secondly, how did people perceive these social regulations throughout the pandemic? Lastly, what was the role of science and technology in the tension between individualism and collectivism in China, as exemplified by the unconditional, rigid applications of public health knowledge and big data surveillance for pandemic control? How did it reflect the relationship between individuals, technology, and Chinese society?

In this project, I examine the characteristics and impacts of public health emergency-induced social regulations and show their connections to the tension between individualism and collectivism in China. I focus specifically on how social regulations and related policies utilized population mobility control and quarantine during Chinese public health emergencies. I also analyze social regulations' effects on individuals and society based on existing literature and interview responses to decipher individual attitudes and responses under changing social contexts. I aim to present a comprehensive picture of the social regulation-exposed tension between individualism and collectivism during public health emergencies, thus showing the interdependence between science, advanced technologies, and authoritarian governance in China.

During the COVID-19 pandemic, China rendered unprecedented tension between individualism and collectivism, exemplified by the individuals' awareness of and struggles against the erosion of their individual freedoms, access to basic human necessities, and fundamental rights under rigid social regulations and the government's systematic neglect of such encroachment. Such salient tensions between individualism and collectivism also revealed the interdependence between big data surveillance technology, public health sciences, and authoritarian governance. Specifically, I reveal how public health science and surveillance technology served as instruments and authorization of authoritarian social control measures, which stimulated people's criticism and eventual protests against the way collectivist ideology encroached on their individual rights and interests in ways unseen in previous pandemics. This interdependence, I find, resulted in the disruption of previously established equilibrium and caused social instability during the COVID-19 pandemic.

Methods

In this project, I combine a literature-based analysis of China's social regulations and an analysis of interviews with Chinese residents to investigate how public health emergencies exacerbated tension between individualism and collectivism in China.

The literature-based analysis consists of two components: a focus on conceptual interpretations and case studies of China's twenty-first-century public health emergencies. First, I use the literature review to introduce the Sociology of Scientific Knowledge (SSK), Jacques Ellul's

Philosophy of Techniques, the Revenge Effect, and Langdon Winner's Theory of Technological Politics to highlight the profound involvement of technology in politics, which evoked and amplified the tension between individuals' interests and the collective benefits. The conceptual examination is followed by China's political system overview in chronological order to provide the background of individualism and collectivism in Chinese culture and society, which exhibited the fluctuating balance between individuals and the Chinese collective system and facilitated the understanding of people's surprising protection for their fundamental interests and rights under the unprecedented strict control during the COVID-19 pandemic. Subsequently, the definitions of individualism and collectivism are introduced. Specific indicators of these concepts will also be pointed out in this section for further reference in analyzing examples of individual-social system clashes during China's public health emergencies.

The second part consists of three case studies of the 2003 SARS epidemic, the 2009 H1N1 pandemic, and the COVID-19 pandemic in China. Individual experiences of mobility control, rigid quarantine, inaccessible emergency care, and information circulations reported by news and peer-reviewed articles are applied to examine striking conflicts with the government's proposed general interest. By reviewing individuals' attempts to protect their own interests and the government's firm stance for ensuring overall social stability in public health emergency cases, I observe a strong correspondence between the implemented social regulations and individuals' experienced obstacles encroaching on their fundamental civil liberties. Thus, the applied social regulations coupled with individual reactions facilitate the establishment of individual responses as the vital indicators of the tension between individualism and collectivism. I apply such a connection

between individual responses and the tension as a unique lens to further investigate how science and technology were used in a novel way that resulted in unseen social instability in China during the COVID-19 pandemic.

In addition to literature-based analysis, interviews are conducted as the primary method to offer fresh evidence of individuals' experiences and attitudes to the persistent social regulations, which are crucial for illustrating the tension between individualism and collectivism experienced by ordinary citizens in China. Sixteen recorded Zoom interviews were conducted from January to February 2023. Interview participants were from 12 major cities in China, aged 20 to 55 years old. The question-prompted, conversation-formatted interviews allowed the collection of individual experiences, attitudes, and perceptions on COVID-19 social regulations. All the interviews were conducted in Chinese and translated into English. These interview responses are vital sources for exploring individual response changes over time. They also fill the data gap in the mainstream media about strict social regulations' impacts during the COVID-19 pandemic in China at the microscopic level, demonstrating the tension between individualism and collectivism.

Literature Review

During the COVID-19 pandemic, science and technologies served as essential components that increased the feasibility of strict social regulations. Public health sciences suggested quarantine measures were firmly adhered to by the Chinese government if community transmissions were detected. Similarly, big data-based contact tracing, video surveillance, and health codes were applied to control people's traveling, pinpoint people violating social regulations,

and eventually forestall regional outbreaks in China. Given the prevalent use of advanced science and technologies for Chinese strict social regulations from 2020 to 2022, the intimacy between science, technology, and social regulations hints at their link to the tension between individualism and collectivism in China.

Thus, to better understand the tension between individualism and collectivism in China during the COVID-19 pandemic, I examine the nature of the COVID-19 policy-relied science and technologies in the field of STS, review the political system in China with changes and continuities in its authoritarian characteristics, and then end with the introduction of individualism and collectivism ideology in a social context.

1. Science, technology, and society concepts

Technology advancement has been a pivotal point of contemporary society, and its relationship with people, state, and society constantly changes, forming complicated dynamics that exert various impacts on society. During the COVID-19 pandemic, advanced technologies like big data surveillance, facial recognition, and health code for keeping one's exhaustive traveling history were used to regulate the population and thus achieve low morbidity and mortality rates. Since these technological practices have soaked into individuals' lives due to their widespread applications, it is vital to perceive technology's role as an authoritarian instrument in shaping contemporary Chinese society, which can facilitate the understanding of technology's influence on significant social instability caused by public health emergencies and the underlying tension between individualism and collectivism.

STS scholars investigated such connections, focusing on technology's role as an authoritative instrument and source of weakening democratic humanity. In this section, I review the Sociology of Scientific Knowledge (SSK), Jacques Ellul's Philosophy of Techniques, Edward Tenner's Revenge Effect, and Langdon Winner's Theory of Technological Politics to situation

science and technology in social contexts and reveal their features and effects as authoritarian control measures.

Sociology of Scientific Knowledge (SSK)

Scholars observed that science and technology function as components of society's mechanisms. One remarkable theory is the Sociology of Scientific Knowledge (SSK). The SSK argues that science, including its knowledge, methods, and practices, “are disciplinary cultures,” and it is “shaped in interaction between the world itself on the one hand, and the culture of science including its methods on the other (Law, 2015, p.3).” There were also specific conditions for the SSK. One is that it “does not matter whether scientific knowledge is true or false (Law, 2015, p.3).” Further, scientific knowledge does not project nature (Law, 2015, p3). Lastly, “theories, methods, perceptions, practices and institutional arrangements are all mixed together (Law, 2015, p3),” reflecting science and technology's inclusive and fluctuating characteristics.

Notably, science and technology are not merely a particular tool or practice; they are collections of tools, practices, and cultures, which forms a large entity that conveys significant momentum to shape society. Similarly, SSK also perceives that social context affects science and technology's properties and outcomes as the other direction of the interaction. Such dynamics between technology and society further facilitate the occurrence of tension between individuals and the state. With the interactions of culture, technology, and technology applications resulting in the cumulative effect on the exacerbated individualism-collectivism tension in China, the complicated dynamics between these factors are needed for investigating the underlying connections between individuals, technology, and Chinese society during the COVID-19 pandemic.

Jacques Ellul's Philosophy of Techniques and Edward Tenner's Revenge Effect

Jacques Ellul's *Philosophy of Techniques* (1964) enriched scholars' understanding of technology's features and its association with society, which is that technology's intimate association with society influences individuals' lives and causes conflicts between individuals and the state.

According to the *Philosophy of Techniques*, modern techniques have five essential characteristics: "universalism," "self-augmentation," "automatism," "autonomy," and Monism (Carabantes, 2022, p. 545). "Universalism" indicates that modern technique extends to all areas of life and worldwide (Carabantes, 2022, p.549). The second feature, "self-augmentation," refers to the fact that "modern technique generates itself" (Carabantes, 2022, p. 550). "Automatism" captures the technique's feature that it is the most efficient choice with no comparable alternatives (Carabantes, 2022, p. 552). These three features depict the nature of scientific knowledge and technology that make them indispensable in contemporary society.

The other two features focus on technology's relationship in a social context. Monism's definition is twofold: first is that "the technical phenomenon, embracing all the separate techniques, forms a whole;" Furthermore, techniques usage are "inseparable from being" (as cited in Carabantes, 2022, p. 555)." Intriguingly, Monism resonates with the SSK's perception that scientific knowledge is a mix of culture, practice, and perceptions, indicating technology's intimacy with society and its potential to alter the situation. "Autonomy" implies the incompatibility between human freedom and techniques (Carabantes, 2022, p.553). Based on Ellul's idea, the autonomy feature signals the double-edged sword nature of technology's application, which coincides with the revenge effect concept. The Revenge Effect describes one possible result due to technology's application under a particular social context, like the COVID-19 pandemic. Remarkably, "the pursued gain is canceled out," and there is "the misalignment between individuals' needs and government's goals" under technological advancement (Carabantes, 2022, p.548). Under such circumstances, the connection between technology and

society becomes more entrenched, even displaying the profound connection between technology and the state's politics. As contemporary China's political system has immense control and influence on the formation and modifications of the social structure, the association between technology, society, and politics, depicted by the Philosophy of Techniques and the Revenge Effect, could be the leveraging point to reveal the foundations of the technology instrumentation, government's intentions, and individuals' criticism and protests in China's public health emergency cases.

Langdon Winner's Theory of Technological Politics

Noticing the significant interdependence between technology and society, some scholars focus on technology and politics, and Langdon Winner is one example. Langdon Winner's Theory of Technological Politics illustrates that technology profoundly interacts with the political circumstance we are situated in. According to Winner, politics "does not just involve human action, but also the realm of technology (Schraube, 2021, p.115)." The technology, including its practice and derived culture, encompasses "politics" and "specific forms of power and authority (Schraube, 2021, p.115)." This perception of technology and politics shows the mutual effect on each other, and it elucidates that technology under the impacts of politics could induce drastic changes in the state, culture, and individual perceptions of technology and politics. On the other hand, social context changes could result in technology changes to fit better in the social environment.

Such a symbiotic relationship between technology and politics as an aspect of society could further develop with the influence of an authoritarian organization in society. Particularly, when technology development becomes more complicated due to its self-augmentation feature, a centralized, authoritarian organization is needed to ensure the functioning of technology (Carabantes, 2022, p.556). In this case, the state power and technology confer the authoritarian characteristic, and they induce clashes between ideologies, specifically individualism and

collectivism. China's contemporary authoritarian political context and state-society dynamics exemplify these features.

2. Authoritarian State and China's Politics Review

An authoritarian state is characterized by highly concentrated and centralized power. Political scientist Juan Linz (1964) observed authoritarian state's qualities as limited political pluralism, political legitimacy based on appeals to emotion, minimal political mobilization and suppression of anti-regime activity, and formally ill-defined executive powers (European Center for Populism Studies).

China's political system has been associated with the term "authoritarian" due to the government's immense power to determine and enact the direction of policies with the lack of consideration of individuals' opinions. Such a power dynamic between the state and individuals is stemmed from the nature of the authoritarian organization of humanity. Zimmerman argues that a centralized and authoritarian organization of humanity is "not compatible with the fundamental rights of liberal democracies (Zimmerman, 1995, p.549), which matches the general image of the Chinese political system and society.

Since the authoritarian nature of the state is profoundly related to individuals' fundamental rights in society, it is essential to examine China's authoritarian organization and individual pursuit of freedom, power, and rights in society. From 1949 to 2022, China's society revealed drastic changes in individual power and rights, along with preservations of the authoritarian nature of the state, which led to constantly changing dynamics of Chinese individuals and the state with conflicts of individualism and collectivism. The following section will briefly review the four Chinese political stages: Mao's, Deng's, Jiang and Hu-Wen's, and Xi's eras, respectively. These stages will collectively demonstrate the continuity and changes in the Chinese state's authoritarian feature.

