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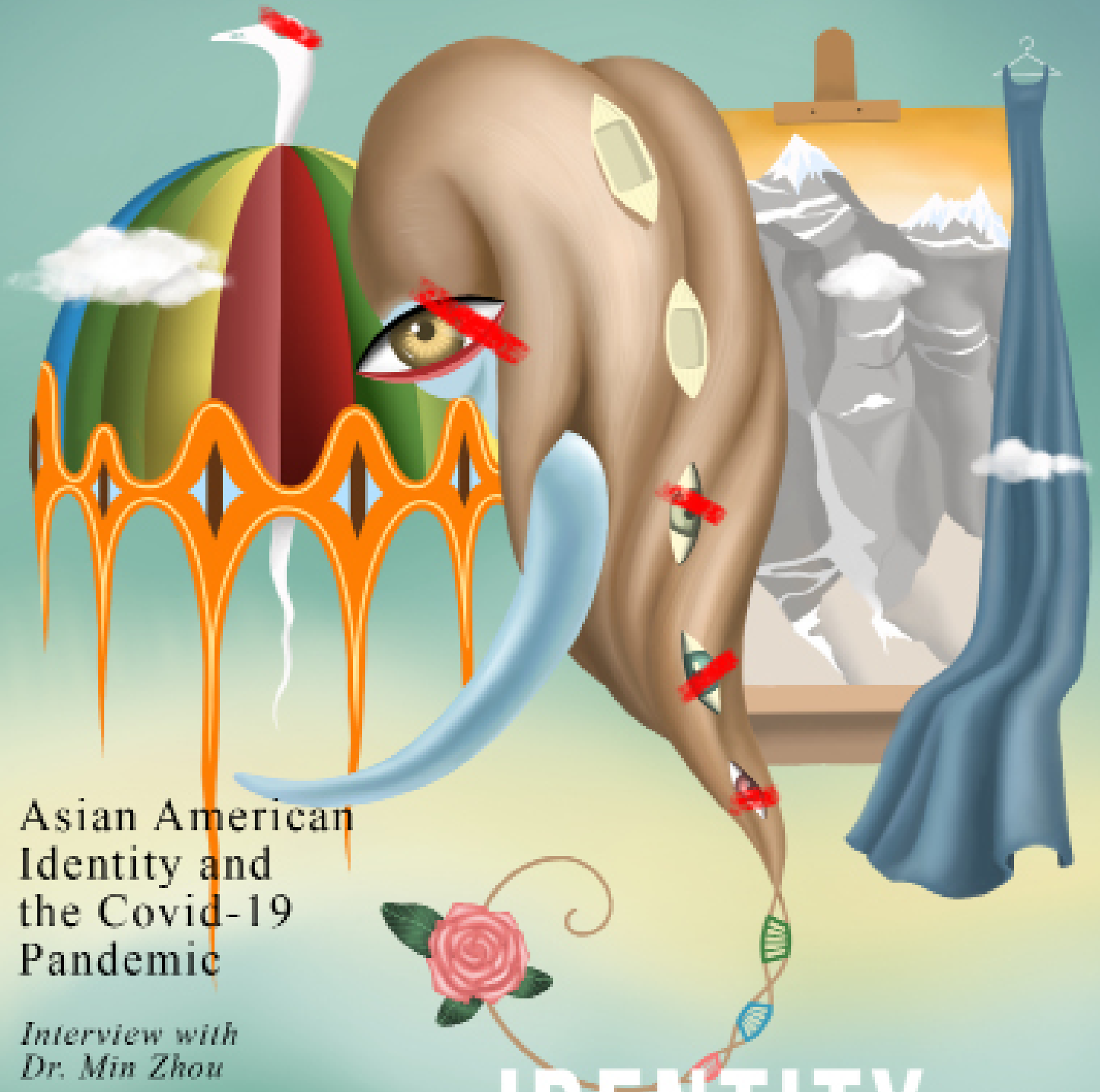


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## Asian American Identity and the Covid-19 Pandemic

*Interview with  
Dr. Min Zhou*

## Trump's Young Chinese Allies

*Junhui Xu*

# IDENTITY AND PERCEPTION

The *Intercollegiate US-China Journal* is a bilingual academic journal that provides a platform for undergraduate students across the globe to publish interdisciplinary, academically rigorous research. As an affiliate of the U.S.-China Better Relations Coalition, the *IUCJ*'s core mission is to connect students across universities and countries to promote participation in a broader discussion of global issues with respect to the United States and China. The *Journal* aims to improve understanding of the United States and China's domestic and global affairs—including in the fields of security, politics, culture, technology, economics, and the environment. Works published will concern discussions of the United States and China, their relations, and their respective roles in international affairs. The *IUCJ* partners with research institutions and prominent U.S.-China scholars to uphold its standards of scholarly excellence.

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# IUCJ



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## Letter from the Editors

Dear Reader,

The past two years have been an exceptionally challenging time for so many affected by the United States-China relationship. Travel between the two countries has been severely limited. Each country has implemented vastly different pandemic responses, reflecting their differing values and governmental systems. As physical connection has been largely cut off and differences have been emphasized over commonalities, the United States and China have defined and perceived each other in increasingly hostile ways, exacerbating tensions and damaging hopes that reconciliation will be possible.

Founded by the U.S.-China Better Relations Coalition, the Intercollegiate U.S.-China Journal (IUCJ) strives to shift the prevailing negative narrative surrounding U.S.-China relations towards one of more positive connection and greater understanding. To this end, the second issue of the IUCJ features a diverse array of student voices on global issues and foreign policy, as they pertain to the U.S. and China. As a journal staffed by students from across the globe, the IUCJ actively cultivates a new shared culture of collaboration and mutual understanding. We also hope that by publishing these articles in both English and Chinese, this issue will connect students across the Pacific by providing a common experience upon which to foster dialogue.

Hope lies in the next generation — those who view themselves as global citizens and fully recognize the importance of proceeding with solidarity, resisting polarizing tropes, and transcending the blame game that often underlies contemporary U.S.-China relations. How countries define themselves and perceive each other greatly affects how they interact. Thus, the first step to improving relations is ensuring that optimism and good-faith perception become prevailing tones in dialogue and interaction between the United States and China.

Sincerely,

Stella Robertson and Ben Lipson  
Editors-in-Chief



# Trump's Young Chinese Allies and Their Anti-Elite Narratives on Social Media

Junhui Xu

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**Abstract** Two thirds of American millennials perceived the Trump Presidency as a critical setback for the United States' democracy, while opposite opinions were nothing unusual for their Chinese peers. These Chinese Trump allies were more skeptical about elite prescription to social ills in the U.S.; alternatively, they believed that Donald Trump was the right candidate for ordinary American people despite his often-disrespectful attitude towards minorities and women. This paper aims to investigate Trump's young Chinese friends' political opinions through critical content analysis and semi-structured interviews. This article shows how the orthodoxy of pragmatism, higher-level perception of inequality through intergenerational connection and collective memories, perceived gains of personal interest, and charismatic leadership could help to explain the origin of their anti-elite mentality.

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## Introduction

The 2016 American presidential election witnessed the emergence of political polarization and strident partisanship in the U.S. Young voters, for example, were less likely to identify themselves as conservatives, with only one third holding favorable views of the Republican Party (Galston 2016). While in China, a considerable number of young netizens have also been actively engaged in this debate, their opinions seemed to have stood in sharp contrast to those of their American peers — pro-Trump sentiment, for Chinese millennials, was everything but an isolated phenomenon.

Whereas many statistical analyses suggested that higher educational levels could be a critical indicator in predicting who voted for Clinton versus Trump (Center 2018; Silver 2016), a later finding in China showed that many of these Chinese Trump allies were, in fact, well-educated urban citizens (Yue, Li, and Sundquist 2017). According to Ronald Inglehart's post-materialist assumption, in a country where economic development and modernization have benefited these

young people significantly, self-expression and individual autonomy, along with the pursuit to build a pluralist and inclusive society, are supposed to loom larger (Inglehart 1981). However, the narratives of these young Chinese Trump supporters appeared to have aligned with right-wing ideologies such as hostility towards immigrants and minorities, opposition to liberal elites (described as "baizuo" or "white leftists" with a pejorative tone on Chinese social media), and even support for white supremacy.

As was mentioned above, the mechanism through which these Chinese youths formulate their ideas and the motivation behind this eccentric political attitude are quite convoluted. By conducting semi-structured interviews among eight Fudan University students, this article seeks to reveal the impulses behind these baffling opinions as well as the cultural and socio-economic contexts that foreshadow the genesis of the former. Furthermore, with these efforts being taken, we could also provide insights into Chinese younger generations' expectations of what elected officials should represent and to whom their services should be dedicated.



## Literature Review

Xinmeng Lian saw this phenomenon through Bakhtin's carnival theory: netizens mocked the two presidential candidates to deconstruct their authority. Standing at the periphery of that debate, these netizens' excitement online had more to do with the entertainment coverage rather than real policies or personal virtues (Lian 2017). However, this statement understated the degree to which netizens have engaged in specific policy debates such as the wall along the U.S.-Mexican border and controversial legislations about the U.S. Immigration and Customs Enforcement.

Other sources claimed that the phenomenon's root cause lay in Chinese media and its propaganda machine, which contained a massive amount of negative coverage about the chaos and corruption in U.S. politics (Zhao and Lu 2017). Drawing from 219 headlines in People's Daily (Shen and Li, 2018), researchers in journalism noticed how this authoritative source of information could shape public discourse about the U.S. through its critiques of American democracy, rebuttals to the "China threat" narrative, and contempt for utopian proposals of the liberal left. The party's mouthpiece indeed can be conservative and nationalistic; however, with the development of digital technology and globalized flow of information, easier access to more diverse opinions will be available to the younger generation, especially to those who manage to study or work abroad. Therefore, understanding the personal background of these online users and their positions on the political spectrum would be conducive to testing this theory.

Right-wing discourses, with their favoritism towards Social Darwinism and low tolerance for vulnerable groups, have won attention from other scholars (Han 2017; Zhang 2019). They regard this mindset as a manifestation of nationalism characterized as realist authoritarianism. Post-materialist values, in their eyes, were irrelevant or even destructive to economic growth or national security. Authoritarian values such as strict discipline and strong authorities, on the other hand, are deemed necessary for being friendly to economic prosperity. This explanation, however, failed to account for individual differences and cannot illustrate the pathways through which they subscribed to these materialist values.

Hence, this study aims to pay attention to the personal traits and beliefs of online users and college students in China, especially those well-educated youth with a mentality of anti-elitism. Through this investigation, this article seeks to present undiscovered socio-political motives behind this phenomenon.

## Methodology

This article will first deploy a content analysis of three of the most viewed questions about Trump and the 2016 election on Zhihu, a popular yet contested Chinese Q&A platform with over 220 million users. The 30 most endorsed answers under each of the three questions will be taken out to specify these users' attitudes towards him, their educational level, and overseas experiences as well as their most concerned issues throughout the election. In doing so, it aims to identify the prime issues and key patterns regarding the construction of "otherness" and divisions in online discussions.

Besides collecting statistical evidence from the internet, semi-structured interviews will be conducted among eight college students who have publicly expressed their support for Donald Trump. These interviewees are all Fudan University students coming from diverse disciplinary backgrounds with majors ranging from computer science to management, mathematics to natural science, as well as political science and humanities. Furthermore, two comparative interviews with students who are not in favor of or indifferent to Trump will also be completed to understand how students from an elite Chinese institution relate themselves to the MAGA appeal.

Every interview is comprised of four sections with tailored survey questions following their answers to the previous one. The first section consists of six quick yes-no questions asking whether they are mostly intrigued by the entertainment effect or the actual policies of Trump. If the latter is the case, the participant will then have to compare and comment on the differences between the policies of Donald Trump and other liberal elites such as Hillary Clinton. Next, the questionnaire explores how their attitudes have evolved after the trade disputes with China and the visa restrictions against Chinese students. The next section investigates the role of sources of information and peer pressure in shaping political opinions. More specifically, it will concentrate on how they would respond to domestic anti-Trump voices, be it critics of their liberal friends or anti-U.S. nationalist outrages throughout the trade war. Finally, an open question is provided to examine the characteristics they want for elected officials at home and how these are similar to or different from those of Trump's, which could in turn help us comprehend the interplay between domestic realities and global imaginations.

## Findings

The 90 most endorsed answers under three of the most viewed questions on Zhihu regarding the topic "Trump" were retrieved to examine the Chinese netizens' changing perceptions of Donald Trump. Among these most endorsed answers, 91.11% or 82 of them expressed a positive attitude towards Trump's victory, 6.67% of them expressed their support for Hillary Clinton, while the rest remained indifferent. Albeit most Zhihu users were anonymous with little personal information stated on their page, 32 of those 82 Trump supporters listed their identities and 18 of them even shared their educational backgrounds. Moreover, it turned out that 71.88% of these identifiable users were influencers with over 100,000 total likes and 28.13% of them have studied or lived abroad. As for those who have shared information of their education, 61.11% of them were studying at a top 100 institution in the world such as UCLA or Cornell, while 27.78% of them obtained their degree in one of the top 10 universities in China such as Tsinghua. Based on the frequency of keywords mentioned in these answers, a simple word cloud was created below (Figure 1): It showed that it was Trump's affinity with the "working-class" and the "silent majority," as well as "Wall-Street-backed" Hillary Clinton ("baizuo") and her "political correctness" on issues concerning "Muslims," "illegal immigrants," and "Affirmative Action" that contributed to their support for Trump. Meanwhile, only six answers on Zhihu and one of the 10 interviewees mentioned the entertaining effect of Trump.





Figure 1. The most debated issues about the election on Zhihu.

Therefore, it is clear that a large portion of Chinese Trump supporters on Zhihu have been studying at elite institutions in both countries or have been an influencer or traveled overseas. This stands in sharp contrast to many of their well-educated American peers and deserves further investigation. To answer this puzzle, this paper will then limit its scope to those who were more educated and then elaborate on the mechanism as to why they backed Trump's policies.

Of all these answers, users favoring Trump shared similar notions about the challenges the U.S. was facing and Trump's role in tackling these challenges. One Zhihu user, who studied financial engineering at Tsinghua and MIT, stressed the historical background that heralded Trump's rise: the declining economic advantage of the U.S. on the global stage, the shrinking middle class after the 2008 Financial Crisis, and the increasing unemployment rate following rapid outsourcing of U.S. industries. He believed that the sense of nostalgia Trump triggered among working-class Americans (by revolving around the word "again"), the frankness people detected from his often-unscripted speeches, and the fact that he owed nothing to out-of-touch billionaire donors (for being one himself) were exactly what were needed to impress ordinary American people. Another post from a physics student at Shandong University concentrated on the current "Cultural War" in the United States and chose a conservative stance himself, claiming that Trump was the only way to stop the "Latinization" of the American population whereas policies of the Democratic National Convention could only yield negative consequences.

Following the narrative that the U.S. was on the brink of falling apart, most of the answers had expressed discontent about the way establishment elites were tackling these challenges. A researcher at Peking University and Arizona State University insisted that it was public safety, economic development, and fiscal stability that mattered most for people working in the academia: "had the policies of the liberals been taken, America and the world would be overwhelmed by turbulence and turmoil." Similar concerns for "law and order" were found in another user's endorsement of Trump, who suggested that addressing public security concerns "brought by illegal immigrants and Muslims" and creating more employment opportunities are more important than dealing with "trivial issues such as abortion and LGBT rights." The agendas of the Left, they claimed, only represented the interest of the privileged who profited from the process of globalization: "living in a bubble called Washington, their policies were bound to fail the rank and file." While on the other hand, Donald Trump had always been talking about the importance of bringing back jobs, revitalizing the U.S. economy, and

prioritizing American interests, making him the lord and the savior to working-class Americans in the eyes of Chinese Trump lovers.

In sum, some of the most outspoken Trump supporters are in fact well-educated in both countries. Policies, instead of the entertaining nature of Trump remained their biggest concern. Moreover, their views about this election had been shaped by their diagnosis of America's social ills and their discontent with the prescriptions offered by political elites like Hillary Clinton. In the next part, this article will try to interrogate the crux of the matter, i.e., what are the crucial reasons behind this belief and how did this evolve when the political climate changed, especially after the Sino-U.S. trade war.

## Discussion

### *The Orthodoxy of Pragmatism*

The reason why Trump won attention and acclaim from well-educated Chinese urbanites despite his disdain for political correctness could be attributed to the orthodoxy of pragmatism, which stands at the cradle of China's economic growth during the past four decades. "It doesn't matter whether a cat is black or white as long as it catches mice," argued one of the interviewees from the Fudan University department of computer science when describing the booming stock market and strong employment performances during the Trump administration (this research was finished in the spring of 2019, long before the pandemic and the recession). Regardless of the chaos, Trump has proven himself to be capable of reinvigorating the economy, which, in the eyes of Chinese Trump supporters, justified the means by which he achieved those policies. Another post on social media that also quoted Deng Xiaoping, concurred with this pragmatic attitude towards politics: "obliterating political correctness only demonstrates he is 'seeking truth from facts'" (实事求是). When he drew parallels between his business success and issues of statecraft, it was a demonstration of "practice [being] the only criterion for testing truth" (实践是检验真理的唯一标准). Notably, the pragmatic thoughts in Trump's book *Think Like a Champion* was acknowledged as down to earth by many users on Zhihu.

These findings, at the same time, demonstrated how official narratives about what drove the economic miracle by the Chinese government could shape people's standpoint and discourse about foreign affairs. This pragmatic orthodoxy could be interpreted as learning from past experiences and maximizing efficiency over approaches. Although traditional Chinese intellectuals urged that power should be cloaked in moral and ethical rationalizations, they claimed that the end will justify all that is required to achieve it. This could be one explanation for Chinese people's pragmatic perspective on most of Trump's policies and how his immoral or disrespectful behavior could be tolerated as long as it is good for the economy and national security.

Apart from this, observations from another interviewee in the comparison group shed light on the connection between this pragmatic mindset and distrust for democratic institutions. By saying universal suffrage is "irresponsible" in any big country, this person thought elections in the U.S. were detrimental to the rationality and continuity of governance: "Because the internet

has increased the speed and volume of political communication online, we must be very cautious about the manipulation and misrepresentation of public opinions.” This answer from a student who does not endorse either candidate echoed Wang Zhengxu’s study on public support for democracy in China (Wang 2007). The majority of Chinese people, according to him, are not ready to embrace democracy since they believe economic growth and social stability are more of a priority than freedom of speech and other democratic rights.

In short, the first part of the discussion intends to investigate why people are so supportive of Donald Trump given his bad record in promoting gender, racial, and economic equalities. It is the orthodoxy of pragmatism that made our interviewees ardent supporters of Trump who constantly boasted about his achievement in saving the economy in lieu of political correctness. This explanation, however, only focused on the role of the political environment (where pragmatism and the economy flourish together); the next part will focus on analysis of individual experiences.

### *High-Level Perception of Inequality Through Intergenerational Connection and Collective Memories*

This section tries to answer why the “American working-class” has been constantly mentioned among Chinese Trump supporters as a case for his presidency. This article suggests that it has a lot to do with the Chinese students’ high-level perception of inequality. That awareness may be very rare in societies with strong economic and racial segregation, but in China, a country that has witnessed two-digit growth for three decades, it can be formed through intergenerational communication or even from their collective memories. One of the interviewees from Jiangsu Province expressed her sympathy for those Americans who suffered from the unequal distribution of globalization because she knew many of those underrepresented people back home. She remembered what it meant to live in times of scarcity and her childhood memory with her grandparents always brought back these hardships. This had caused serious cognitive dissonance during her prior exchange to the U.S.: while her American peers were so passionately advocating for minority rights, all she ever wanted was social mobility and opportunities.

Another answer to the question of why Zhihu has more Trump supporters while users on its American counterpart, Quora, all hate him suggested that many Chinese students were the first in their family to receive higher education so that class distinctions were less entrenched and there was a deep connection between those well-educated young students and the lower-middle class in China. These people were thusly more cognizant of the power of the silent majority, who they believed could shake the whole political landscape when mobilized under the same appeal as what had happened during the Chinese Revolution. Hence, it explained why they were not as shocked and overwhelmed as their American peers about Trump’s popularity and observed it as an outburst of long-term political anxiety.

This kind of intergroup contact has helped reduce prejudice and build trust. After getting to know each other through long-term interactions, the group membership or any negative label

related to that membership will become elusive and redundant for Chinese Trump supporters; instead, they would respond and treat the lower-middle class at the individual level entirely. Thus, successful cross-class communication could be a catalyst to eliminate the perception of outgroup homogeneity, rendering a more positive view about people in other groups possible (Brodt and Ross 1998; Mason et al. 1998; Rothbart and John 1985). Evidence from social media seems to resonate with this explanation: “due to that understanding, Chinese people will not categorize all U.S. Trump supporters as having moral defects or simply insane, they would believe there is always a reason and it is not fair to judge them from a moral high ground; Chinese people will have sympathy for those working-class people rather than stereotype them as extremists with low intelligence and critical thinking.”

### *Perceived Gains of Personal Interest and Evolving Beliefs*

If the previous two factors are based on their understanding of the American society and what it has to sacrifice so as to invigorate the economy, perceived gains of personal interest are a more direct variable in explaining their support for Trump’s presidency. The next part of this paper seeks to offer a changing picture of this factor with empirical evidence both before and after the trade war and the new visa policy for Chinese students, especially the latter one.