For each era, there were significant shifts in the leadership's approaches to the Chinese government's ruling and the balance between individualism and collectivism, which were parallel to changes in individuals' perceptions and behavior. In this case, it is crucial to recognize changes and continuities in the Chinese authoritarian political organization.

Stage 1: Mao's Era with Expansion in Collectivism

Mao was the first idol-like leader of the People's Republic of China. Thanks to bringing unity and peace to the Chinese people in 1949, Mao was recognized as the "ideal charismatic leader whose exceptional abilities were acknowledged as the key to success" (Teiwes, 2012, p. 5). With such charm, Mao was in an unchallenged position for China's development from 1949 to 1957, and he remained an influential figure in China's political and social arena until 1976.

During the long period of Mao's leadership, the Chinese government promoted socialist transformation, which significantly enhanced the state and collective organization. One example is that the national-wide economic planning began, with the first Five Year Plan being approved in mid-1955 (Teiwes, 2012, p.40). The national-wide planning enacted a sharp change from private to state and collective organization in agriculture, handicrafts, and capitalist industry and commerce (Teiwes, 2012, p. 41). Additionally, the redistribution of resources like lands under new land reform enhanced equality and collective welfare (Teiwes, 2012).

The massive transition from private to collective ownership and redistribution of resources marked the expansion of collectivist ideology and organization in China. The collective ownership with redistribution of resources helped many individuals to gain properties and rights that the previous social context did not offer, which is an advancement of living standards. On the other hand, many individuals' rights and power to pursue personal benefits were significantly downplayed due to individual interests' incompatibility with the collectivist and socialist ideologies in China. Coerced actions by the government usually accompanied collective ownership

and resource redistribution, which included confiscating landlords' assets, public humiliation at the "speak bitterness" meetings for landlords, and even execution of landlords (Teiwes, 2012, p. 36). In this case, the authoritarian feature of the Chinese political system revealed the unbalanced dynamic between collectivism and individualism at the initial stage.

Stage 2: Deng's Era with the New Breeze for Individual Power

The Great Leap Forward, the Great Chinese Famine, and the Cultural Revolution caused severe turbulence in the Chinese political system and society, disrupting society's normal functioning in the later Mao era. After the turmoil, Deng's era represented a new stage of the Chinese political system. It introduced a new breeze that elevated individuals' power in Chinese society, exemplifying a slight decrease in the authoritarian nature of the Chinese political system.

When Deng Xiaoping oversaw China's leadership during the 1980s, the party leadership proposed discontinuing excessive party intervention in all aspects of China's society to "strengthen the Party's leadership over the ideological and political fields" while also avoiding the antagonistic position to people (Brødsgaard, 2018, p.2). Simultaneously, Deng advocated the market reform initiative, "socialism with Chinese characteristics (‘中国特色社会主义’)," to stimulate fundamental economic development to solve poverty and underdevelopment (Steele & Lynch, 2013). This intentional promotion of political shift and economic reform in China's social development facilitates the replacement of Maoist direction with the language of market economics and privatization, along with the awakening and increasing emphasis on individual interests in the social structure (Steele & Lynch, 2013; Yan, 2010).

Meanwhile, the increase in individualism in Chinese society also caused the fragmentation of the authoritarian organization to some extent, which was captured by the concept of "fragmented authoritarianism" (Lieberthal & Oksenberg, 1992). As the party intervention intentionally waned during the reforming era, the policy process bolstered negotiation and self-interest protection

among agencies and organizations at the same level rather than coercion and sweeping decisions from top to bottom (Lieberthal & Oksenberg, 1992; Jaehwan, 2021). This phenomenon marked the change in the Chinese political system's authoritarian feature.

Stage 3: Jiang & Hu-Wen's Era with Increasing People's Voice

The Jiang and Hu-Wen era represented the next stage of China's political system in the early twenty-first century. Remarkably, further promotion of the reforming policy conferred traits of pluralization for the Chinese political system, reducing the authoritarian characteristic even more.

The late Jiang tenure and the Hu-Wen era focused on the CCP's ruling capacity. The leaders promoted new political initiatives like the theory of the "Three Represents" that allow private entrepreneurs to become Party members, the "consultative democracy" providing consultation with non-Party groups, the improvement of internal party democracy, increased rotations of governmental and Party officials, and separation of the Party and government (Brødsgaard, 2018, p.4). These policies, aimed to allow more voices from different non-Party organizations and offered more individual benefits, gave Chinese society a more favorable environment to enhance civic welfare (Howell, 2019), contributing to increased satisfaction and social stability.

As these political changes increased people and multi-parties' involvement in the policymaking process, self-interest protection and fragmented authoritarianism were enhanced, along with bolstered pluralization in the Chinese political arena. Specifically, as the parties associated with the policymaking and implementation process increased, the competing motivations, interests, and perceptions induced dilemma, bargaining, and potentially the policy stall (Howell & Duckett, 2019). Such a "fragmented" authoritarian feature existed for this third period of China's political scheme.

Stage 4: Xi's Era with Strengthening Central Power

The CCP ruling under Xi Jinping's leadership represented a new period with notable centralization of power and purification of the Party. Unlike the previous two stages, the authoritarian state consolidated during Xi's era. Once coming into power, Xi centralized power for his royal aides and himself by advocating and implementing the "top-level design (顶层设计) (Brødsgaard, 2018, p.5)," which hinted at his ambition to retrieve power from lower levels of the government. The centralization process also occurred at the party level. Divergent from the previous policy of separating the Party and government to increase ruling capacity, Xi introduced measures like "bidirectional entrance and cross-appointment (双向进入, 交叉职务)" for CCP officials to work in large corporates, ensuring the Party controls all aspects of Chinese society (Brødsgaard, 2018, p.7). Furthermore, stripping away the power of the premier and other colleagues in the Standing Committee of the Politburo was another way to promote power centralization under Xi's regime (Brødsgaard, 2018).

From the incredible power of the local Party committee to the reinforced vertical lines of authority, the priority of the government officials' work shifted to meeting the central government's directive, as Xi positioned at the center of Chinese political order and the CCP-led heavy hierarchical organization (Brødsgaard, 2018). This era has been the top-bottom-heavy organization ever since the end of the Cultural Revolution (Brødsgaard, 2018), thus reflecting the striking authoritarian characteristic of the Chinese political system again. Simultaneously, individuals' power decreased as the government's focus changed to collectivism.

3. Individualism and Collectivism

The changes in the Chinese political system over the decades elucidate the dynamics between individualism and collectivism, and the tension between these two ideologies cannot be ignored. As the tension between individualism and collectivism mainly refers to the discrepancy between Chinese individuals' interests and the collective social system, major social changes that directly alter the extent of individualistic and collective interests could compound the differences between individuals and the government's expectations. Indeed, the tension between collectivism and individualism became tangible under the influence of the authoritarian state and unprecedented social contexts like public health emergencies. In this section, I start by reviewing different definitions of individualism and collectivism by other scholars. Then I delineate the specific definitions of individualism and collectivism that serve as fundamental references for later in-depth analysis of the tension between individualism and collectivism in Chinese public health emergency case studies.

Individualism and collectivism convey multiple meanings under different disciplines. Based on cross-cultural and sociological studies, individualism encompasses the principle of individuals' efforts benefiting the individual and the culture that people behave "according to self-interest and personal preferences" while "consider independence and self-sufficiency very important" (Fatehi et al., 2020; Steele & Lynch, 2013). In contrast, collectivism emphasizes the group's good over individuals, which may include the sacrifice of self-interest to promote the interest of the collective (Fatehi et al., 2020; Steele & Lynch, 2013). These concepts are also connected with political ideologies: individualism is intrinsically positioned at the center of Western capitalism, while collectivism carries the socialist values incorporated by China (Steele & Lynch, 2013; Wang, 2002). Previous research suggested that individualist factors, like personal income, marital status, employment status, and health, had become more influential among the Chinese population since the reforming era. In contrast, the collectivist factors, namely national

pride and support for collectivist policies, had decreasing impacts over time (Steele & Lynch, 2013).

Since the COVID-19 pandemic hit, the public health emergency further exacerbated the tension with more challenges of individual living patterns and needs. Given that individuals' expectations for unrestricted movement, adequate living standards, and privacy are severely limited by the government's strict social regulations to ensure disease containment, the individuals' struggle with social regulations and their minimal benefits inevitably introduces a broader problem in Chinese society: the tension between individualism and collectivism.

For this paper, I adopt the definition of individualism as the prioritized emphasis on individual fundamental interests. Collectivism is the preference to ensure the collective good at the expense of individual sacrifices. Here the individual fundamental interests refer to individuals' freedom, accessibility of necessities, and fundamental rights: Eroded freedom includes free movement, speech, and the protection of privacy. The accessibility of necessities refers to the ability to find, obtain, and apply some necessities of one's established life pattern within their physical and financial capabilities. Necessities include food, medication, and transportation under strict social regulations during China's public health emergencies. The individual fundamental rights associated with the quarantine measures include but are not limited to the health rights to ensure "a standard of living adequate for the health and well-being of himself and of his family" (United Nations, 1948). Additionally, an individual's physical and mental health are considered crucial components of the health right.

Given that the major social context for this paper is public health emergencies, the collective welfare is focused on community health and social operation. Collective health welfare is demonstrated by China's low prevalence, incidence, and mortality rate associated with infectious diseases as well as the protection of everyone's right to life and health (生命健康权) in the

community. The social operation of collective welfare refers to the normal operations of essential infrastructures.

Case Studies: Major Public Health Emergencies in China

Given that the individualism-collectivism tension intertwines with social and political changes, the tension's occurrence and intensity also fluctuate with major social events that affect people's daily routines. To situate the most recent COVID-19 pandemic with China's unique social and political contexts, I choose to examine previous public health emergencies: the 2003 SARS epidemic, the 2009 H1N1 influenza pandemic, and the COVID-19 pandemic. In this section, I analyze three major public health emergencies in China to trace continuities, compare differences in how varying degrees of social regulations impact people's daily lives, and reveal the corresponding tensions between individualism and collectivism under their control. For each case study, I first introduce the infectious disease's background, followed by social regulations and their implications on individuals' lives. The dynamics between individuals and the government are also delineated.

1. The First Hit: The 2003 SARS Epidemic

Background of the SARS Epidemic

Severe Acute Respiratory Syndrome (SARS) was China's first serious public health emergency in the twenty-first century. SARS is an airborne virus mainly transmitted through tiny saliva droplets. After 2-7 days of incubation periods, the SARS virus will cause the main symptom of a high fever ($>38^{\circ}\text{C}$), accompanied by headache, malaise, muscle pain, and mild respiratory

signs like coughing, dyspnoea, and hypoxemia (WHO). The confirmed first case was a 43-year-old man from Foshan City with fever and diarrhea after having an exotic meal on November 16, 2002 (McLean *et al.*, 2005, p.31). More patients were admitted subsequently, with high fever, severe pneumonia, and no response to antibiotic treatment (McLean *et al.*, 2005, p.31). The atypical pneumonia cases emerged quickly, and no one could determine the cause of the strange illness. This circumstance marked the beginning of the SARS epidemic. From November 2002 to July 31, 2003, the world's total SARS case number was 8096, and 794 people died. China had 5327 total cases and 349 deaths.

Social Regulations Applied for the SARS Epidemic

As soon as scientists understood that SARS was an airborne disease, the Chinese government swiftly proposed the "war against SARS" with mitigation and containment measures in February 2003. Quarantine and surveillance of the floating population were two main resorts applied to thwart the spreading of the SARS-CoV virus.