Before Trump was elected, a post on Zhihu said his isolationist stance and “America First” resolution will benefit China, as opposed to Hillary Clinton’s “pivot to Asia” strategy and human rights diplomacy. After the trade war and the intellectual property disputes, the same user claimed that Trump’s attack on ZTE and Huawei will incentivize China to develop its own chips and pursue technological independence. Meanwhile, he noted how this round of trade negotiations happened not only between the U.S. and China but also between the U.S. and many of its allies, where Trump’s aggressiveness and unpredictability could distance these countries, thus benefiting China.

Apart from perceived gains in diplomacy and international politics, answers from another interviewee addressed those of personal benefits. One political science student who studied in the U.S. last year claimed that Trump’s emphasis on infrastructure, public safety, and strict immigrant policy would be appreciated by many of the Chinese students in America. He referred to his personal experience about the little-renovated airport in California, a blue state, while many airports in red states were in much better condition. A self-proclaimed middle-class individual who lived in the U.S. believed that he would by no means support the Democratic Party, who refused to accept fewer undocumented immigrants and lower the tax for the middle-class because they worried about political correctness. One of the most discussed issues, among other things, was affirmative action in college admissions, which they believed would benefit African Americans at the expense of Asian Americans who “ironically valued meritocracy the most.”

People’s ideas seemed to have diverged after the recent trade war and visa restrictions against Chinese students and scholars, especially the latter. Though three of the interviewees (mostly from Fudan University’s departments of political science and international politics) thought Trump’s trade policy

had exacerbated the clash of civilizations and destroyed the neoliberal global order, which the majority still justified as “of the American national interest.” The new visa restrictions and the U.S.’s persecution of Chinese scientists, however, caused more frustration and outrage among those young Chinese college students. “Donald Trump has opened the Pandora’s box, he used people’s hatred and hostility towards China to infringe on academic freedom,” one of the interviewees complained. What’s more, from this interview, it was discovered that Trump’s visa restrictions did have an impact on people’s choice to study abroad. Five out of ten interviewees claimed that they were considering studying countries other than the U.S. As one math student put it, “although the top ones could still get their ideal offer, people like me are really deciding to try Germany or France instead.”

In sum, the Trump administration’s trade policy does not have a direct influence on those college students while its visa restrictions and attacks on Chinese scholars have triggered widespread anger and frustration among those who were more exposed to voices in the academia and obliged them to reconsider their life plans.

### *Charismatic Leadership*

Finally, we came to examine the formation of this cult of personality, which was marked by emotional loyalty to this unconventional leader. Max Weber’s historical sociology described how the world was moving toward inexorable polarization into good and evil, toward existing traditions and institutions, and we will use what he termed as “charisma” to investigate this phenomenon (Weber 1978).

When asked about their take on Trump’s policies, a considerable number of them mentioned that they were surprised at Trump’s determination and perseverance in carrying out his promises such as the wall at the U.S.-Mexican border as well as better trade deals with its major trading partners to reverse the trade deficit. Using executive order to build a wall has also won acclaim from one student in the department of international politics, to which he said, “this proves that he is a determined guy, not just boasting for votes.” Another Zhihu user studying economics and finance at Tsinghua quoted Cao Cao, one of the most powerful warlords in the Chinese Three Kingdom Period, “an old steed in the stable still aspires to gallop a thousand li” (老骥伏枥，志在千里) to praise Trump’s dedication to the United States even at a very old age, especially in some of the toughest challenges like immigration and racial conflicts. And some of them even found his interview in 1988 complaining that the U.S. has always been ripped off by the rest of the world, saying that contrary to many career politicians, he remained committed to his original aspiration even after three decades.

This emotional attachment they had for Donald Trump was not always rational since the trade dispute will undoubtedly hurt ordinary Chinese. Organizational science literature has provided key insights on the motivational effects of charismatic leadership, which engages followers’ self-concepts and identities in the interest of the mission articulated by the leader, and then, in turn, has a strong positive impact on the behaviors and psychological states of the followers (Conger and Kanungo 1987; Conger and Kanungo 1998; Shamir, House, and Arthur 1993). That is to say, a sense of identity and self-

conceptualization have been embedded in Trump supporters’ mindset, there is a strong relationship in which followers, leaders, and circumstances fatefully intertwine.

### Conclusion

In conclusion, this research conducted in 2019 showed that young Chinese Trump supporters are mostly concerned about his certain policies vis-à-vis the entertainment coverage. Special attention has been given to the U.S.’s increasing economic inequality and the elites’ unpopular agenda on identity politics. They had faith in Trump because he represented the sound and the fury of isolated white working-class Americans while in their mind the prescriptions provided by establishment leaders would only intensify these already existing problems.

The motivations behind this sentiment are diverse and can be designated into the following four categories: (1) Their high tolerance for his disrespectful or even immoral behavior could be explained by the orthodoxy of pragmatism, upon which the economic miracle in China since Deng’s opening up is predicated. As long as employment data and stock market index remain intact, the auspicious picture, according to their logic, could justify his means to this end. (2) Because China’s modernization took place within a short period, the connection between different socio-economic groups is rather strong and manifests itself in the form of inter-generational communication. This accounts for the reason why they are more sympathetic to the struggling lower-middle class that is enthusiastic about Trump. (3) Perceived gains played a vital role before Trump took office since they believed his isolationist America-first foreign policy would benefit China’s rise. The later trade dispute did not significantly bring down their affection for Donald Trump, yet the visa restrictions and relentless persecution of Chinese scientists and students stirred up intense emotions and exasperation among these college students. (4) Weber’s concept of charismatic authority offers insights into the general question as to when people would display loyalty to unconventional faces in politics and how this personal devotion could legitimize his presidency. This has been developed into a collective identity marked by interpersonal allegiance to the leader per se even though it may not seem rational or in their interest to support him as president of the United States.

The last part of the interview is an open question regarding young students’ expectations for their own leaders. Compared with the respect they have shown for Trump, answers to this question consist of much more diverse political preferences: (1) One defended the significance of national interest but demurred at the extent to which the Trump administration addressed it. Chinese leaders, in his view, should never dog the footsteps of Trump to push our friends away. (2) The point that China needed more prudent leaders was favored by three of my interviewees. This prudence stems from executive experience and a sense of “historical responsibility,” as well as a long-term vision that prioritizes the welfare of future generations rather than maximizing the odds of winning elections. (3) More pluralistic and inclusive ideologies were also gaining momentum among Chinese youth. One of them saw globalization as still having the potential to bring us good in the long run, and another believed leaders should take a more humanistic approach to governance. Even though he



affirmed his support for Trump, the third person was convinced that businessmen could not run a country and that issues like healthcare, education, and housing should not be subordinated to the law of the market. (4) The last person from the School of Mathematics thought this country should be run by scientists and technocrats who knew the trend of technology whereas less attention should be paid to ideological issues such as political thought education.

In summary, this study of Chinese Trump supporters could provide great insights in understanding how pragmatism shaped elite students' narratives, how China's modernization contributed to cross-class interactions, how their perceived interests came into being at home or abroad, and how a leader's charisma produced a new identity that contradicted rational choice theories. Moreover, this research also calls for further study into the question of why Chinese people's attitude towards their own leaders can be a lot more diverse than their thoughts about Donald Trump.

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## Appendix: The Questionnaire for Semi-Structured Interviews

- Answer yes or no to the following questions regarding the 2016 election:
  - Do you like internet memes such as “America wins Trump reigns” about him?
  - Have you followed his business career and her daughter?
  - Do you think the chaos followed by his victory will be good for China?
  - Does his critique of American elites make you happy?
  - You support him because you believe his ideas or because the Democrats are too bad?
  - Do you care more about his actual policies or his entertaining side?
- Which are some of his policies you support? / Which are some of his entertaining comments that attract you?
- Follow up on policy: compared with “Baizuo,” why do you think his ideas fit today's America more?
- Now that the trade war has happened, do you have any other thoughts?
- Has Trump's restrictions on Student Visa affected you, especially studying or working in the US?

6. What are your sources for American news? (Pause) How do you digest their critical coverage of Trump?

7. What's your thought on people who supported Clinton and despised Trump? (Pause) Whether in China or in the US, everything is very polarized right now. Many American college students don't like Trump; as the trade war escalates, many young Chinese now hate the Trump administration, does their presence have any pressure on your opinion?

8. Final question, if China holds an American-style election today, what kind of leader do you want to pick? Would a Trump-like figure still be your top choice? If not, why do you think he is better for America?

# Information Anxieties: Popular Imaginations of Information in Post-Mao China

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**Abstract** In the late 1970s and 1980s, China experienced rapid advancement in information science and technologies. The proliferation of wireless broadcasting, radio, and television increased the public's access to and engagement with information, and gradually transformed the popular imagination of life, society, and modernity. While people generally looked to technological advancement as an indicator of progress, the consequent explosion of information resulted in deep anxieties in the working class. This paper refers to this historical period as the “information craze” — a decade marked by vibrant social engagement with the concepts and mediums of information, and accompanied by feelings of both anticipation and anxiety about the futuristic information society — and explores the public sentiments behinds the “information craze” in relation to backdrop of power-transition, ideological vacuum, and shifting class identities in China.

Keywords: somatic science; information; Chinese economic reform; technology advancement

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## Introduction

In the late 1970s and 1980s, China witnessed the emergence of a plethora of avant-garde science research. One monumental event of this period was the founding of somatic science (人体科学) by Qian Xuesen (钱学森), the father of China's missile and space program. Qian proposed that the human body is basically an information system that is able to communicate the supergiant system of the external world (Xiong and Ye 2013, 1–7). Despite its obscure theoretical origin, somatic science became remarkably successful in finding a common language with the general public through the practice of Qigong (气功) — an ancient practice of breathing exercises and martial art movements that promotes the exchange of information between the human body and the universe. Qian Xuesen's scientific reassessment of Qigong helped it achieve unprecedented official and public recognition in late 1980s, when the number of Qigong followers increased to over a hundred million (Palmer 2007, 6). This Qigong movement was one of the earliest flash-points of the reform era's “information craze,” a period marked by vibrant social discourse and engagement with the concepts and mediums of information. During this period, Jiang Zemin, then Minister of the Electronics Ministry of China, assessed the IT industry as “the strategic high ground in international competition” and encouraged large-scale development of information infrastructure and technologies (Jiang 2010). Chinese cities experienced unprecedented expansions in wireless broadcasting, radio, and television, which increased the public access to and engagement with information, and gradually transformed the social perception of life and work, giving rise to a more “de-humanized” and technocratic understanding of the worker's body and labor in the post-Mao reform era (Chan and Senser 1997, 104).

The information craze is a phenomenon that occurred against the backdrop of a post-socialist China: a period of power-transition, ideological vacuum, and shifting class identities in China. On one hand, information was fantasized as the magic force that could address the ills of the Maoist economy and modernize China economically and socially. On the other hand,

the explosion of information and its implications resulted in deep anxieties in the working class. This paper is interested in the historical context of the information craze; how scientists, the government, and the general public came to share a common enthusiasm for information revolution and then diverged in their attitudes towards its frictional problems. The first part of the paper discusses the origin of somatic science and the concept of the information body. The second part of the paper discusses the importance of information to the shifting social and economic reality of the reform era. The third part of the paper highlights two key developments of information era — changing labor hierarchy and the rise of the intellectual economy. The main thesis is that the flurry of socioeconomic changes in the transition towards an information society created tremendous anxiety for the working class. The popular imagination of information, expressed through literature, captures the sense of conflict and tension between the old and the new in the reform era.