Quarantine was the public health measure that mobilized everyone in China to combat the mysterious infectious disease. For individuals with suspicious symptoms after traveling to SARS prevailing regions, the quarantine and onsite treatment at a designated healthcare facility or home quarantine for 14 days was the primary approach (Ding, 2014, p.198). Another was the surveillance of the floating population, mainly peasant workers and college students, traveling to the SARS prevailing area. The control of the floating population included using "temperature monitors and health registration forms to track migrant returnees (Ding, 2014, p. 198)." If the

tracked individuals were suspicious of developing any SARS symptoms, the 14-day quarantine measure would be immediately adopted.

The strict public health measures against SARS expanded in the Spring of 2003. From April 19, 2003, strict quarantine in airports and stations, closure of public places, including schools and universities, and daily reporting by the national media occurred across the country (De Vlas *et al.*, 2009, p.103). The public holiday for Labor Day on May 1 was even canceled to prevent potential traveling and gatherings that might facilitate the spread of SARS. However, as soon as SARS cases significantly decreased in June 2003, regions began to declare SARS-free. The social regulations were lifted accordingly, marking the gradual end of the SARS epidemic in China (Enserink, 2013). People and society returned to regular daily routines gradually.

Implications of the Social Regulations

The novel quarantine and population surveillance for an infectious disease facilitated disease control, but they also induced individuals' experiences with the impingement of their liberties and rights. Such a dynamic reflected the undercurrent of tension between individuals and the authoritarian organization in China.

Although the MOH guideline and other government-issued documents specified that the immediate quarantine was designated for individuals with a traveling history to high-SARS risk regions and the development of SARS symptoms, the forced quarantine for individuals happened in many regions. In some regions, local officials were authorized to apprehend individuals returning from high-risk regions into forced quarantine (Thornton, 2009, p.41). In Beijing, the

Armed Police Corps dispatched 231 troops to patrol the quarantine area around the Xiaotangshan Hospital, which ensured the quarantined individuals were under control (Thornton, 2009, p.39).

Quarantined individuals had no guarantee of living essentials and healthy living conditions. As mentioned by Thornton (2009), many people were afraid that they might be put into quarantine with people who indeed had SARS, which could cause a dangerous infection during quarantine. Hong Kong Amoy Garden residents also reflected the citizens' concerns about quarantine living quality in the mandatory SARS quarantine. The residents discovered that there were only two toilets for every three rooms in the quarantine housing, which meant that people had to share toilets during their quarantine (Ding, 2014, p.195). However, individuals' concerns about their well-being were not considered a factor for this collectivism-oriented quarantine measure. Government officials deemed people's concerns about SARS mandatory quarantine as an excuse to evade government-enforced quarantine, which was highly irresponsible for the community. The outcome of such conflict between individuals' expectations and officials' collectivism-driven actions was the eventual concession of individuals: individuals endured primitive quarantine conditions until they were cleared for quarantine.

Besides the passive acceptance of the quarantine, many floating populations fled to other remote provinces from Beijing to evade the government-enforced unknown, inflexible quarantine (Thornton, 2009, p.42). These individual reactions depicted the decline of individual freedom and rights under the government's proposed social regulations during the SARS pandemic. Such situations also indicated the dynamic between individualism and collectivism, with the authoritarian feature having an advantageous stance in the tension.

After SARS mysteriously disappeared in the summer of 2003, the Chinese community ignored the suffering and encroachment of individual rights thanks to the persistent propaganda for the rosy image of collectivism during the SARS epidemic. The reports emphasized the nation's collective success in combating SARS, but the lingering side effects on SARS survivors due to the aggressive hormone treatments were never publicized. In the end, people described the SARS epidemic as reflecting the Chinese government's efficiency and caring about people's health. The conflict and imbalance between individualism and collectivism are hidden in the shadows temporarily, waiting for the next public health emergency to expose it to the public.

2. The Second Trial: The 2009 H1N1 Influenza Pandemic

The 2003 SARS epidemic promoted the development and professionalization of China's health infrastructure, including establishing the CDC and other public health bureaus to prevent similar knotty public health issues. The Chinese government's embarrassing experience in 2003 also pressured public health officials to respond to public health emergencies more efficiently. The lessons learned from the previous epidemic helped China to face the 2009 H1N1 influenza pandemic with better preparation and management. Nevertheless, the tension between individualism and collectivism reoccurred during the unsettling period.

Background of the Pandemic

The H1N1 swine influenza, detected in North America in the Spring of 2009, posed severe health risks globally within three months due to its airborne transmission route and the high level of infection in all seasons. The main symptoms included fever, aching muscles, chills, cough, sore

throat, runny or stuffy nose, headache, tiredness, and diarrhea (Mayo Clinic, 2019). More than 482,000 cases of H1N1 infection and more than 6,000 deaths were reported globally (WHO, 2009).

For China, the H1N1 pandemic was both a challenge for government management and an opportunity for testing a modified public health system. As soon as China learned about the H1N1 influenza outbreak in North America, the government quickly established a command-and-control mechanism, which included the MOH-led National Response Planning Committee (NRPC) (Liang *et al.*, 2010). This quick leadership assembly ensured the society's careful surveillance and control based on the laboratory network to prevent quick community transmission like the SARS epidemic at the initial stage.

Social Regulation Implemented for the H1N1 Pandemic

Quarantine was implemented again as the primary social regulation, but this time the targeted group was international travelers, especially those from North America. Local CDC and border control, especially in places with large floating populations, became the first responders at the forefront to control the diseases and implement public health social regulations accordingly. During the initial stage of the pandemic, China's border control tightened the entry screening, and all those in close contact with the detected H1N1 influenza case on the same flight were "immediately informed and put under medical observation for seven days (Liang *et al.*, 2010)." For land transportation, a similar screening procedure was implemented. Mason (2016) depicted the following scene at the border:

"One of the first measures that the Tianmai CDC (located at the border between Hong Kong and Guangdong Province) implemented...was to require each person who crossed the border from Hong Kong and traveled into Tianmai to

complete a health report attesting to his or her lack of flu symptoms and reporting where else he or she had traveled during the previous seven days (p.154).”

To maximize the efficiency of the screening, the Tianmai Quarantine Bureau "reassigned much of its personnel to staff flu prevention booths for "examining health reports," "pulling aside suspect travelers for interviews or exams," and "pointing laser thermometers shaped like guns at the foreheads of anyone" to check his or her temperature (Mason, 2016, p.154)." If one reported recent travel to the high-risk area and developed a fever ($> 37.5^{\circ}\text{C}$) or other flu-like symptoms, that person would be transported to the hospital for further examinations and then to the quarantine facility for seven days if necessary. These facilities are usually on the outskirts of the city, and infected individuals would be "monitored and treated with Tamiflu and Traditional Chinese Medicine (TCM) for seven days (Mason, 2016, p.154)."

With the SARS epidemic experience, China's strict quarantine measure had legal support: "According to Chinese law on the prevention and treatment of infectious diseases, cases and contacts of H1N1 were obliged to follow quarantine and medical measures (Liang *et al.*, 2010)." As the pandemic progressed, strict quarantine was applied extensively in Chinese cities to contain community transmission efficiently (Ding, 2014). Moreover, advanced technologies contributed to the robust disease control in China: the quarantine measures and technology for surveillance networks were expanded during this time for the H1N1 pandemic exclusively, including the utilization of the national infectious disease and public health emergency information systems for direct online reporting and communications (Liang *et al.*, 2010; Mason, 2016).

Unlike the SARS epidemic, there was an interesting turning point in the Chinese government's strategy to combat the H1N1 pandemic: the switch from containment like the strict

quarantine measure to mitigation focusing on "reducing the pandemic impact (Liang *et al.*, 2010)." The reasons were mainly twofold. One was that the containment measures were too resource-intensive and costly to maintain as the pandemic spread quickly. Another reason was that many clinical data illustrated that most H1N1 cases were mild, which would not cause a significant threat to the overall public health and individual well-being. With these considerations and evaluation of the pandemic health impacts on Chinese society, the Hu-Wen government gradually removed strict social regulations in the later stages of the H1N1 pandemic.

Implications of the Social Regulations

For the H1N1 influenza pandemic, quarantine for traveling led to similar tension between individuals' rights and government-upheld collectivism. Individuals remained to respond with compliance and passive acceptance in the circumstance. In the meantime, the encroachment on individualistic values had new routes: fueled by the government's propaganda, people began taking on the role of regulatory enforcers and policing each other within their own communities.

Compliance remained as a notable characteristic of many Chinese individuals. When one was asked for quarantine, with the sense of not getting into trouble and responsibility, people chose to comply with the quarantine requirement. According to a local CDC official, "When you say 'you need to be quarantined; we need to take your blood' [to individual Chinese residents], and they listen to you. They won't go complaining about their individual issues or human rights" (Mason, 2016, p. 166). In this case, compliance and passive acceptance were similar to individuals' responses to strict social regulations, compared with the SARS epidemic.

On the other hand, the increase in hostility among people represented a new route that encroached on individualistic values during the H1N1 pandemic. When the Chinese government publicized the danger of the influenza pandemic, such action significantly mobilized many anxious people to involve themselves in individual-initiated sanctions of other individuals that may threaten their health. Although the government did not explicitly lead the whole process, the government's goal to strengthen the collective social system and dampen individual rights was achieved by utilizing individuals' fear of health risks. The persistent propaganda and reports of the strict social regulations' effectiveness fueled the enormous support from people and stimulated distrust and hostility towards specific individuals in the community. For example, there were incidents of groups asking for "geographic quarantines" to "restrict the travel of those returning from outbreak areas in North America" (Ding, 2014, p. 204). Such community expectation of absolute control for potential influenza patients reflected that the national collective wellness overrode individuals' freedom and fundamental rights during the pandemic. Such widespread hostility among people was a route for encroaching on individualistic values. It revealed the unbalanced dynamic between individualism and collectivism in addition to the strict social regulations' erosion of some individuals' freedom, accessibility of necessities, and rights during the H1N1 pandemic.

3. The Unexpected Attack: The COVID-19 Pandemic

Background of the COVID-19 Pandemic

After several years of peace in Chinese public health, a new infectious virus quietly emerged, introducing an unprecedented hit that no one had ever imagined. That is the COVID-19 pandemic, which is an ongoing global public health challenge.

COVID-19 is an airborne infectious disease with common symptoms such as fever, cough, tiredness, and loss of taste or smell (WHO, 2020). Severe cases might later develop difficulty breathing or shortness of breath, loss of speech or mobility, and chest pain, which needs medical attention immediately (WHO, 2020). On December 31, 2019, the World Health Organization Country Office in China was informed of several cases of unknown cause pneumonia with shortness of breath and fever in Wuhan, China (WHO, 2022). Since then, the novel SARS-CoV-2 Virus has quickly spread and disrupted the ordinary dynamic for individuals and communities globally. On March 11, 2020, the WHO declared the novel coronavirus outbreak a global pandemic (WHO, 2022). With practices to effectively contain airborne diseases in previous public health emergencies and the uncompromising political environment, China implemented unwavering lockdowns, quarantine measures, and big data surveillance as the defense strategies against the COVID-19 pandemic.

Social Regulations Implemented for the COVID-19 Pandemic

The lockdown was a novel public health measure used in China since the initial COVID-19 outbreak. According to Haider *et al.*, it included mandatory measures that were applied indiscriminately to reduce COVID-19 transmission within a general population. Such a measure usually involves restrictions on ordinary social and economic life (Haider et al., 2020). In China, the lockdown was strictly regulated with multi-level control. Specifically, "closed management"

was enforced. The system required all the residential communities to close; everyone except organizers and volunteers was forced to stay home. The doors were locked, while adults and students adopted the Work-From-Home and Online studying modes. Volunteers or government-appointed workers accomplished essential services like groceries (Yang, 2022, p. 42). If individuals were observed to gather and disobey the mask mandate, law enforcement officials, including police and residents' committee members, immediately controlled and punished those individuals. For instance, law enforcement officers were shown beating up citizens who were not wearing face masks and shaming them by publicly parading them (Yang, 2022, p.42). Similarly, a group stormed into a private home and smashed the mahjong table at which a family of three was playing (Yang, 2022, p.42). Until December 2022, long-term, closed management was applied once there were any new COVID-19 cases. Well-reported cities that experienced long-term lockdowns included Wuhan (January-April 2020), Ürümqi (July-August 2020), Shijiazhuang (January 2021), Xi'an (December 2021-January 2022), Anyang (January-March 2022), Shenzhen (March 2022), Shanghai (April-May 2022), and Chengdu (September 2022) (Buchholz, 2022).