## Literature Review

Existing literature on post-Mao China generally regards information science and technology as factors of production that increased productivity and upgraded the structure of the Chinese economy. Only a few authors have examined the impact of information science and its associated narratives on the spiritual and psychological conditions of the Chinese people. This small body of literature, which includes Wu Xiaobo's *The Sorrow of the Chinese Working Class*, is generally written as literary or fictional stories that lament the moral and spiritual degradation of rural China, the erosion of working-class identity and pride, and the rise of utilitarianism and materialism in the city (Wu 2015). Nonetheless, recent works on post-socialist socio-cultural history have been taking a more scientific approach to post-reform public thought. Historian Liu Xiao's book, *Information Fantasies*, provides a very convincing evaluation of the origins and effects of the information craze in the reform era, including the Qigong phenomenon (Xiao 2015). This paper inherits Liu Xiao's approach of examining *information* as a socio-

cultural phenomenon of post-socialist China and hopes to place the movement in a larger historical context, by applying perspectives from the three traditional bodies of literature on post-Mao China — party-centric, economic, and socio-cultural — to the evaluation of the transition to an information society.

## The 1980s “Information Craze” and the Rise of Qigong

In the late 1970s and 1980s, avant-garde scientific research and popular imagination found a common language in the discussion of information and the human body. Both scientists and the general public were interested in how to incorporate the human into the ceaseless information flows that characterizes the external environment. The Chinese scientists’ venture into somatic science is largely a legacy of the Cold War arms race and the urgency to develop cutting-edge defense and space technology. In the early 1980s, Chen Xin (陈欣), a researcher at the Institute of Space Medico-Engineering, in his collaboration with Qian Xuesen, proposed a “human-machine-environment system engineering” that facilitates seamless interaction between pilots and aircrafts, by treating the human being as an information system. Developing this system requires quantitative analyses of human behavior and the physio-biological data of the human body (Sheng and Dhillon 2016). To capture and study this data, instruments like electromagnetic wave detectors were attached to the test subject — now a cybernetic body amid information flows — to determine the type and quantity of information exchange. These procedures gave rise to the “the science of qigong,” which Qian Xuesen believed to be a “shortcut to uncover the informational mechanisms of the human body” (Xiao 2019).



Figure 1: Information pots. (Liu 2019)

The association of Qigong and information system is not unfamiliar to the Chinese public. “Qi” exists as an important notion in Traditional Chinese Medicine long before Qian’s time; it is believed to be a kind of vital energy that emerges from acupuncture meridian points on the body and provides information about the persons’ health. As early as the 1950s, Qigong was already integrated into the modern health and medical institutions of the PRC. In the 1970s, Qian Xuesen’s interest in Qigong further promoted the scientific rebranding of this ancient practice. His esteemed position in the scientific community gave greater credibility and prestige to the science of Qigong. Qigong masters around the country gladly accepted Qian’s theory and adopted the association between qi and information as a means to boast the magical healing effect of qi. In line with the somatic science perspective and Qian’s expertise in space technology, Qigong masters came up with a famous quasi-science creation, the Information Pot (信息锅) — a literal metal pot that Qigong practitioners wore on their heads in order to receive signals from outer space, so that a “resonance between heaven and mankind” (天人感应) could be

formed (*Haiwai Huaren Zhongwen Menhu* 2011). In doing so, the Qigong masters aimed to repackaged their traditional trade as a scientific and fashionable one that could appeal to people living under the rapid pace of modernization in the reform era. Their approach was proven to be successful as the number of Qigong followers soared to over one hundred million in the late 1980s (Palmer 2007, 6).

The repackaged Qigong allowed the average person to glimpse into the world of avant-garde science and feel more involved in the country’s latest science research projects. This desire to stay up-to-date stemmed from an anxiety that accompanied the public life’s transition into the post-socialist information age, where there was a change in the nature of information mediums.

In the 1980s, the unprecedented expansion in wireless broadcast and the television revamped the nature and function of the media as information channels, which used to consist of mostly wired loudspeakers that broadcasted Maoist propaganda. The state’s centralized mediums were gradually “undermined and depoliticized” by the late 1970s, and gave way to the creation of private spaces where information is neutral, utilitarian and non-political (Xiao 2019, 57). For the first time, information that was delivered to households no longer carried prescriptive messages on morality and conduct. It no longer told people what to do, but instead presented them with a dizzying array of choices on what to listen to and believe. The Chinese public found themselves lost in an explosion of information with little organization, orientation, or means of navigation. In contrast, the “paucity of information” under the Maoist era was a kind of blissful ignorance (Roy 2015). When the Maoist seal was removed, the previous socialist subjects were pressured to embrace a new era of information proliferation where information is charged with scientific, liberal, and modern connotations, which means that if one does not keep up with information, he or she would be considered illiberal or backward.

Against this backdrop, a sense of self-consciousness about one’s ignorance arose from the society. People were eager to grab onto any accessible materials with which they can make themselves more knowledgeable and scientifically-literate. Apart from the practice of Qigong and the use of information pots, science fiction was another channel through which the untrained person could reflect on science. From 1976 to 1981, about 600 science fiction novels and stories appeared as books or in magazines. Founded in 1978, science fiction magazines like *Kexue Wenyi* (科学文艺) [Scientific literature and arts], *Zhihui Shu* (智慧树) [Wisdom tree], *Kehuan Haiyang* (科幻海洋) [Seas of science fiction], *Shijie Kehuan Yicong* (世界科幻译丛) [Translations of world science fiction], and *Kehuan Shijie* (科幻世界) [World of science fiction] mushroomed (Xiao 2019, 55). Despite the whimsical and sometimes preposterous nature of some of these science fiction stories, they simplified frontier science into accessible languages and transformed keywords like “information” into the trending buzzwords and mystical signifiers in popular culture.

## How China’s Political Developments Shaped the “Information Craze”

The central political development in post-Mao China is



the Chinese Communist Party (CCP)'s transition from a revolutionary leader to a technocratic elite committed to modernization. The CCP government, having recently ended the Cultural Revolution, "reorganized themselves around Deng Xiaoping's (邓小平) economic reform plan that sought to remedy the inefficiencies inherent in the Soviet-style economic system" and put China on par with developed countries in the West (Burton 1987, 431-46). In 1978, Deng Xiaoping, the architect of China's post-Mao reforms, called for the rapid development in electronic computing, cybernetics, and automation technology at the National Conference of Science. Various predictions of an incoming "information society" gained wide circulation and attention in China, especially after the translation of Alvin Toffler's book *The Third Wave into Chinese* (Xinhua Online 2004).

The mentality of prioritizing science over ideology was common in the post-Mao atmosphere of political disillusionment: while the Cultural Revolution was regarded as irrational and inhumane, science was invested with the power to transcend ideological conflicts. The reformists attempted to use the neutral and optimistic idea of science to distance themselves from the past and justify their technocratic rule as objective and beneficial for China. Yet, it is noteworthy that the reform agenda was not decisive from the start, but rather opportunistic and *post hoc* — in Deng's own words: "Take one step and then decide on the next step" (看一步, 走一步). Critics challenged Deng's technocratic approach to modernization on the grounds that it was too "unoriginal," "Western," and lacking in "socialist ethics" (Tsinghua 2006). This argument harks back to *ti* and *yong* debate proposed by Zhang Zhidong from the previous century — can China maintain its socio-cultural norm while adopting Western technology for practical application, or is "utter Westernization" (全盘西化) the sole means to effective and genuine social progress (Levenson 1958)? The reformists justified their position, suggesting:

"[there is no] ready answer for [the question of what] socialism with Chinese characteristics is all about... [China can only increase [her] knowledge of this by continuous practice under the direction of correct theory... Practice is a great school (实践是一个伟大的学校)" (Hu 1984).

To strengthen this stand, Hu Yaobang selectively cited Mao Zedong's own political report to the Seventh National Congress of the Communist Party in 1945:

"In the final analysis, the impact upon the people, good or bad, big or small, of the policies and practice of all political parties in China depends on whether and how much they help to develop the Chinese people's productive forces" (Mao 1968).

The back and forth between the critics and the reformists highlight the crisis of legitimacy affecting the CCP's continued political domination in the reform era: if China's socialist cause was abandoned, the legitimacy of the CCP would be gone too. The difficulty of legitimization and the need to borrow Mao's authority gives rise to the inference that reform elites were essentially trapped in a quest for succession.

Apart from the political narrative's allusion to Mao, the scientific narrative propagated by Chinese scientists was

also reminiscent of the revolutionary communist ideology. Comparing the somatic science to communism, Qian rewrote the first sentence of Marx and Engel's Manifesto of the Communist Party as "the specter of somatic science is haunting us" and celebrated somatic science as "not only a scientific revolution, but also a cultural revolution" (Xiao 2019, 43). Indeed, the futuristic imaginations in 1980s "New Era" were "imbued with utopian impulses" that evoke a feeling of nostalgia for the age of Maoist idealism, because both promised great industrial strength and a more prosperous society. The wish to change the temporality and physical limits of the human body also resonates with the ambitions of the Great Leap Forward, which envisions a sleepless "iron wo/man" who could work around the clock (Xiao 2019, 31).

Despite the familiar sense of idealism and Maoist nostalgia, the transition towards the envisioned information society was not always well-received at the social level. While the elites did achieve some success in popularizing science, they were not entirely content with the type of scientific discourse that the masses were engaging in. The general public's lack of proper science education and training resulted in widespread misbeliefs, myths, and pseudo-scientific practices.

In 1989, Yu Guangyuan (于光远), Deputy Director of the National Science and Technology Commission, lamented that, "within a long time in the middle of 1980s... pseudoscience prevailed so extensively that opponents' articles had got no chance to be published, either rejected, or totally ignored" (Li and Fu 2015, 543-47). He later published a report titled "Investigation and Criticism of Extrasensory Power" at the China Academy of Science in 1982, and this was just the beginning of the reversal in the government's welcoming attitude towards popular science narratives (Yu 1982).

Science fiction, which represented the public's fantastical imaginations of technocratic future, faced a crackdown during the campaign against "Spiritual-Pollution" (精神污染) in 1983-84, even though the genre was previously celebrated as a tool for "science popularization" (科普). In 1994, the CCP also changed its policy of tolerance towards Qigong, denouncing the practice as a "pseudo-science" (伪科学), which eventually ended the decade-long Qigong fever. These events suggested the incongruence of the public's perception with the party's perception of science, as well as the confusion and conflict inside the Party's imagination of the technocratic information society. In sum, the transition towards the envisioned information society is packed with inconsistency and contradictions. As the myth of revolution and its grand narrative fell apart, contesting forms of desires and visions from scientists, the general public, and officials clamored to fill in the ideological gap.