Quarantine was implemented once again when there were any emerging cases. Residents in medium-risk and high-risk communities experienced home quarantine during the lockdown implementation (Shangguan & Wang, 2022). When the lockdown was lifted, quarantine at designated medical facilities still occurred for individuals with COVID-19-positive lab results or traveling to high-risk areas, as shown by the health code. The health code used big data that accurately collected an individual's itinerary in daily routine to assess his or her risk level. If the health code was red or yellow, the individual had to undergo 14- and 7-day quarantine, respectively (Shangguan & Wang, 2022). This practice remained in place until December 13, 2022.

Implications of the Social Regulations

Unlike previous public health emergency responses, the Chinese government firmly held the "zero-COVID tolerance" policy while ignoring the disrupted economy and individual lives. The series of lockdowns exposed issues about delayed ER care, government response, food shortages, inflexible governmental management, and hoarding and profiteering. The most direct consequences are avoidable deaths, especially the vulnerable children and elders with underlying health conditions. For example, during the 2022 Shanghai Lockdown, a patient suffering from a severe asthma attack passed away due to the late arrival of the ambulance and the refusal of another ambulance accompanying doctor to lend out the Automated External Defibrillator (AED) (Global Times, 2022). Individuals' mental health was also at stake due to the quarantine regulation, propaganda, and unaffordable living expenses, which led to tragic suicide incidents: a 32-year-old woman in Guangzhou who tested positive for COVID-19 hanged herself to death shortly after being transferred to the makeshift hospital according to the quarantine policy (Caixin Global). The loss of access to daily necessities and protection of fundamental health rights in China showed the encroachment of individualist values during the COVID-19 pandemic.

As the regulation duration was significantly prolonged, the reoccurring lockdowns and strict quarantine measures evoked unprecedented negative individual responses and conflicts between individuals and the authoritarian system. The series of city-wide lockdowns caused the public to question the Chinese public health system and the government's ruling capability. For example, a Wuhan aunty explicitly criticized the government's lockdown control when the community official admonished her to comply with at-home quarantine in early 2020. During the

pandemic, the Wuhan aunty's swearing speech represented many individuals' negative responses to brutal measures that neglected people's basic needs for food and commodities (Yang, 2022, p. 58). Moreover, angry inquiries about emergency response teams' delayed reactions occurred frequently. Students in Henan Province questioned the lack of quarantine locations after staying on the transfer bus for more than 24 hours without access to food and the restroom. Residents begged for food, and pregnant women implored hospitals for access to medical care because of their yellow or red health code during a three-month regional lockdown in Xinjiang. Under the influence of stringent social regulations, these urgent outcries elucidated the significant encroachment of people's fundamental freedom, accessibilities, and rights to sustain their lives. The consequence was an increase in individual distrust of the government. However, the government evaded questions while trying to tighten control by suspending social media accounts that posed COVID-19 policy critics to prevent individuals from reflecting on or questioning the lockdown reality online, exerting power conferred by the authoritarian organization (Wright, 2023).

The suppression of people's criticism and upheld of the strict social regulations continued to brew more individual criticism and even protests. On October 13, 2022, a man hung banners on an overpass of a major thoroughfare in the northwest of Beijing, protesting the persistent "zero-COVID tolerance" policy and authoritarian ruling (CNN). The banner emphasized the outcry regarding the problematic policy during the pandemic: "No to COVID test, yes to food. No to lockdown, yes to freedom...Don't be a slave, be a citizen (CNN)." Later in November and December 2022, groups of students and people protested on streets in major cities to express their distrust towards the COVID-19 regulation and the government's authoritarian organization for

controlling the pandemic, which was triggered by the deadly fire in Ürümqi, Xinjiang (Che & Chien, 2022; Yeung, J. 2022).

These incidents delineated by mainstream media and literature revealed a drastic change in individual responses to strict social regulations during the COVID-19 pandemic, compared with the previous SARS epidemic and the H1N1 influenza pandemic. Remarkably, individuals' confrontation with the authoritarian, powerful government was the salient feature.

A Closer Look: COVID-19 Pandemic Interview Analysis

Thanks to the advanced internet and media coverage, the predicaments many people faced under China's strict social regulations became visible to the public. The accumulation of this kind of information indeed bolstered our understanding of the social regulation exacerbated tension between individualistic values and the collectivism-based social system in China.

Still, many individuals' everyday perceptions and responses were not covered by the mainstream media. For instance, there were many obstacles related to people's daily commuting, working, studying, and sustaining their basic living standards. Even if these individuals' ordinary experiences were unremarkable compared with some people's significant upheavals in life or surprising actions to directly encounter political power during the COVID-19 pandemic, the repetitive interference of individuals' everyday routines could also offer astonishing insights into the tension between individuals' interests and the collectivism-based social structure in China.

To fill the gap, I conducted sixteen 45-minute interviews with people from twelve Chinese cities to further investigate specific features in people's thoughts on the strict COVID-19 social regulations, supported by their experiences from 2020 to 2022, when regulations were

implemented extensively in Chinese society. The interview questions concentrated on people's feelings and considerations about their memorable experiences during the COVID-19 pandemic social regulations. For this section, I begin the analysis of interview responses with life disruption as the common theme over the three years and then followed by an examination of individual attitude changes. Subsequently, I review individual experiences and the remarkable confrontations between individuals and the system. This section ends with a review of individual considerations about the reasons for chaotic COVID-19 management.

1. Life disruption under different periods

Under the dome of the COVID-19 pandemic, significant social events tended to attract the most attention from the public and social media. In the meantime, individual experiences under various social regulations did not receive sufficient coverage. With this idea in mind, I asked questions about individuals' most memorable experiences with social regulations. For the question "What personal experiences about COVID-19 social regulations did you have," the interviewees recalled numerous unique experiences with different degrees of life disruptions, which could be classified mainly as restricted mobility and disrupted living patterns. I elaborate on these two points by introducing interviewees' testimonies with time as the variable, thus conferring the dimension to the evolution of the social regulations' impacts on individuals.

Restricted mobility

Individuals' earliest experience of restricted mobility began with the Wuhan city-wide lockdown in 2020. Interviewee Q specified that the lockdown lasted for 76 days, during which they had faced extreme difficulties obtaining sufficient food due to the shortages and limited transport from other areas to Wuhan under the strict social regulations. Simultaneously, people in

other regions also experienced the loss of free movement with changed living patterns. College students are prohibited from returning to their campus and taking online courses at home instead (Interviewee B).

Beyond the scope of mainland China, many Chinese residents also experienced significant mobility restrictions in the form of strict quarantine requirements after international travels. As the WHO declared COVID-19 a global pandemic in March 2020, many Chinese students studying in foreign countries were asked to return to their home countries. During this time, the 14-day quarantine with strict symptom screening presented extra control of individual mobility. According to five interviewees, they have experienced at least 14 days of quarantine in a random, government-designated hotel after traveling from the US to China. During the 14-day quarantine, the mediocre living conditions, including lousy WIFI, food, and services, were passively accepted by these five interviewees, as there were no appealing processes. “The food quality was not good, and I had a hard time completing the remote final in December 2020 during the quarantine (Interviewee D, personal communication, January 30, 2023).” Similarly, according to Interviewee Z, “all the hotel staff offered minimal services per COVID regulations in May 2020 (Personal communication, January 31, 2023).”

Interviewee Y, with a fever developed during the quarantine, was sent to the hospital and received numerous medical examinations, including Chest CT, blood test, and temperature check. “I was later forced to live in the tentative COVID quarantine tent for the remaining quarantine period, and every day around 5-6 AM, the nurse in a white hazmat suit ("Big White") would check my temperature” (Interviewee Y, personal communication, February 16, 2023).” These individuals' experiences with travel-associated quarantine illustrate the significant control on individual mobility under the COVID-19 public health emergency during the first year. Due to a

limited understanding of the virus and its health impacts, most people complied with these regulations to protect themselves and the community from potentially devastating health effects.

In 2021, individuals' movements were not bound by the regulations as strictly as they were in 2020. Interviewees reported they could travel freely if they presented the health code at transportation centers. In the meantime, international travelers were still required to comply with the standard 14-day quarantine, but no separate regulations were exerted. All one needed for traveling and entering public spaces were their health and travel history code after quarantine. Interviewee X summarized the requirements as the "big three": "Health code, temperature check, and disinfectant spraying turned into the daily routine for both community workers and us (personal communication, February 4, 2023)." Other interviewees reported similar experiences: "I had to show the green health code at the highway toll station during my business trip (Interviewee J, personal communication, January 26, 2023);" "The health code on the phone is a must-have if you are out of your house (Interviewee A, personal communication, February 4, 2023)." These concise summaries substantiate that extra precautionary measures become components of newly established mobility patterns for the general public during the continuous COVID-19 pandemic.

Nevertheless, there were still traces of intense movement control whenever there were signs of regional outbreaks. Interviewee S recalled the small lockdown he almost experienced. In August 2021, he "escaped" from Yangzhou to Shanghai on the eve of the Yangzhou Lockdown to avoid being locked at home and not being able to resume his college life. Although there was no official announcement when he prepared to leave home early, social media spread the lockdown information. "The whole process felt like fleeing, as I used personal relationships to get tested on time and then caught the last train out of Yangzhou (Interviewee S, personal communication, February 4, 2023)." This unique experience of restricted mobility in 2021 reveals the persistence

of the social regulations that control individuals' movement as the main route to eliminate the possibilities of large COVID-19 outbreaks in China, and it could be deemed as the base tone for the continuing chaotic social regulations and individual lives in 2022.

For social regulations on the general public's movement in 2022, mobility restriction was the characteristic, and rigidity was the highlight. As the same strict social regulations were deployed to control people's movement and disrupt the transmission chain for the virus, the mobility restriction remained as the essential characteristic of social regulations in 2022. Meanwhile, Omicron variants' higher transmission ability posed significant challenges for the Chinese government to maintain the low COVID-19 incidence and prevalence rates with the existing social regulations and implementation intensity. Accordingly, it resulted in the government's obsession with utilizing all possible regulations to achieve a zero-COVID state, exemplified by more rigid, unbridled control of people's daily behaviors. All the interviewees characterized social regulations in 2022 as "rigid," while some further highlighted the frustration around the restrictions on physical mobility.

International travelers had quarantine periods with the duration depending on social circumstances. Interviewee J stayed in the hospital and the designated hotel for 17 days after being diagnosed with COVID-19 infection in October 2022. As J recalled, "I asked the doctors and workers at the hospital, but no one knew the exact time for releasing me. It was just nonsense and made me feel frustrated and outraged." Domestic traveling is also under close surveillance: every county and city required new PCR testing upon arrival; local governments did not trust the reports from other areas, including the neighboring area that used to promote multi-city collaborations for development (Interviewee R and X, personal communication, January 29 and February 4, 2023). Likewise, interviewee N's father was considered a high-risk individual and was transported to a

hotel in the evening after out-of-province traveling in late 2022 (personal communication, February 10, 2023):

[My father] and other travelers were asked to enter the hotel through the small side door, and then they were sent to separate rooms with the WeChat group as the only means of communication. My father was anxious and angry because he felt he had handed his safety to somebody he did not know or trust.

These overlapping experiences of COVID-19 quarantine rendered restricted mobility a pervasive life disruption during the COVID-19 pandemic in China.

Disruptions of Established Living Patterns

The altered living patterns illustrate a second aspect of life disruption. The symbiosis between one's living patterns and the COVID-19 social regulations was repeatedly disrupted under intermittent community lockdowns across China in 2022. Due to the high frequencies of COVID-19 variants outbreaks, different groups of people reflect their basic living patterns disrupted at various intensities.