## Transitioning Into a Post-Mao Information Society

Despite the controversy, conflict, and inconsistency in the transition towards an information society, the endeavor did leave a lasting impact on post-Mao Chinese society. Two significant developments were the new hierarchy of labor, and the growing emphasis on intellectual economy. Collectively, they set the stage for China's transition to a capitalist economic model that resembles that of the West.

The popular somatic science narrative, coupled with the state's prioritization of industrial efficiency transformed the perception of workers from political, proletarian subjects to neutral, non-political, and utilitarian information bodies, as evident from the visual and literary culture of the period. In 1980, the first prototype industrial robot was developed by the Shenyang Institute of Automation, and was hailed as a milestone event in the modernization of the Chinese industry (Shenyang Institute of Automation n.d.).

Subsequently, robots became the star of fiction stories, magazine covers, and even Children's TV shows such as *Yuanyuan and the Robot* 《园园和机器人》 and *Little Robot* 《小小机器人》 produced in 1980 and 1981 respectively (Douban, n.d.; Baidu Baike, n.d.b.). In the same period, the China Central Television Network (CCTV) also incorporated a variety of robot-themed Japanese children's sci-fi shows into its TV catalogue, such as *Astro Boy* 《铁臂阿童木》, *Dr. Slump* 《怪博士和机器娃娃》 and *Doraemon* 《哆啦梦》 (Baidu Baike, n.d.a.). These iconic productions became part of the collective memory of the generation of post-reform urban Chinese born in late-1970s, 1980s and 1990s. These Japanese shows — inspired by Japan's domestic success in industrialization and digitalization — propagated a technocratic utopian vision for the society, where friendly robots live amongst humans to help them solve problems, perform essential jobs, and fight against enemies and natural disasters. The portrayal of heroic robots in popular culture — the Astro boy (阿童木), Doraemon (哆啦A梦), and Arale (阿拉蕾) from *Dr. Slump* — became tremendously influential in China's post-reform youth and popular culture. These shows reversed the exaltation of heroic humans in the Maoist period, such as Leifeng, the Worker's Exemplar (劳动模范雷锋) and Liu Hu Lan, People's Hero (人民英雄刘胡兰), and Young Soldier Zhang Ga (小兵张嘎), whose stories were widely circulated in children's TV shows, movies, and theatrical productions. The shifting cultural trend began to set a new standard for China's role model of the time (时代楷模) — robotic, scientific, and hyper-efficient instead of arduous, altruistic, and righteous — and inadvertently ended the glorification of the muscular body of peasants, human workers, and foot soldiers.

Despite the hype surrounding robots in media culture, not everyone is optimistic about its side-effect of depoliticizing and dehumanizing the ideal human worker. Critics argue that the technocratic trend, coupled with the avant-garde scientific theory of information body, is reducing workers to mere technological devices, and hence eroding the prestige and spirit of the working class while justifying the rise of an inhumane capitalist state (Mosco 2004).

The same concern can also be seen in the popular literatures of that period. The 1981 popular science fiction story *A Curious Case* — which depicts a robot doctor who puts human workers to shame with its skills but turns out to be a murderer — darkly alludes to a dystopian future where work becomes completely devoid of human values. The protagonist of the story, robot doctor Fangfang, is believed to be “the highest achievement in artificial intelligence research thus far.” Her medical knowledge comes from an extensive database of expert knowledge from human doctors, which enables her to make the most accurate diagnosis and perform the most difficult surgeries (Dai 1994, 181-90).

The imagination of an all-powerful AI doctor was not merely a literary fantasy. In the same period, Chinese information scientists were deeply vested in the project of transferring human knowledge to computers through the expert system (Huang 1986, 26-37). The procedure involved collecting the professional knowledge of experts in a certain field and storing it into computers. This scientific endeavor was ardently supported by the Chinese government. In the 1983 speech, “A Worldwide New Technology Revolution and Our Strategy,” delivered by then-premier Zhao Ziyang (赵紫阳), information science and microcomputer research were positioned as the key to China's success in the age of global technological competition (Zhao 1984, 3-9). Yet, the elites' optimism was not shared by everyone in society, especially the working class, who found themselves being displaced by technology. Against this backdrop, science fiction and popular literature became a channel through which members of society expressed their dissatisfaction, anxiety, and fear of the incoming information age. This sentiment is reflected in the ending of the robot doctor's story: the seemingly faultless Fangfang eventually exposes her defect when she attempts to open a patient's skull in order to cure his headache. After an investigation, people found out that Fangfang's creator, Scientist Lin, has forgotten to install basic moral values in the robot's system, which gave rise to the dangerous defect (Dai 1994, 181-90).

The robot doctor's story directs attention to the dilemma of labor and work ethics in the 1980s. It voices the people's mistrust of machines during a time when robots and artificial intelligence are becoming a national sensation. By highlighting the robot doctor's defect and lack of morality, popular literature attempts to preserve the human worker's dignity and superiority over their non-human counterparts. The story can also be read as a political commentary on the government's attitude towards the changing labor landscape: Scientist Lin's failure to install the moral faculty in Fangfang is a metaphor for the Chinese elites' neglect of the human spirit in the pursuit for technological advancement. This narrative reflects the growing anxiety faced by the Chinese working class, who are insecure about their lack of up-to-date knowledge and machine-like efficiency and precision (Dai 1994, 181-90).

The transformation of social value was accompanied by a new economic outlook and personal ambitions. Daniel Bell, a Harvard sociologist, whose work became highly influential in the Chinese intellectual scene in the 1980s, predicted the “rise of the intelligentsia” in China, following the diminishing of physical labor (Bell 1973). In line with Bell's view, Chinese writer Gu Xin (顾欣) predicted the rise of “meritocracy” in China, where authority would be premised on intelligence and competence (Hu 1997, 8). This school of thought was congruent with the developmentalist and technocratic schema of Deng's China, and justified the elevation of intelligent labor over muscle labor as an inevitable part of modernization — a rite of passage for China to join the developed world.

This elevation of intelligent labor, however, came at the expense of a generation of Maoist workers. During the transition to the Deng economy, the working class not only suffered massive layoffs, but also an erosion of working-class pride and masculinity. The sentiment of confusion and skepticism about the Deng economic reform and the shift towards capitalism caused a change of heart in the genre of “reform literature” (改革文学) — a body of literature that

emerged in the reform period, which initially supported and glorified the reform, but subsequently shifted to a more sympathetic attitude towards those who have been left out or hurt by the increasingly technocratic and capitalist policies (Su 2015, 18–24). One of such novels, *Zhentong* (阵痛), written by Deng Gang (邓刚) and published in 1983, told the story of Guo Dazhu (郭大柱), a hardworking and passionate middle-age factory engineer who is demoted because he cannot not catch up with the latest machineries (China Writer, n.d.). The reform rendered him and his generation useless, and they anxiously attempt to stay relevant by taking up menial jobs such as serving tea to the newly-hired, college-educated engineers, who were visibly less motivated and perfunctory in their work.

The feeling of helplessness and desire to keep up was also shared by the younger generation, especially those from the rural areas, who no longer enjoyed Mao's ideological support for the peasant class. In "A Lost Dream" (丢失的梦), a story published in 1983, a country girl yearns so much for a college education that she tries to kill herself when she fails the college entrance exams. She dreads becoming a peasant or manual worker like her parents and rests all her hope on a college degree, so that she can move to the city and obtain a better job. The personal values of the protagonist are a far cry from values propagated in the Maoist era. Peasants and manual workers — once glorified as the model citizens — became the dreaded profession of the youngster. College degrees, despite the renouncement of intellectuals during the Cultural Revolution, became fashionable again for those who want to move up the social ladder. The story also reflects the public's growing anxiety about the urban-rural division, which became stark with the rise of a new social hierarchy under the increasing capitalist economic system, and Deng's policy of prioritizing the development of coastal cities.

Interestingly, the story's solution to the rural girl's woes was a scientist who could program information into her mind, where "confusing, overlapping waves are replaced by continuous, beautiful sine waves of symmetry and harmony" (Xiao 2017). The girl immediately became knowledgeable and was able to pass her exam with flying colors. This resolution highlights the public's prevailing faith in information to transform rural China into a modern nation. Paradoxically, the information explosion of the 1980s triggered a feeling of insecurity amongst the citizens, who then turned to information again as the panacea for the problem of backwardness associated with the pre-reform era.

## Conclusion

The Chinese government, the scientists, and the general public were united in a common enthusiasm for information, although they were motivated by different agendas. On one hand, the development of information technology was a way for Chinese scientists to catch up with their Western counterparts, and a political tool for the government to achieve their technocratic and developmentalist goal, thereby legitimizing their rule by distancing themselves from the traumas of the Maoist era. On the other hand, the general public's eager engagement with information was a way to stay relevant and soothe the anxiety of becoming socially and technically obsolete. Despite the shared enthusiasm, the transition to the envisioned information society is ridden with contradictions because the endeavor was not clearly defined from the start. The contradiction in the

government's action point to the uncertainty and volatility of post-socialist China, where reform and modernization were largely a process of trial and error. During this paradoxical time of turbulence and utopianism, imaginations of how the future society looks like ran wild. These imaginations are expressed in science fiction, films, and TV shows, alongside sentiments of anticipation, anxiety, and confusion experienced by the society as it departed from Mao's revolutionary age and embarked on the uncharted path of global capitalism.

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# Infrastructural Afro-Modernity with Chinese Transnational Capital: Narratives Surrounding the Kenyan Standard Gauge Railway

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**Abstract** The Kenyan Standard Gauge Railway (SGR) is a transnational infrastructure project financed by the Chinese government. Beyond its physical form, the SGR serves as a tool for storytelling and narrative building. In fact, competing stories told by the Chinese government, the Kenyan state, and the Kenyan public all contribute to how we understand Kenya's national identity, the BRI's global reach, and the China-Kenya relationship. Through different narratives, the SGR becomes a field of contestation between many different storytellers. This paper investigates the types of stories told about the SGR by the Chinese and Kenyan governments, as well as the Kenyan public, and seeks to answer the question, how do these narrative infrastructures inform us about Afro-Modernity and a global China?

**Keywords:** infrastructure; economic development; Standard Gauge Railway; Belt and Road Initiative; Africa-China relations

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## Introduction

In 2013, under the new leadership of Chairman Xi Jinping, the Chinese government launched the Belt and Road Initiative (BRI). The *China Daily* calls the BRI "a bid to enhance regional connectivity and embrace a brighter future" (He 2019). Under the framework of BRI, the Chinese government has been focused on building and funding physical infrastructure in Asian, African, and European countries to improve transportation, trade, and connectivity. The BRI seeks to create a global economic chain under the leadership of China.

Sub-Saharan Africa is the region with the most new BRI projects. Chinese involvement in these projects is large in both

scale and depth. Of the sectors in which China has invested in Sub-Saharan Africa, the transportation sector, specifically trains and railways, has received the most BRI funding, according to data collected by the Global China Investment Tracker at the American Enterprise Institute (AEI 2019).

In Kenya, Chinese investment in the transportation sector began in the early 2000s under former Kenyan President Mwai Kibaki (2002-2012), before the BRI was officially launched. Under the current President, President Uhuru Kenyatta (2013-present), developmental loans from China to Kenya have increased dramatically. Among the development projects in Kenya, the most prominent is the Standard Gauge Railway (SGR). The SGR is a new railway system the Kenyan government adopted to replace portions of the old Meter Gauge

Railway, which was constructed by the British colonizers.

As a piece of infrastructure, the SGR exists not only in the physical space, but also in discursive narratives. In *Keywords for Media Studies*, Melissa Aronczyk defines nation as “a set of contingent and ongoing processes that actors mobilize for diverse purposes in a range of contexts” (Aronczyk 2017, 125-126). In the article, “Following the Infrastructures of Empire: Notes on Cities, Settler Colonialism and Method,” Deborah Cowen argues that infrastructure is “both an object and a method of inquiry” (Cowen 2019, 10). Combining Cowen’s focus on nation building and Aronczyk’s focus on infrastructure, I will use national narratives surrounding the SGR as a method of inquiry to study the relations and processes of power in the project, in order to make “visible the struggles over infrastructure, and in doing so [offer] a glimpse at how infrastructure can be built otherwise so that reproduction can be redirected to underpin alternative intimacies based in alliance, mutuality and solidarity” (Cowen 2019, 15).

Narratives have power. Narratives shape how we understand the world, how we choose our enemies and allies. Storytelling becomes a field of contestation between the states and the public in shaping how we define a nation. What stories do the Chinese State, the Kenyan State, and the Kenyan public tell about the SGR? What hegemonic narratives are produced through these stories? What do these stories do, and for whom?

## Literature Review

### *Chinese State Capital and its Global Reach*

The BRI development model is not welcomed and accepted by all. Chinese foreign direct investment (FDI) in Africa has catalyzed particularly polarized narratives about China’s intentions. Both the Chinese state and U.S./European media produce distorted narratives of BRI projects that create polarity in perceptions. To the African state, Chinese capital is key to their national development. To the Chinese state, Chinese state investment is seen as a gesture to invite African countries to join China on the train of modernity. To spectators in the U.S. and Europe, whose countries also participate in major foreign aid relief in Africa, Chinese capital represents a predatory debt trap. Chinese movement in Africa is often portrayed as neo-colonialism in the U.S. and Europe. Chinese faces become the faces of new colonizers (Brautigam 2010). But many of these suspicions are based upon a misunderstanding of BRI projects. The unique character of Chinese FDI lends clarity to these polarized narratives.

The western foreign aid framework is not fit to analyze China’s presence in Kenya. While much of western foreign aid is focused on setting up support systems for private investment in Africa with a focus on Western democratic ideals, such as President Trump’s Prosper Africa Initiative, BRI projects are centered around infrastructure-driven development funded by state capital with no explicit demand on governance standards (Campbell 2020). U.S. media reports on Chinese investment in Africa exposes the flaw in U.S. perspective. For example, a New York Times article covering Secretary of State Mike Pompeo’s visit to Africa in early 2020 titled, “On Tour, Pompeo Courts Africa, to Counter China,” focuses much more on U.S. frustration about Chinese investment in African infrastructure,

rather than the local politics that have influenced African leaders to favor Chinese aid, as well as local sentiment towards globalization (Dahir 2020). The purpose of such reporting is not to cover African economics and politics, but rather to fabricate an image of a frighteningly powerful China. The framework of colonialism is also insufficient to analyze China’s presence in Africa. The British empire built a railway in Kenya to consolidate colonial control and gain more land, while the Chinese government built the SGR in Kenya for economic gains and diplomatic influence (Burman and Lonsdale 1992, 16).

The SGR is funded with Chinese state capital for the purpose of securing profits generated in a global economy and power produced through diplomacy. Chinese state capital does not broadly mean capital from all Chinese investors, but rather specific capital designated by the Chinese government to be invested in foreign infrastructure under BRI. The Chinese government has more control over this kind of capital than private Chinese capital. Unlike private capital, the objectives of Chinese state capital extend beyond profit maximization to include increasing Chinese diplomatic influence and gaining access to emerging markets and natural resources.

I argue that BRI infrastructure projects do two types of work. First is economic development for both a BRI partner country and China. Second is the soft power work which centers around the perception and narrative about China and the host country. In her book, *The Specter of Global China*, Ching Kwan Lee points out that to understand the characteristics of Chinese state capital in Africa, one must combine the logic of state as well as the logic of capital: “centralized control and decentralized improvisation are both at work in Africa but they fail to recognize 1) the primacy of politics in shaping the interests, capacity, and impact of Chinese state capital in Africa, and 2) the eventful nature of capitalism” (Lee 2018, 10). That is, the Chinese government does not have the power to create law in Africa. But Chinese state capital, regulated and released through Chinese legislation, does have influence over how local officials and legislators create laws. The eventfulness lies within the public and the local political parties who also have influence over how laws are made, and who gets to make laws. In terms of narratives, the Chinese state is the authoritative speaker on Kenyan railway, but it can produce narratives that affect the public discourse surrounding the SGR. Of course, the narratives produced will also be challenged by unpredictable local conditions. The intersectional model proposed by Ching Kwan Lee disrupts the narrative that Chinese state capital is a totalized, controlled medium through which the Chinese government hopes to colonize Africa.

Lee argues that we should not see Chinese state capital as “quantifiable amounts of money, economic inputs or aggregates of policies and policy makers,” rather we should understand Chinese state capital as “processes and relations of power.” This opens up the possibility to understand both the market forces and the political forces that influence Chinese state capital. It creates a framework to compare Chinese state capital and other FDI in Africa. More importantly, it elevates local resistance as a legitimate source of contestation as opposed to defenseless outcries from people with no agency: “in Africa, Chinese state interests must contend with local African political, economic and social pressures... The power of Chinese state capital is subject to constant contestations and



change over time” (Lee 2018, 9). To analyze the narratives surrounding Chinese direct investment in Africa is not to witness a tragic story of colonialism but to observe how different SGR stories create understandings that interact with each other. It is to ask the question; how does the materiality of Chinese funded infrastructure transform the intangible national narratives of Kenya?

## Methods and Data

While most of the research surrounding the SGR is focused on economic analysis, my research focuses on the narratives that emerge from infrastructural materiality. The two main phases of the SGR I will be covering are the Nairobi-Naivasha SGR (内马铁路) and the Mombasa-Nairobi SGR (蒙内铁路). These two phases are central to the Kenyan state and Kenyan public discussion of the SGR, and they are mainly funded through FDI.

There is no one Chinese state narrative of the SGR or BRI, for there are so many agents involved in reporting. Centralizing information around BRI is a rather recent phenomenon. To find the reports that best reflect Chinese state narratives on the SGR, I chose to analyze the Belt and Road Portal, which was launched in 2017 by the Chinese State Information Center. From big data visualization on BRI foreign transactions to official BRI policies, this official state portal covers all aspects of the BRI.

When researching the Kenyan state narrative surrounding the SGR, I looked into two places: one is the Kenyan Vision 2030 “medium term plans,” the other is State House Kenya’s social media content. These two sources serve different functions for the Kenyan state. The medium term plans are published by the Kenyan State Department of Planning every five years and function as the blueprint for Kenyan national development. They determine the nation’s developmental goals in all sectors, set economic agendas to achieve these goals, and provide a framework for Kenya to become competitive in the global market. The State House Kenya’s social media content is run by the Kenyan Presidential Office. It focuses on the actions taken and the decisions made by President Kenyatta. It also publishes videos that feature the lives of everyday Kenyan people. Both of these sources create specific national development narratives surrounding the SGR. The Kenyan state narrative operates in two layers: the first is the macro national development planning, the second is micro citizen storytelling. While the achievements of the SGR echo the goals set in the medium term plans, personal narratives describe the tangible impacts of these development projects.

It is important to analyze the narrative from Kenyan public, for it reflects local dissent and anxiety, which are often left out during negotiations of such infrastructure initiatives. To do so, I have chosen to analyze content from some of the most widely circulated newspapers/online news websites: Daily Nation, the Standard, the East African, and the Star. Each of these news outlets target a different audience. The East African targets the widest audience, the entire East African community. Daily Nation targets Kenyan elites who would take interest in national development and larger economic goals. The Star targets lower socioeconomic class Kenyan readership. The Standard is the oldest Kenyan indigenous newspaper and was founded by Indian settlers. It is closely

aligned with the Kenyan states. It targets lower socioeconomic class citizens and is focused on marginalized communities in Kenya. I will emphasize the opinion content because it reveals larger social celebrations and anxieties that are drowned out in homogenizing state narratives.

## National Narratives

### *Chinese State Narrative*

#### Coalition Nostalgia of South-South Cooperation

While I read through the search results of “SGR” on the Belt and Road Portal, I noticed that numerous articles characterized the Nairobi-Mombasa SGR as the continuation of a legacy started by the Tazara railway. In an article titled, “Wang Yi: Mombasa-Nairobi Railway is the new symbol of China-Africa Relationship” (王毅: 蒙内铁路堪称中非友谊新的象征), the author claims that the “Mombasa-Nairobi SGR is the new Tazara railway” (蒙内铁路十分成功, 得到了肯尼亚民众热烈欢迎和社会各界一致好评, 堪称新时代的坦赞铁路, 正在成为中肯和中非友谊新的象征) (G. Zhang 2020a). The comparison between the Tazara railway and the Kenyan SGR is not a coincidence, but a key building block of the narrative infrastructure created for Chinese transnationalism.

The message of solidarity born out of Tazara persisted under the framework of the BRI. Afro-China coalition nostalgia of the 1960s serves as the undertone of Chinese state investment in Africa today. But the larger political claim of anti-colonial and anti-imperial projects has faded into history. Like the Tazara railway, which provided an independent trade route for Tanzania and Zambia, the SGR is also positioned to provide Kenya a strategic trade route to the world economy. But this time, it is not for the country to gain economic and political independence, but to further their economic development. Indeed, in contrast to popular U.S. and European discourse about Chinese colonialism in Africa, the Chinese state narrative surrounding the SGR is one extended from the anti-colonial narrative under Tazara Railway. These articles showcase the consistency of China-Africa relations. It gestures to the history of Chinese railway activities in Africa, specifically when socialist China helped build railways in East Africa under very different visions than the British vision. Thus, the SGR continues to be a symbol of coalition. However, it no longer centers politics but rather economic importance according to the imagery of a hyper-connected economic chain led by China.