Students had distinct experiences based on their locations. For example, interviewee B from a college in Beijing mainly mentioned the problems with the hybrid mode of studying and the tedious approval process for leaving the campus to get necessities when Beijing was under threats of community transmission. In contrast, college students from Shanghai outcried about quarantine life when they received limited resources and low quality of life. For instance, taking a shower became luxurious for some Tongji University students due to the college's regulations of students' aggregation in a limited space (Interviewee F, personal communication, January 28, 2023). In Jinzhou, a small Chinese Northeastern city, medical staff members were arranged to patrol a college outside walls to prevent students from sneaking out of the college instead of conducting the usual official tasks in the hospitals in late 2022 (Interviewee F). Regardless of the

locations, all the young adults' college life was profoundly disrupted by the COVID-19 social regulations.

Adults, especially mid-aged individuals, had their established living patterns disrupted differently. Generally, this group encountered a main checkpoint at the entrance of the residential area, where individuals needed a special traveling pass as proof to enter or exit their residential area to complete daily tasks and essential activities like buying groceries, going to work or school, and getting vital medical care.

However, when local outbreaks occurred, residential areas were locked down under the local government's direction, and essential daily activities requiring individuals' presence were inevitably disrupted. Interviewee K in Shenzhen experienced the residential area lockdown twice in 2022, each lasting for 20 days and 7 days, respectively (personal communication, January 29, 2023). Interviewee K admitted that the relatively infrequent and short residential area lockdown did not significantly impact their basic needs because the remote working/schooling and food preparations had been well-established since 2020. Moreover, Shenzhen government officials did not continue the long-term lockdown. Such decisions reduced the unease and anxiety regarding the status quo with the disrupted living patterns.

Other individuals' experiences reflected the geographical difference in the social regulations during the process. For example, interviewee K's husband was forced to be under Xinjiang's whole-region lockdown for three months, from August 10 to December 6, 2022. During the lockdown, the doors were locked, and all the necessary daily tasks relied on online interactive systems. Elders who lived alone relied heavily on community workers' help to access food and medications. In Wuhan, individuals experienced residential communities lockdown in November 2022 (Interviewee Q). The lockdown was initially set up as five days, then continued with extra

five-day periods. Nobody knew the end of the tentative lockdown with "5 more days" repeatedly, and the continuing lockdown began to impinge people's shortly established living patterns. According to interviewee Q, in early December 2022, the government "suddenly abandoned the social regulations and 'lay down,'" ultimately pushing individuals into profound life disruptions. Interviewee Q mentioned that everyone in the family had COVID-19 symptoms since December 13, 2022, yet they "only got two cases of acetaminophen at home." In the end, they "had to share the precious acetaminophen within the family and with friends who had no medications."

These individuals' disrupted lives under pandemic social regulations collectively revealed the government agencies' profound neglect and diminishment of individuals' fundamental rights and freedom, exemplified by restricted mobility and disrupted living patterns. The initial outbreak in 2020 could be deemed a peak for the overwhelming focus on community wellness over individual opinions and rights, and 2021 was a plateau of the whole situation. However, the social regulations' disruptive feature reached another climax with extraordinary rigidity in 2022. Over time, individuals' exhaustion under persistent social regulations became common during the COVID-19 pandemic.

2. Feelings as the mirror of attitudes

Personal feelings could serve as a mirror to reflect one's attitudes, so they were acquired during interviews. According to sixteen interviewees' responses to the question, "How do you feel about the social regulations you encountered from 2020-22," the words provided by participants for the years 2020, 2021, and 2022 showed a unanimous agreement on feelings. The generated word cloud (see Fig. 1 in appendix) visualized the frequency and shifts of feelings throughout the three-year pandemic under strict social regulations. Intriguingly, these shared descriptive languages also corresponded to different periods of the social regulations implementation.

"Understanding" was the predominant response when recalling the early 2020 social regulations, as interviewees suggested that the fear of the virus outweighed all the other considerations. The rampant outbreak outside the households was a source of fear and a threat to many people's lives. The dense population in communities inevitably bound personal and community health tightly, so the strict social regulations' implementation was accepted as people endured the sacrifice. However, the feeling of understanding waned drastically in the years 2021 and 2022 due to the exhausting continuation of rigid social regulations that irregularly disrupt individuals' restored living patterns repeatedly.

An emotional middle ground was observed amidst the pandemic control in 2021. Feelings of "floating," "superficial," "inconvenient," and "time-wasting" were indicated. After the first year, with uncertainties and occasional disruptions of established living patterns, individuals could find a dynamic equilibrium with the social regulations and maintain their living patterns. The relatively fewer COVID-19 outbreaks in 2021 allowed interviewees to consider the existing social regulations redundant and sometimes unnecessary, fitting into the attitude spectrum's moderate region.

On the other hand, negative emotions, which represent the majority of the word cloud, reflected that individuals' endurance reached the ceiling in 2022 after three years of rigid social regulations in China. Predominantly, weariness of the repeated occurrence of COVID-19 variants set the leading tone for stressful circumstances. Under the persistent social regulations with deadlocks, individuals ultimately faced the predicament of continuing disrupted lives or seeking changes to such situations with more pessimistic attitudes. The feeling of "angry," "ridiculous," and "frustrated" captured the chaotic, irritating situation during the late phase of strict COVID-19

social regulations. Thus, individuals' feelings formed an interesting spectrum over time, which overlapped with the fluctuation of the regulation rigidity in China.

3. Confrontations Between Individuals and the System as Typical Scenes

The exposed negative attitudes emphasizing life disruptions reveal confrontations as a critical theme for the relationship between individuals and the government-directed collective social system. Indeed, interviewees presented conflicts with different sectors of the Chinese government during the pandemic, and the intensity also varies on a case-by-case basis (see Fig. 2 in appendix).

Negotiations

One common type of interaction was direct negotiation with occasional emotional ruptures. Such interaction occurred between some college students and the administration when students reflected on problems in the implemented closed-loop system on campus. For example, students from a college in Beijing were forbidden from leaving the college campus even during the summer vacation, when the COVID-19 cases were low in the local area. Students from other cities thus faced significant challenges in obtaining necessities and experienced mental breakdowns after months of such informal, college-level "lockdowns" (Interviewee B, personal communication, January 27, 2023). To break the deadlock, students united and petitioned for college policy modifications, which faced criticism, hindrance, and opposing opinions from some instructors and students. Nevertheless, the college dean eventually listened to students' suggestions regarding the off-campus approval process via the direct negotiation forum. The college administration adjusted the policy accordingly, keeping a relatively peaceful atmosphere on campus until late 2022 (Interviewee B, personal communication, January 27, 2023).

Another typical negotiation interaction was related to the community or CDC phone calls. During the pandemic, the communities were designated as the smallest unit with numerous surveillance tasks. Examples include the preliminary epidemiological check, vaccination status follow-up, and group PCR testing. Consequently, it was usual that one received frequent phone calls from community workers to follow up with pandemic-related issues. Interviewee W admitted that he either argued with logic and evidence or appealed to pathos with the person calling him to get PCR testing or the COVID-19 vaccination (personal communication, February 18, 2023).

I began discussing the efficiency and effects of PCR testing and COVID-19 vaccination if the one on the phone was the medical practitioner. Such conversations would reach a shared sorrow and powerlessness of changing anything under the circumstance and system between the practitioner and me.

For tough community workers, I would begin calling them bro, as it helped shorten our distance and dissolve the tension in the initial disagreements on getting PCR testing or COVID-19 vaccination.

By deploying different tactics during the negotiation, individuals cleverly smoothed the tension between themselves and government officials and avoided sharp conflicts that might induce troubles in their living patterns.

Interviewee J also used the same tactic to negotiate with officials when encountering excessive social regulation requirements.

When I was asked to get tested by the community worker phone call, I confessed to the worker there, saying, “This is so ridiculous to get tested even though I had a green health code.” The workers sighed and said they also knew [the tiresome process]. That's why the worker used a compromising tone during the phone call. Nevertheless, "they had to follow the direction from the 'top officials (上面领导).'" The only thing the community worker did was kindly remind me to get tested when I am free to avoid any glitches that could happen to the health code.

Similarly, Interviewee X mentioned that he had encountered an emotional rupture when trying to remove the health code notification in October 2022. The notification did not occur for

the first time, but the pop-up during the National Holiday almost ruined his family's traveling plan. Consequently, Interviewee X called the responsible community official, waiting for a solution. The official said there was no way to remove the notification during the vacation. Then he called the mayor's hotline, who referred him back to the first community official. The conversation repeated for a while, in which those deadlocks ultimately ignited his anger, and he started questioning the whole process's efficiency and feasibility in the call. The emotional negotiation worked, as the notification was removed 2 hours after the phone call.

Conflicts

Another common confrontation form was conflict, which was especially prevalent during the second half of 2022. Interviewees reflected on two main routes of quarrels. In-person quarrels were a form described. Interviewee R said she argued with the "Big White" at the testing tent because she did not wear a mask and came to the test late (personal communication, January 29, 2023). Interviewee R recalled:

I did not wear a mask because few people were in the residence hall, and nobody was there waiting for testing. When I reached the tent, the guy working there immediately scolded me as I did not wear a mask. I did not want to argue at first and just wanted to get tested before they stop the service, but he was very vulgar, so I argued with him fiercely.

This "Big White" was very strict about his work and "completely not considerate about people's situations at all," and "the arrogance and aggressiveness in communication" ignited the conflict (Interviewee R). This confrontation between an individual and the community worker clearly illustrated people's awareness of their impinged civil liberties under social regulations. The individual's decision to argue against the official allegation exemplified the individual's agency to protect their rights.

Interviewee K reported witnessing verbal abuse between the community worker and individuals at the residential area gate and parcel pickup point because of the chaotic regulations and exhausting waiting time. Likewise, interviewee J recalled that he saw people had intense quarrels when in line to get tested at the community sample collection tent: “people waited in line became furious when one community worker led several primary school students to come to the front of the line, and then angry people began arguing about such cut-in-line behavior and awful arrangement by community workers.”

The second route is group chat or phone call quarrels, a shared experience of individuals when the policy implemented for quarantine, lockdown, or testing received no clear explanations from officials. Interviewees Q and H mentioned quarrels in the community chat due to the unclear directions for testing and quarantine release procedures. For interviewee Q, "the community workers' announcement of the testing schedule was confusing, so I questioned the information delivery in the group chat, which later turned into chaos. Some residents even supported community workers and criticized me. That quarrel was very bad." Similarly, interviewee H said that international travelers “kept asking about the plan of releasing people when the government lifted the social regulations, but the workers did not disclose anything; the collective anger then broke out.”

The “lousy attitude” and “irresponsibility” shown by community officials' responses in text messages ignited the anger and frustration of individuals enduring significantly altered living patterns (Interviewee H). Ultimately, quarrels broke out, leading to more arguments and unreasonable mistreatment like threatening limited movement by community officials.

During interviews, some participants also acknowledged that they understood the powerlessness of community workers under strict supervision and the intimidating power of the

responsibility system. The responsibility system is the scheme applied in the Chinese political system to ensure that local officials will comply with the central government's policies.

Individual officials who are found to not meet the central government's standards might be immediately fired or punished with severe penalties affecting promotions and positions (Mason, 2016). With the potent check on government officials' compliance with the central government's direction, no one was willing to adjust. It led to increasing numbness and intentional neglect of many people's struggles to sustain basic living patterns under the strict COVID-19 regulations. Since the immense pressure exerted by the responsibility system was similar to the stressful situation induced by the strict social regulations, people expressed their understanding of the government workers' coercing behavior with resignation during the COVID-19 pandemic.

Nevertheless, the excessive social regulations and some officials' numbness regarding individuals' basic needs stimulated anger and criticism of the social regulations' real intentions, increasing confrontations between individuals and the practice. Consequently, the increase in the confrontation between individuals and government officials in daily routines became the ground of distrust between individuals and the government, indicated by the outcry and refusal of collectivism-based regulations during the pandemic.

4. Speculations of the Unusual Experience

The confrontation between individualistic ideas and collectivism-based social regulations not only illustrated the awareness and outcry for individual rights and freedom but also led people to speculate reasons behind their everyday experiences that many people seldom encountered before the COVID-19 pandemic. For the interview question, "What do you think is the factor that leads to the three-year-long strict social regulations in China," sixteen interviewees had convergences of their speculations about the fundamental cause of individuals' friction with

COVID-19 social regulation. Specifically, the nature of the virus in China's context, science and technology as tools, and political system issues are listed, which are presented sequentially in this section (See Fig.3 in appendix).

Virus in China's Context

Many interviewees acknowledged that the virus's transmissive nature and the outbreak's associated health risk for the whole community could not be ignored. Given China's large and dense population, the government's consideration of joint health and welfare would be a determinant for continuing the “zero-COVID tolerance” policy for extended periods. The high population density could serve as the incubator of not only community transmission, leading to a high incidence rate, but also new variants that could pose resistance or escape to current medical treatment and vaccination-induced immunity. Thus, when new variants cause waves of infections globally, it is reasonable to maintain social regulations during the public health emergency to minimize the adverse health implications due to "the disease itself and the unknown associated with the disease (Interviewee A)."

China's enormous population of elders and children also magnified the SARS-CoV-2 virus's implications, which shaped the government and communities to prefer securing health with strict social regulations. For many interviewees, the fact about the SARS-CoV-2 virus's "high transmission efficiency," "evoked fear of infection," and "lasting health impacts" for vulnerable populations justified the continuation of strict social regulations to protect not only individuals but also their beloved ones, who are elders and children with weaker immune systems against infections (Interviewees B, J, X, and Q). Furthermore, the lack of understanding of the long-term COVID, repeated infections, side effects, and add-on effects with other underlying health

conditions make the balance of individuals' cost-benefit analysis tilt towards a more conservative, collectivism-based method to offer protection and create a stable environment in China.

Science and technology as a Tool in Society

An intriguing speculation from most mid-aged interviewees focused on science and technology's function as political tools in the COVID-19 pandemic. Here science and technology included three aspects: the public health experts' suggestions, the purported "scientific-based" preventive measures, and the social media as the conveyor of overflowing information.

First, interviewees considered that public health science, the core of offering objective suggestions for individual and governmental actions based on scientific data collection and analysis, was manipulated to fit into the government officials' anticipation. Interviewee J pointed out that "medical experts stood out every time there was a pandemic update, yet their suggestions changed from complying with social regulations in 2020 to anticipating the possible infection in late December 2022." Interviewee W had similar feelings; he further argued that the experts' words "cannot be trusted because their data and evidence are unfathomable." The public health experts' changing opinions and suggestions on social media when the policy direction shifts illustrate the degenerative feature of science under the influence of the pandemic. Such outcomes yield the loss of the value of science as the production of trustworthy evidence and suggestions. As a result, interviewees exhibited a loss of confidence in the accuracy of the science that was being communicated.

Some interviewees also noted that the government strengthened precautionary measures to protect the community from the vicious COVID-19 variants, reflecting science and technology's tool-like characteristics. As scientific techniques like PCR testing, quarantine, and big data

surveillance conferred high efficiency in pinpointing COVID-19 cases promptly, the local governments utilized extra testing, quarantine, and surveillance requirements in addition to the central government's guidelines to reduce community transmission possibility. Thus, local officials will be exonerated from potential responsibility associated with disease control failure and might be considered the leader in containing COVID-19 infections. The extensive usage of advanced technologies exemplified the Chinese government's tendency to support their regulations with a solid scientific foundation during the pandemic, but it significantly neglected the inconvenience and limitations of scientific testing and regulations. Interview X disclosed that each county asked him "for getting tested and obtaining new testing results under its jurisdiction" even if he had "a negative PCR result within 24 hours." Similarly, interviewee J was required to get tested after showing the green health code at the highway exit. From the interviewees' perspectives, these extra layers of social regulations had no scientific basis for effectively controlling the transmission, and they introduced more inconvenience to individuals' lives. In this case, science and technology were profoundly manipulated for the government's discretion.

Moreover, the "quarantine economy" conspiracy illustrated that science became the vehicle for ensuring the Chinese government's zero-COVID policy at the expense of individuals' living patterns. The persistent quarantine requirements for travelers and identified close contacts had offered enormous business opportunities for hotels, catering services, and biotech companies, so people who benefited from the pandemic control-based policy might continuously support the claim that COVID-19 was still a potent virus with significant morbidity and mortality rate in China. In contrast, interviewees who experienced 14 days (or more) quarantine during the pandemic argued that the quarantine with "bad living conditions," "high financial costs," and "baseless extension of quarantine period" significantly disrupted their lives and stimulated the distrust

towards scientific basis provided by the government (Interviewee H, Z, D, and J). From this perspective, science and technology related to controlling the COVID-19 pandemic's severity were intentionally used as support if it was favorable to the expectations of the government and some individuals, while the immense adverse impacts on individual living patterns hinted at their feature of the revenge effect.

The exploded information due to the fast-developing social media was another factor interviewees considered for science and technology's role in society during the pandemic. Interviewee K compared her experience during the SARS epidemic with the current COVID-19 pandemic. For the SARS epidemic, the primary source for statistics was TV and radio, which were relatively unidirectional. Whereas the COVID-19 pandemic had too many media sources and a large quantity of unfiltered information, she had to "distinguish the truth among lies," which occasionally elicited significant panic (Interviewee K). As a tool to spread news and information, social media significantly reduces individuals' barriers to keeping updated with current societal situations. Nevertheless, the explosion of information could also be the source for spreading panic and extreme emotions, potentially leading to radical attitudes and actions that disrupt social stability.

Political System Issues

Besides the possible factors related to science and society, an unavoidable factor is the political system issues in China, which was represented by the questioning of the "Great Power system," "fragmented authoritarianism," and the link between policy and international relationship dynamics.

One issue was related to the “Great Power system (大国体制),” which referred to the emphasis on promoting the nation’s power, influence, and a positive image at the international level. Interviewee K thought the "Great Power system" was problematic, leading the Chinese government to become obsessed with a nice global image at the expense of individual lives. This idea resonated with other interviewees. For example, interviewee R suggested that all the experiences under rigid social regulations were "unorganized" and "cannot be called management." Moreover, controlling people was the only approach that served as the core of the purported scientific response under the Chinese political system (Interviewee R).

The ruling capacity of the government under the pandemic's shadow was questioned by some interviewees. According to interviewees Q and H, the officials demonstrated minimal power to understand and respond to public health emergencies, leaving a delusive impression of "successful" social regulations. "Incremental regulations (层层加码)" and "one-size-fit-all measures (一刀切政策)" with consequential tragedies and inconveniences around the country revealed that the political system was not fully adjusted to respond to the public health emergency efficiently. Furthermore, the loss of discretion, revealed by the entrenched collectivist values and profound reluctance to face any negative images, led to the government agencies' resistance to scientifically evaluating and modifying the policy (Interviewees J, S, W, and Z). This outcome echoed the fragmented authoritarianism concept, thanks to the lack of trust and collaboration among local governments to exonerate them from being responsible for negligence or over-acting. Collectively, the COVID-19 pandemic exposed the problem of the "zero-COVID tolerance" policy and the underlying issues of China's political system and ruling capability, which stimulated the impingement of individual rights and, ultimately, the tension between individualism and collectivism during the pandemic.

Another political-associated factor mentioned by interviewees was the government-promoted link between policy and political ideologies. Here, specific policies of “Co-existence” and “Zero-COVID tolerance” were conferred with the connotation of capitalism and socialism, respectively, thanks to governmental propaganda and popular feeling mobilization. Individuals also noticed such links. Based on Interviewee F’s reflection, “COVID-19 is not merely a disease; it has been politicalized and become the pivotal point for the global political situation.” The notable distinction between the “Co-existent group” and the “Zero-COVID group” in social regulation policies was linked to the opposing stance of Western countries and China in the ideology. For instance, interviewee F mentioned that some of her friends in China upheld the idea that “democracy and individual freedom and rights are Western culture's products; we [Chinese people] do not need these imports (personal communication, January 28, 2023).” Such an attitude disclosed that the COVID-19 policy was directly connected to the political ideologies in different cultures.

Also, as other interviews noticed, the strict social regulations were equivalent to socialist ideology emphasizing collective well-being in many Chinese residents’ minds. In contrast, the lack of social regulations represented the degradation of the capitalistic society with the greedy pursuit of personal benefits. Such a link between COVID-19 policies and ideologies stimulated a black-and-white perception and evaluations of the COVID-19 social regulations in China. Eventually, it magnified the emphasis on collectivism and the minimization of individual interests, which fueled the tension between individualism and collectivism during the pandemic.

Discussion

The COVID-19 pandemic demonstrated the continuity of the social regulations' implementation for effectively controlling public health emergencies. It also revealed

unprecedented changes in Chinese society, which included the intertwining relationship between individuals, technology, and society, the delicate balance between individualism and collectivism, and the flimsy democratic humanity under the authoritarian organization.

1. Continuations in Social Regulations and Outcomes

When the SARS-CoV-2 virus threatened the Chinese population's health in early 2020, the Chinese government aimed to reduce community transmission by implementing multiple social regulations like lockdowns, quarantine, and contact tracing. These regulations were used to cut the transmission route based on the available public health knowledge. The ultimate goal for implementing these strict social regulations was to achieve the “zero-COVID tolerance” approach and protect everyone's rights to health and life during the unprecedented pandemic. Thus, it reflected the underlying goodwill for implementing strict COVID-19 social regulations in Chinese society. Accompanied by the good intention for social regulations' implementation was the acknowledgment of significant disruptions to individuals' established living patterns. Specifically, the most common justification for the social regulations was that the temporary inconvenience was for the normal functioning of society in the long run.

Strict social regulations implementation resulted in a relatively low incidence, prevalence, and mortality rate at the early stages of disease transmission, which allowed the swift restoration of a stable Chinese society: the Chinese social dynamics were restored with the COVID-19 social regulations by March 2020, approximately three months after the initial outbreak (Shangguan & Wang, 2022). Fifteen out of sixteen interviewees also reported that they did not contract COVID-19 during the early onset of the pandemic when strict lockdown, contact tracing, and quarantine were implemented. These reflections showed the effectiveness of strict social regulations in protecting the whole community from immense health risks during the pandemic.

Such effectiveness of social regulations was a continuation of the previous SARS epidemic and the H1N1 influenza pandemic in China. The SARS epidemic ended within three months thanks to the prompt social regulations of quarantine, population mobility control, and the favorable policy to proffer human and material resources to implement the resources-consuming social regulations at the national level. Similarly, the H1N1 pandemic's initial social regulations, specifically screening of populations at the border, quarantine, and large-scale implementation of PCR testing, were extremely helpful in keeping the infection rates low in China. Until early June 2009, there were no large clusters of H1N1 cases in mainland China, which indicated the effectiveness of strict social regulation implementation against health risks that might threaten the whole Chinese community's health (Liang et al., 2012). By quickly implementing strict social regulations that control individuals' mobility, the Chinese government got the public health issue under control within a short period. The similar success of the three major public health emergencies was also attributable to people's acceptance and compliance with the temporary disruptions of their living patterns.

2. Differences Stimulated by the COVID-19 Pandemic in China

Nevertheless, social regulations during the COVID-19 pandemic exhibited several differences compared with the SARS epidemic and the H1N1 influenza pandemic. These distinctions occurred in the science and technologies with their practice, the dynamics between individuals and the Chinese social system, and the interactions among science, technology, and politics.

One striking difference between the COVID-19 pandemic and previous cases was the use of advanced technology to control society for an extended period. The Chinese government prioritized strong leadership in global pandemic control and a stable society. To achieve such

ambitious goals, the Chinese government utilized the authoritarian organization to promote advanced technologies like big data for contact tracing and population surveillance for the existing social regulations like quarantine and population control, which profoundly increased the rigidity of the regulations. Consequently, the technology showed its universalism feature: everyone was included in a comprehensive system, and all aspects of their life were altered by technology-aided social regulations for three years (Carabantes, 2022).