#### 人类命运共同体 “A Community of Shared Future for Mankind”

When searching the Nairobi-Naivasha SGR under its Chinese name “内马铁路,” the Belt and Road Portal produced total 30 news reports with publication dates ranging from Aug. 8, 2016 to Feb. 9, 2020. But out of the 30 articles, only five mention the Nairobi-Naivasha SGR in their title. A majority of the articles do not discuss the SGR in detail, but rather highlight it as a part of BRI achievements in general. In these reports, the SGR is represented as one achievement in a laundry list of BRI successes globally. Likewise, the portal produces a total of 201 results when searching “Mombasa-Nairobi SGR” (蒙内铁路), but only 17 of these reports mention the Mombasa-Nairobi SGR in their titles. The other 184 reports situate the Mombasa-



Nairobi SGR within the larger context of the China-Africa relationship and BRI progress. In the Chinese state narrative, the SGR is used to showcase the BRI's global impact rather than local conditions. The reports focus on when the project was completed and the length and the function of the project to demonstrate how economically and architecturally magnificent it is. The function of the SGR is written as an abstract concept of modernity rather than a material economic reality. Alongside the new bridge in Bangladesh and the new tunnel in Indonesia, the new Nairobi-Naivasha SGR in Kenya is celebrated as a triumphant story of Chinese-led infrastructure development. The state capital China continuously invests in Kenya signals a long-lasting relationship between Chairman Xi and President Uhuru Kenyatta. The new SGR railway, built using Chinese technology and captured in journalists' photos, showcases that Kenya is a part of this Belt and Road family (一带一路大家庭) (Cao 2020). The Chinese state narrative regarding the SGR is macro, global, and optimistic.

Many of these reports recycle the exact same sentence as follows: "October 16th, Nairobi-Naivasha SGR first phase completes construction" (10月16日, 肯尼亚内罗毕—马拉巴标轨铁路(内马铁路)一期工程正式建成通车) (G. Zhang 2020b). In these reports, this sentence is often the only sentence that mentions the Nairobi-Naivasha SGR. It has appeared in BRI yearly recap reports such as "This Year of Constructing Belt and Road Together" (共建“一带一路”这一年) (Cao 2020). It has also appeared in seasonal recap reports such as "October 17th, 2019: Investment over One Billion in Countries along the Road in First Three Quarters" (2019年10月17日: 前三季度对沿线国家投资超百亿美元) (Cao 2019). Timelines and breakthrough points are key in these reports. The SGR does not only symbolize infrastructural growth in space, but also modernization through time. The material achievements in 2019 connotes it as a year of development and advancement. For most people receiving this news, the sense of time is more tangible than the physical structure being built. They could not see the railway being built in front of them, but they know that in 2019, Kenya and China leaped into unprecedented railway development. It gestures to a futurity which the growth of the present will lead us to "a community of shared future for mankind" (人类命运共同体), which is the underpinning idea of BRI.

In 2013, Chinese Chairman Xi Jinping proposed "a community of shared future for mankind" as a key value for global governance, sustainable development, and peaceful diplomacy. This concept is especially salient in the Chinese state narrative on China-Africa relations. In March 2013, during Xi's visit to Tanzania, where China built its first train in Africa, he said that "history shows that China and Africa have always found themselves facing similar odds. Similar historical experience, common development tasks and shared strategic interests have bound us together." During his speech entitled "Be Reliable Friends and Genuine Friends Forever" (永远做可靠朋友和真诚伙伴), Xi referenced the relationship between China and African countries in the 1950s and 1960s (Xi 2013). He explicitly mentioned the joint effort to fight against colonialism and imperialism between African leaders and Chinese leaders like Chairman Mao and Premier Zhou. Xi's visit to Tanzania, where the Tazara railway was built, signals a clear message of coalition nostalgia. In the Chinese state narrative, China and Africa fought side by side against imperialism and colonialism during the independent era. Now China and Africa share

the same fast lane to development. Xi's speech historicized Afro-Chinese intimacy as a condition for the shared future. The ideology, "a community of shared future for African countries and China" emphasizes a long history of cooperation, structural similarities, and mutual cooperation. The narrative surrounding the Tazara railway in the 1960s mainly focused on an ideological goal: China, Tanzania, and Zambia are building a train to fight against colonizers. The narrative surrounding the SGR mainly focuses on an economic one: Kenya and China are building a train for economic prosperity in the future. This marks a shift of Chinese state vision from ideology to development, conceptual to material, disruptive to advancement.

I argue that the value of "a community of shared future for mankind" is the central theme of the Belt and Road Portal and the Chinese state narrative surrounding the SGR. When searching the phrase in the portal, it produces 2099 results, nine times the SGR results combined. The website layout also signals its global orientation. The website has six different languages built in. The top right corner of the website always displays weather information and the latest BRI updates from all over the world. The background of the website is an abstract sketch of the world map. The phrase "shared future" appears repeatedly in reports on the SGR. Majority of the SGR reports are framed within a globalized context rather than localized context. The SGR is therefore abstracted from its material reality as a railway. It is filled with representational capital as a background of the shared future narrative. Furthermore, the globalized framing of the SGR does important work for Chinese nation building. It creates a universal understanding of China for Chinese citizens. It helps Chinese people situate what China's role is in the world: China is important. China is a development leader to other countries. China is no longer catching up. It is being caught up to. Such narrative justifies the BRI as an important project not just to the government institutions, but to every Chinese person. It tells Chinese individuals that you should feel proud for how far China has come. The SGR, along with other China led infrastructures, fuels the vision of Chinese led futurity.

## *Kenyan State Narratives*

### *Keeping Track of Time*

Kenyan Vision 2030 was a national development plan launched by the last Kenyan President, President Kibaki, in 2008. It "aims to transform Kenya into an industrialized middle-income country offering a high quality of life to all our citizens" (The National Treasury and Planning of Kenya 2013). This economic development blueprint is carried out through successive 5-year "medium term plans." So far, the Kenyan State Department of Planning has published three medium term plans. Although the 5-year plan is a recent addition to Kenya's national development strategy, it has been an essential economic planning document for the Chinese government since 1953. Like the Chinese 5-year plans, the Kenyan 5-year plans prioritize economic growth. It heavily focuses on industrializing key industries such as transportation, energy, and resource production, among others. I argue that the 5-year plan does two types of work for a country: one is internal political power centralization, the other is diplomatic signaling. For Kenya, the 5-year plan centers the state as the key leader and executor of economic progress and legitimizes a

model of economic development that was born out of socialist influence and heavy state control. It also aligns with the Chinese development model, making it easier to attract foreign investment from China.

Despite changing leadership in Kenya, several themes of development have remained consistent throughout all three medium term plans. The plans are similar in both structure and focus to the Chinese 5-year plans. All Kenyan plans uphold infrastructure development as the “foundations of the economy and society” (The National Treasury and Planning of Kenya 2013). Beyond economic development, infrastructure is seen as a tool to transform Kenyan society. The first medium term plan lists infrastructure as the first subpoint under discussions surrounding foundations for national transformation. The proposed programs of all three medium term plans are heavily centered around building or renewing physical infrastructures including roads, ports, and railways. The transformation is not only material, but also cognitive. It affects how politicians, companies, and citizens understand the concept of progress. The timeline-based understanding of progress in these 5-year plans echoes the futurity projected in the Chinese state ideology of “a community of shared future for mankind” (人类命运共同体). Like BRI, Kenyan Vision 2030 gestures to the future. Under the medium term plans, infrastructures like the SGR are the spatial markers of time. It creates a narrative around big shiny projects that we look to as the benchmarks of national progress. The concrete body of the infrastructures are the material embodiment of the present that separates the past and the future. Every 5-year medium term plan marks time in space, and every infrastructure marks space in time. And the state is the governing body that keeps track of the time. The state sets the time and wires the clock of progression. The making of Kenyan Vision 2030 is also the making of the state. It sends the message that Kenyan leadership will lead the country into the future.

### The SGR and Kenyan National Identity

What kind of future does the SGR lead Kenya to? The phrase “Standard Gauge Railway” was very recently included in the medium term plans, but it has quickly gained importance in national development strategies. In the first medium term plan, there was no mention of the SGR. In the second medium term plan, it was mentioned seven times under different discussions and proposals, and it was detailed in the implementation matrix. In the third medium term plan, the SGR was included in the list of acronyms. It is referred to as the “SGR” throughout (The National Treasury and Planning of Kenya 2018). This quick adoption of the language of the SGR shows that the Kenyan government considers the SGR to play an important role in economic development.

Even though the term “SGR” is positioned at the center of the Kenyan development strategy, the term “China” is not mentioned alongside the SGR. In fact, the two do not show any connections at all in the medium term plans. There was no mention of China for the funding or construction of the SGR partly because this is a plan about national development. The complete silencing stands in sharp contrast with how involved the Chinese state, Chinese capital, and Chinese labor were in the creation of the SGR. The second medium term plan was set for 2013 to 2017. This is the five-year period when the Nairobi-Mombasa SGR was built. The construction started in

September 2014, and the railway started operating on May 31, 2017 (G. Zhang 2020a). This 300-mile railway that connects the capital to the Indian Ocean cost 3.8 billion USD, “with Export-Import Bank of China financing 90%, while 10% was funded by the Government of Kenya” (Githaiga and Bing 2019). And the majority of the Nairobi-Mombasa SGR work was contracted to the Chinese Communication Construction Company. In a list of proposed programs in the second medium term plan, there is an implementation matrix detailing sources of funds for each project. Sources for SGR Mombasa-Malaba/Kisumu Standard Gauge Railway funding is listed as GoK, which refers to the Government of Kenya. It did not mention China nor foreign investment (The National Treasury and Planning of Kenya 2013). This omission of foreign partners creates a singular national narrative which focuses on the independence and self-determination of the nation. In the context of globalization, the Kenyan state makes a paradoxical claim about national identity through this transnational development project. It creates a harmonious national identity through infrastructures: the SGR is Kenyan. Such a narrative also centralizes the role of the state in intangible identity formation through material economic policies.

Kenya is not alone in its practice of nationalist narratives. Infrastructure has always served the function of projecting national independence and the strength of the ruling party. In Chinese railway development history, the government has also engaged in the erasure of technological and financial dependency. Even though railway development is always told through a national independence narrative in China,

China’s railroad network was financed and built under semicolonial conditions, and even after nationalization, Western advisers and a mix of European and North American methods shaped the emergence of Chinese railroad management, training, and administration... until the end of World War II hardware equipment and technical progress remained completely dependent on imports from Great Britain and the United States. From 1949 to the political rift in 1961, engines, rail equipment, and technical advisers all hailed from the Soviet Union. China’s rail development today, especially its high-speed sector, depends on technology imports. (Köll 2019, 297)

Even the recent high speed rail development was a collaborative effort between Chinese engineers and European and Japanese engineers who shared train building expertise through technology transfer agreements (Chen and Zhu 2007). There is a tendency to create a monolithic identity through technologies that are driven by diverse resources and expertise. Narratives surrounding nationalized infrastructure have allowed political power to claim a unified national message that is inherently antithetical to the diverse nature of any nation state. This reveals a process of creating national identities for infrastructures, which is done through building narrative infrastructure. For the state, the physical infrastructure and the narrative infrastructure are equally as important, serving separate but mutually reinforcing economic and political goals.