In contrast, although the Chinese government also tried to present a positive image internationally for the previous two public health emergencies, the goal of implementing strict social regulations was mainly to contain the disease and restore social stability like the pre-epidemic or pre-pandemic level. When public health emergencies came under control, the social regulations were lifted gradually to recover individuals' living patterns and the whole society's mechanisms, like severely impeded economic development and an overloaded medical care system during public health emergencies (Liang et al., 2010). Such differences in the Chinese government's objective when encountering public health emergencies set the basis for more differences in social regulations and the ultimate effects on individuals and society.

Another difference was due to the extended periods of social regulations implementation. Unlike the previous two health emergencies, the COVID-19 pandemic greatly exposed the pitfalls of strict social regulations. As the COVID-19 social regulations remained effective for extended periods, it magnified profound adverse effects on individuals' everyday lives and society that overshadowed the benefits of strict social regulations. The most noticeable effect on individuals' lives was the suppression of individualist values mirrored by the encroached individual fundamental rights. For example, the restricted mobility and disrupted normal living patterns were examples of suppressed individual freedom: During the COVID-19 pandemic, interviewees'

similar experiences of lockdowns, randomly extended quarantine, and traveling difficulties with heavy surveillance reflected the loss of individual freedom of mobility and privacy rights for many people across the country. However, only specific individuals identified as close contacts or high-risk people encountered forced quarantine during China's SARS epidemic and H1N1 pandemic (Ding, 2014; Mason, 2016). Under such unparalleled circumstances, many individuals during the COVID-19 pandemic could not sustain their pursuit of personal development and material wealth, which were crucial for better living standards and conditions. Thus, these individualistic values' suppression directly disrupted individual lives unprecedentedly due to the extended period of social regulation implementation.

Another aspect of the suppressed individual right due to the extended periods of social regulation implementation was the individuals' access to daily necessities. People living in the epicenters encountered obstacles to obtaining daily necessities like food and medications in January 2020 and December 2022, two critical moments when the COVID-19 cases surged under social regulations (Yang, 2022; Interviewee Q). The inadequate living necessities and medical care for people's access under COVID-19 social regulations demonstrated the plummeted individual fundamental rights of life. Thus, individuals' fundamental rights and interests were significantly encroached upon by the government-applied COVID-19 social regulations, which were largely unseen in previous public health emergencies.

Compared to previous pandemics, distinctions conferred by the COVID-19 pandemic were accountable for the intensified tension between individualism and collectivism. It ultimately led to the unusual confrontation between individuals and the Chinese collectivism-upheld system. Notably, the complicated relationship between science, technology, and society was also involved in the atypical, widespread social instability in China.

The intensified individualism-collectivism relationship was illustrated by the change in individuals' attitudes and their confrontation with the government officials and the social system to protest for their lost rights and interests due to the rigid social regulations. The decline of individuals' fundamental rights triggered drastic changes in individuals' attitudes and reactions during the COVID-19 pandemic. The finding of this project suggests that people transitioned from understanding, acceptance, and compliance to skepticism, apprehension, and disobedience (Personal Communications, January-February 2023). Individuals' initial understanding and acceptance of strict social regulations stemmed from the desire to protect individual health, previous experience in the SARS and influenza pandemic, and the entrenched value of collectivism in Chinese culture and education (Zhu, 2021). Since the infectious disease's nature remained largely unknown at the beginning of the epidemic or pandemic, sacrificing individual living patterns temporarily for a quick restoration of everyday lives was worthwhile. Nevertheless, as the COVID-19 social regulations caused profound disruptions to individuals' lives for three years, individuals could not endure excessive sacrifices to meet the collectivistic values without remarkable benefits. Consequently, the persistent, rigid social regulations eventually stimulated individuals' skepticism and distrust towards the social regulations.

When distrust and frustrations accumulated, people responded in conflicts with the system that upheld the tethering social regulations. Individuals applied negotiations, criticism, protests, and even physical fights as main resorts to express their desire to change the unbearable status quo induced by persistent social regulations (Che & Chien, 2022; Yang, 2022; Yeung, J. 2022; Personal communications, January-February 2023). These confrontations and clashes between individualism and collectivism were rare under China's authoritarian organization, hinting at the

role of unusual dynamics of science, technology, and politics under the dome of the COVID-19 pandemic.

3. Intersections of Science, Technology, and Politics in Chinese Society

Indeed, the intertwining relationship between science, technology, and politics in Chinese society could be deemed as the propeller of the salient tension between individualism and collectivism. Although the scientific knowledge of public health and advanced technologies for society-level surveillance did not convey any intentions naturally, the government's expectations of "zero-COVID tolerance," a global leadership image, and collective health infused neutral science and technology with collectivist ideologies. Such dynamics were consistent with the Sociology of Scientific Knowledge and Langdon Winner's Theory of Technological Politics. Besides, given that technologies had innate features of "self-augmentation" and "autonomy" (Carabantes, 2022, p. 545), scientific knowledge and technologies used for strict social regulations conferred the indispensability in society and incompatibility with democratic values. Consequently, science and technology became the powerful tool of the government to control not only the pandemic situation but also the general order in society. Such pervasive applications of science and advanced technology were naturally incorporated into the new social system during the COVID-19 pandemic.

As time passed, technology and social regulations became crucial parts of the authoritarian organization, further leading to the interdependence of science, technology, and politics in China. Eventually, it led to the government's persistent reliance on strict social regulations to maintain a stable situation, and the technology's incompatibility feature facilitated the encroachment of individual fundamental rights, which exacerbated the tension between individualism and collectivism, as well as the distrust of the Chinese government's ruling capacity. Intriguingly,

individuals' perceptions of the circumstances they were situated in from 2020 to 2022 reflected those interdependent components. First, interviewees pointed out that science and technology were manipulated as tools for the government and some people's expectations (Personal communications, January-February 2023). Furthermore, interviewees questioned the "Great Power system," "fragmented authoritarianism," and the intentional link between policies and political ideologies due to these factors' adverse impacts on individuals' impression of the Chinese government's ruling capacity (Personal communications, January-February 2023). These ideas signaled that individuals noticed issues within the overall social system and authoritarian governance by pondering the exhibited interdependence between technology and Chinese politics. Since the authoritarian organization in China became centralized during Xi's leadership, it became increasingly challenging for individuals to express their opinions and offer suggestions for policies implemented at the national level. Such lack of access to individual expression in the decision-making process and the encroachment on individualistic values during the COVID-19 pandemic demonstrated that the Chinese authoritarian governance still exerted profound power that impacted the degree of democracy in China. Collectively, democracy's fragile nature was confirmed by the COVID-19 pandemic in China. The suppressed democratic humanity under China's increasing authoritarian characteristics in its organization and system could be deemed the fundamental problem evoking social instability, impeding the reformation of the trust and bond between individuals and the government. In the long term, such dynamics could affect the Chinese social structure with turbulence, resulting in more complicated connections among individuals, technology, and society.

Conclusion

This research project uncovers the profound changes in Chinese society due to the implementation of strict social regulations in response to the COVID-19 pandemic. The exploration of the COVID-19 social regulation's impact from 2020 to 2022 demonstrates both the scientific-based intention and actual encroachment of individual rights in China, yielding to the tension between individualism and collectivism exhibited by conflicts between individuals and the Chinese political and social system.

The cases of the 2003 SARS epidemic, 2009 H1N1 pandemic, and COVID-19 pandemic showed the continuation of the Chinese government to apply strict social regulations and collective health advocacy for restoring the normal social mechanisms during public health emergencies, which indeed showed high effectiveness in the initial stages. However, the COVID-19 pandemic has exposed more issues related to the strict social regulations under the spotlight. By analyzing literature and interview responses, I find that individuals underwent significant life disruptions and encroachment of their individualistic values under rigid social regulations for an unprecedented three-year period. Such circumstances and the government's prioritized focus on collective health and positive international impression ultimately evoked and exacerbated the tension between individualism and collectivism.

The complicated relationships among science, technology, and politics in Chinese society was also revealed by analyzing interviewees' response, previous literature, and related STS concepts. Remarkably, the close association between technology and authoritarian governance in China facilitated the encroachment of individualistic values, which induced individual dissatisfaction with altered living situations. As a result, the complicated relationship of science, technology, and politics further contributed to the tension between individuals and the

collectivism-based social system, leading to social distrusts, instability, and the increasingly fragile nature of Chinese democratic humanity. These might have ripple effects on individual-government relationships and social structure in the long term.

Overall, this paper's focus on the individualism-collectivism tension under the influence of strict social regulations for public health emergencies revealed complicated dynamics among individuals, technology, and the state in contemporary Chinese society during unstable external circumstances. It also helped fill the research gap for the COVID-19 pandemic and social regulations' impacts on Chinese individuals, serving as the reserve for precious individual perceptions, attitudes, and reactions. These records could not only preserve the crucial evidence of the dynamics between individuals and the social system in China during the turbulent ages but also function as the reference for future legislation modification to reduce the profound negative impacts on individuals' fundamental rights and the social stability, which are crucial for establishing and maintaining a delicate equilibrium in China.

This project leaves room for further research on the relationship between science, technology, and society in China. Although public health science and technology demonstrated its adverse effects on individualism, it might also have conveyed positive implications for individual civil liberties, like increasing information transparency, during the pandemic. Further examination of these technology-associated benefits can help complete the puzzle of the intricate relationship. Also, increasing demographic diversity for interviews can be a future direction for depicting a more comprehensive picture of individuals' attitudes and responses under the individualism-collectivism tension, thus facilitating the examination of science, technology, and society. In this case, future research is guaranteed to investigate the complicated dynamics in which many people are situated.

References

- Brødsgaard, K. E. (2018). China's Political Order under Xi Jinping: Concepts and Perspectives. *China: An International Journal*, 16(3), 1–17. <https://doi.org/10.1353/chn.2018.0022>
- Carabantes, M. (n.d.). *The Coronavirus as a Revenge Effect: The Pandemic from the Perspective of Philosophy of Technique*. <https://doi.org/10.1177/01622439211008595>
- Che, C., & Chien, A. C. (2022, November 28). Memes, Puns and Blank Sheets of Paper: China's Creative Acts of Protest. *The New York Times*. <https://www.nytimes.com/2022/11/28/world/asia/china-protests-blank-sheets.html>
- CNN, B. B. (2022, October 13). *Rare protest against China's Xi Jinping days before Communist Party congress*. CNN. <https://www.cnn.com/2022/10/13/china/china-party-congress-protest-banners-xi-intl-hnk/index.html>
- De Vlas, S. J., Feng, D., Cooper, B. S., Fang, L.-Q., Cao, W.-C., & Richardus, J. H. (2009). The impact of public health control measures during the SARS epidemic in mainland China. *Tropical Medicine & International Health*, 14(s1), 101–104. <https://doi.org/10.1111/j.1365-3156.2009.02348.x>
- Ding, H. (2014). Transnational Quarantine Rhetorics: Public Mobilization in SARS and in H1N1 Flu. *Journal of Medical Humanities*, 35(2), 191–210. <https://doi.org/10.1007/s10912-014-9282-8>
- Enserink, M. (n.d.). *SARS: Chronology of the Epidemic*. Science. <https://doi.org/10.1126/science.339.6125.1266>
- European Center for Populism Studies. (n.d.). *Authoritarianism*. European Center for Populism Studies. <https://www.populismstudies.org/Vocabulary/authoritarianism/>

- Fatehi, K., Priestley, J. L., & Taasobshirazi, G. (2020). The expanded view of individualism and collectivism: One, two, or four dimensions? *International Journal of Cross Cultural Management*, 20(1), 7–24. <https://doi.org/10.1177/1470595820913077>
- Global Times. (2022, March 31). *Shanghai ambulance doctor suspended from duties for leaving a dying patient in the lurch - Global Times*. [Www.globaltimes.cn](http://www.globaltimes.cn).
<https://www.google.com/url?q=https://www.globaltimes.cn/page/202203/1257285.shtml&sa=D&source=docs&ust=1682886453364830&usg=AOvVaw2OzGnDuzJxCbVE-LNgu1jI>
- Haider, N., Osman, A. Y., Gadzekpo, A., Akipede, G. O., Asogun, D., Ansumana, R., Lessells, R. J., Khan, P., Hamid, M. M. A., Yeboah-Manu, D., Mboera, L., Shayo, E. H., Mmbaga, B. T., Urassa, M., Musoke, D., Kapata, N., Ferrand, R. A., Kapata, P.-C., Stigler, F., ... McCoy, D. (2020). Lockdown measures in response to COVID-19 in nine sub-Saharan African countries. *BMJ Global Health*, 5(10), e003319. <https://doi.org/10.1136/bmjgh-2020-003319>
- Jaehwan, L. (2021). The End of Fragmented Authoritarianism? Evidence from Military-Civil Fusion Policy under Xi Jinping. *The Japan Forum on International Relations*.
https://www.jfir.or.jp/en/studygroup_article/3519/
- Kai, X., & Wei, H. (2022, November 24). *Woman Hangs Herself in Makeshift Covid Quarantine Hospital - Caixin Global*. www.caixinglobal.com. <https://www.caixinglobal.com/2022-11-24/woman-hangs-herself-in-makeshift-covid-quarantine-hospital-101970368.html>
- Liang, W., Feng, L., Xu, C., Xiang, N., Zhang, Y., Shu, Y., Wang, H., Luo, H., Yu, H., Liang, X., Li, D., Lee, C.-K., Feng, Z., Hou, Y., Wang, Y., Chen, Z., & Yang, W. (2012).

- Response to the first wave of pandemic (H1N1) 2009: Experiences and lessons learnt from China. *Public Health*, 126(5), 427–436. <https://doi.org/10.1016/j.puhe.2012.02.008>
- Lieberthal, Kenneth G., and David M. Lampton, editors *Bureaucracy, Politics, and Decision Making in Post-Mao China*. Berkeley: University of California Press, c1992 1992. <http://ark.cdlib.org/ark:/13030/ft0k40035t/>
- Mason, K. (2016). *Infectious Change: Reinventing Chinese Public Health After an Epidemic* (1st ed.). Stanford University Press.
- Mayo Clinic. (2019). *Swine Flu (H1N1 Flu) - Symptoms and Causes*. Mayo Clinic; Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/swine-flu/symptoms-causes/syc-20378103>
- McLean, A., May, R., Pattison, J., & Weiss, R. (2005). *Sars: A Case Study in Emerging Infections*. Oxford University Press USA - OSO. <http://ebookcentral.proquest.com/lib/colby/detail.action?docID=728767>
- United Nations. (1948). *Universal Declaration of Human Rights*. United Nations. <https://www.un.org/en/about-us/universal-declaration-of-human-rights>
- Shangguan, Z., & Wang, M. Y. (2022). China's community-based crisis management model for COVID-19: A zero-tolerance approach. *Frontiers in Public Health*, 10, 880479. <https://doi.org/10.3389/fpubh.2022.880479>
- Steele, L. G., & Lynch, S. M. (2013). The Pursuit of Happiness in China: Individualism, Collectivism, and Subjective Well-Being during China's Economic and Social Transformation*. *Social Indicators Research*, 114(2), 10.1007/s11205-012-0154–1. <https://doi.org/10.1007/s11205-012-0154-1>

- Thornton, P. M. (2009). Crisis and Governance: Sars and the Resilience of the Chinese Body Politic. *The China Journal*, 61, 23-0_11. <https://doi.org/10.1086/tcj.61.20648044>
- World Health Organization. (2020, January 10). *Coronavirus*. Who.int; World Health Organization: WHO. <https://www.who.int/health-topics/coronavirus>
- World Health Organization. (n.d.). *Severe Acute Respiratory Syndrome (SARS)*. Wwww.who.int. https://www.who.int/health-topics/severe-acute-respiratory-syndrome#tab=tab_2
- World Health Organization. (2022, March 28). *Timeline: WHO's COVID-19 response*. Wwww.who.int. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/interactive-timeline>
- World Health Organization. (2009, November 12). *WHO information on tuberculosis and pandemic influenza A (H1N1)*. Wwww.who.int. [https://www.who.int/news/item/12-11-2009-who-information-on-tuberculosis-and-pandemic-influenza-a-\(h1n1\)](https://www.who.int/news/item/12-11-2009-who-information-on-tuberculosis-and-pandemic-influenza-a-(h1n1))
- Wright, G. (2023, January 7). China suspends social media accounts of Covid policy critics. *BBC News*. <https://www.bbc.com/news/world-asia-china-64198313>
- Yan, Y. (2010). The Chinese path to individualization. *The British Journal of Sociology*, 61(3), 489–512. <https://doi.org/10.1111/j.1468-4446.2010.01323.x>
- Yang, G. (2022). The Wuhan Lockdown. In *The Wuhan Lockdown*. Columbia University Press. <https://doi.org/10.7312/yang20046>
- Yeung, J. (2022, November 28). *Rare protests are spreading across China. Here's what you need to know*. CNN. <https://www.cnn.com/2022/11/28/china/china-lockdown-protests-covid-explainer-intl-hnk/index.html>

Zimmerman, A. D. (1995). Toward a More Democratic Ethic of Technological Governance.

Science, Technology, & Human Values, 20(1), 86–107.

Zhu, Y. (2021). ‘Self’ (ziji), ‘others’ (taren) and ‘collective’ (jiti): Friendships at school

embedded with China’s Confucian–collectivist sociocultural values. *Children & Society*,

35(6), 916–929. <https://doi.org/10.1111/chso.12473>

Zweig, S. A., Zapf, A. J., Beyrer, C., Guha-Sapir, D., & Haar, R. J. (2021). Ensuring Rights

while Protecting Health: The Importance of Using a Human Rights Approach in

Implementing Public Health Responses to COVID-19. *Health and Human Rights*, 23(2),

173–186. <https://www.jstor.org/stable/48636264>.

Appendix: Supplementary Figures for Interview Analysis

Figure 1

The Word Cloud Generated Based on Responses to the Question, "how do you feel about the social regulations you encountered from 2020-22."

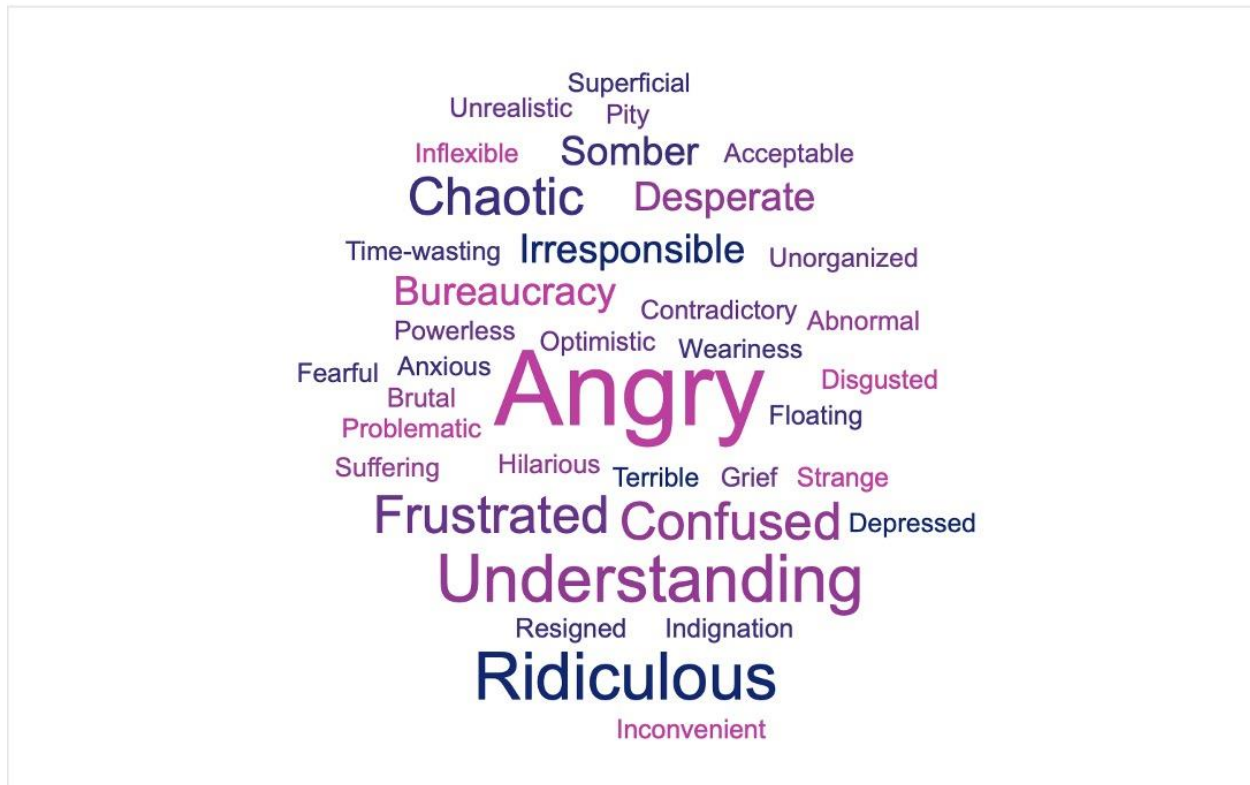


Figure 2

Visualization of the Confrontations Experienced by Interviewees during the COVID-19 pandemic

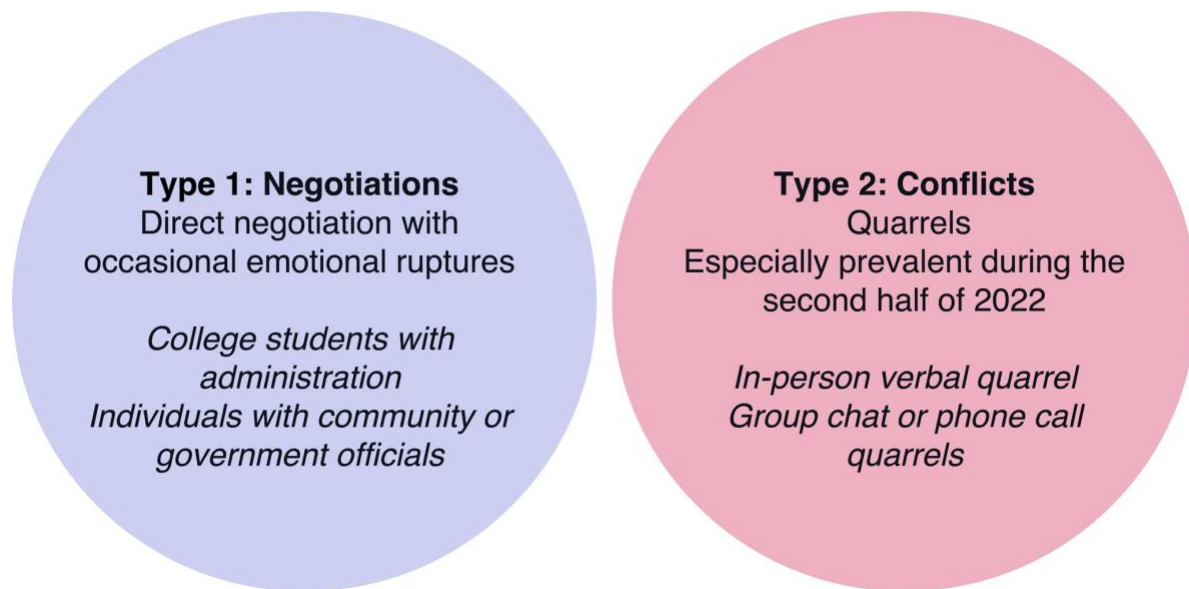


Figure 3

Visualization of interviewees' speculation about the cause of chaotic experiences under the strict COVID-19 social regulations