There are many tools that the state utilizes to construct narrative infrastructure. Besides macroeconomic planning, the national framing of the SGR is constructed through personal narratives. In a series of videos published by State House Kenya, Project 254, the SGR is featured as one of the main

projects undertaken by the current administration. Unlike the Kenyan Vision 2030 medium term plans, these videos extrapolate content from in person interviews rather than statistical projections. The video series is public facing as it is published on YouTube and Facebook. Episode 25 of Project 254 is titled “Kenya’s Standard Gauge Railway (SGR) Story.” As of March 2020, it has 49,458 views. In this video, the selection of interviews and locations emphasizes the benefits of the SGR for everyday people. In the very beginning of the video, the host claims that the video is made to show how the SGR benefits Kenyan businesses and individuals. The video carries on to interview a group of benefitted parties: passengers who prefer the SGR for its safety and punctuality, taxi drivers who get more business from new railway stations, hotels that have increased their bookings because of booming tourism in Mombasa, etc. The everyday Kenyan people are represented as the reason why the SGR should exist.

The video also answers to a lot of questions that have emerged in public debates: What employment opportunities does the SGR create? Why should one transport cargo on rail rather than on highway? The video interviews Mombasa Port cargo workers who claim that the SGR will make the Mombasa port a commodity outlet for East African countries like Uganda and Tanzania to ship their goods to the world. The host of the video stands in the center of the port, and points to containers, accounting their national origins (State House Kenya 2019). It showcases the regional connectivity which the SGR has already built. It also shows that Kenya will race to be the first East African country to connect all of Eastern Africa to the world. Experiences of individuals are transformed into microscopic examples of national progress. These individual Kenyan citizen’s narratives are edited together to create a collage of positive SGR impacts. The interviewee’s personal experience is narrated as national experience. The development of the SGR is the development of the Kenyan national identity.

While the SGR is framed as an independent national project, China is strategically mentioned in these plans as a partner and a model of an emerging economy. In the first and second medium term plans, China is mentioned once. It is named alongside India and Russia as a rapidly growing economy. It is described as the emerging market in comparison with Europe and the U.S., which were entering recessions (The National Treasury and Planning of Kenya 2008). In the third medium term plan, China is mentioned four times. Twice it was referred to in the context of the newly established China-Africa Joint Arbitration Center. Once China was mentioned alongside other countries such as Israel and South Africa as strategic development partners. Lastly, China was mentioned as a country with comparatively low energy cost (The National Treasury and Planning of Kenya 2008). Such comparisons create an imaginary sense of place Kenya occupies in the world. It puts Kenya on a timeline which measures modernity.

Both the Chinese and the Kenyan state narratives surrounding the SGR serve particular goals for the Kenyan state. The SGR symbolizes the advancement of Kenya’s economic development. It signals Kenya’s increasing importance in the world economy, creating a more attractive environment for foreign investment. The infrastructure, although requiring foreign resources, reinforces a uniform identity for the country. For Kenya, this identity is an industrialized middle-class country. The identity centers the state as an indispensable part

of progress which will lead the country into the future. The heavy emphasis on the benefits and success of the SGR in the state narrative consolidates the development standard in Kenya. This standard is beneficial to the ruling party as it renders the party indispensable in national economic development. It also defines modernity through the Chinese development model, and the modeling followed by countries like Kenya. At the same time, Kenya is able to retain independence through creating nationalist narratives.

### *Kenyan Public Narratives*

The rich journalistic landscape in Kenya creates an abundant and diverse public conversation surrounding the SGR. It is evident from the numbers of reports that the SGR is a popular topic. When searching SGR, the East African generated 10,100 results, Daily Nation generated 1,418 results, and the Standard generated 80,500 results. The amount of discussion on the SGR generated by Kenyan journalism outweighs the Kenyan and Chinese state reporting by at least three digits. Compared to both Kenyan and Chinese state reporting, Kenyan public reporting creates much more content, engaging a much wider audience with different socioeconomic backgrounds. It targets both Kenyans and East Africans, covering a wider range of issues through economic, cultural, social, and familial lenses. Like the state reports, these news outlets generate reports that focus on policy updates and economic facts. Beyond news updates, these outlets also publish positive and negative opinion pieces on the SGR.

There are three themes of opinions I will be focusing on. They do not cover all of the Kenyan public attitudes toward the SGR, but they reveal certain themes in the public narrative that pose a challenge to the state narrative. The first theme is the demand for more information. Exposure does not translate directly into transparency. In the Kenyan Vision 2030 medium term plans, a lot of emphasis is given to railways as an important means to promote economic progress. But the medium term plans and the content published by the Kenyan government do not reveal much information about the SGR. The SGR is a closed door deal between the Kenyan government and the Chinese government. The Kenyan parliament and the Kenyan public were not consulted with about the SGR deal. Many of the key questions have gone unanswered: How will the Kenyan government plan on paying back the Chinese government? What are the collaterals in the agreement? How much are the Chinese personnel being paid for the project? In Kenyan public discourse, opacity has become the defining characteristic surrounding the SGR. These articles make explicit the demand for transparency in their titles. One of such articles published on *the Star* is titled, “REVIEWING SGR, SINO-KENYAN TIES: Make Public All Agreements with China: It is Critical to Ascertain the Viability of the SGR Project Since our Competition is External rather than Internal” (Mwaura 2018). Another article demanding information published in Daily Nation is titled, “Why State is Obligated to Disclose Details of Contracts” (Kibicho 2019). The lack of accountability from their own government has spilled over to more doubt about the Chinese government.

From the contract negotiated with the Chinese government to the non-disclosure agreement required for SGR employees, the Kenyan government and the Chinese government have been unresponsive to the public. Not until Kenyan activists



took the government to court, did the court ask the Kenyan government to release an SGR investment contract between the Kenyan government and the Chinese government (Muthoni 2020). The demand for transparency is not a criticism against the railway as many articles acknowledge that infrastructure is much needed, which aligns with Kenya Vision 2030. The demand for transparency is a question of how. It criticizes how the infrastructure will be financed, built, and operated to benefit Kenyans and avoid debt traps. In articles such as “Kenya’s prosperity depends on getting right leadership at port” and “Is Government up to more transparent partnerships in the new decade,” the Kenyan public is using the SGR as a method of inquiry to hold their country’s governance practice and democratic processes accountable (Sunday Nation Reporter 2016; Bankelele 2020). The demand for more clarity surrounding the SGR is an example of infrastructural civic participation, an act of local defiance against both the national and the international actors.

The second theme is the focus on the present. The Chinese and Kenyan state narratives focus on the future. Kenyan public journalism reports on life in the present. This type of reporting involves the current impact of the SGR, usually on a local, communal, or individual level. One example is the reporting on the Mombasa truck driver protest. The Mombasa-Nairobi SGR has led to public outrage since 2019 because of the Kenyan government directive that requires all freight to be carried through the SGR. But freights that come into the Mombasa port are usually carried by trucks rather than rail. Truck business is an important part of the Mombasa economy. The directive has led to the staging of multiple protests which are not covered by the Chinese and Kenyan states. In an article published in the Star, “Hong Kong-like protests to hit Mombasa over the SGR cargo deal: Barely months after SGR freight trains, thousands of families are living in misery after their breadwinners who were working in cargo transport companies are now jobless,” the author creates a connection between protest in Kenya and the 2019 protest in Hong Kong to highlight the totalitarian effect of the cargo directive (Kasuku 2019). The covering of the protest represents dissenting voices surrounding the operation of the SGR. They make visible the negative economic impacts of the SGR, which are not mentioned in state reports. Beyond job loss, this type of reporting also covers other effects such as environmental degradation and land seizure in articles like “Pain of families awaiting pay for land seized for Kenyan SGR project” and “Widow moves to court to bar SGR from her 60-acre land” (Achuka 2019; Ogemba 2018).

These articles create a space in discussions surrounding national identity by presenting the claim that people like the truck drivers in Mombasa and rural residents along the SGR line are also a part of the nation. They are particularly marginalized because of the rail, which is why their interests should be prioritized. The emphasis on the present grounds infrastructure development in the means, not the ends. The public devotes a big portion of attention to immediate material effects rather than projections of GDP and national growth. The grounding in the present and in the material world is important for the discussion of nations. It is not just abstract conceptualization but lived experiences of unprivileged social groups. Reports of these micro-narratives make up the larger discussion of Kenyan life. They enlarge the discussion of national identity: What is life like for more Kenyan individuals under the SGR? Whose future is made better by the SGR? And

whose life is made uncertain by the SGR? These stories make visible the material impacts of infrastructures beyond fancy words and big numbers.

The third theme is the explicit discussion of Chinese loans and Chinese laborers. Lack of information has led to a spur of investigative journalism and public speculation into what the deals really look like between China and Kenya. The Kenyan state silence on China in discussions of the SGR has created ambiguity on the deal between Kenya and China. This ambiguity could produce antagonism and suspicions in Kenyan perceptions of China and the Chinese people. In reports like “SGR’s Sh1bn grass: Unbridled greed and negligence in megaproject,” journalists claim the use of the SGR budget for corruption because of ridiculous pricing of grass (Achuka and Wafula 2020). Articles like “How Chinese SGR staff lived large at Kenyans’ cost” list detailed calculations about Chinese SGR staff’s living expenses (Achuka 2019). These reports create an air of uncertainty about the Chinese intent in investing in the SGR. They pose suspicion over the “community of shared future for mankind” proposed by Xi. Unlike western journalism, where China is described as a predatory actor, much of this type of reporting cautions Kenya’s president and East African leaders to develop better negotiation strategies and governance practices when taking Chinese loans. These reports reflect the agency of Kenyan people in understanding and weighing the costs and benefits of using foreign lending for national public transportation development.

The Kenyan public narrative covers a larger range of issues related to the SGR. In demanding more information and making visible the material present and China’s involvement, it broadens the discussion of the nation and its citizens. It also displays Kenyan agency in which they demand citizen voices be taken into account in these larger geopolitical negotiations. Rather than completely rejecting the definition of nation and global community set out by the Kenyan state and Chinese state, the Kenyan citizens create a more detailed conversation about how we get there and through what means.

## Conclusion

### *Defining Afro-Modernity*

In “The Year of China in South Africa,” Mingwei Huang argues that “there is a sui generis character to Afro-Modernity and Chinese transnationalism that diverges from Euro-American capitalist modernity even as they emerge from the same world-historical forces” (Huang 2018, 148). The definitions of both Afro-Modernity and Chinese transnationalism are contested in the case of the SGR, a transnational infrastructural project that is influenced by foreign, domestic, and local power. The SGR is a piece of infrastructure that has come to define the Kenyan national modernization project, the BRI’s global reach, and the China-Kenya relationship. The railway connects not just space, but also ideas and time. The SGR is a poignant example of how infrastructural development produces both physical and narrative results, which extend beyond both physical and imaginary borders.

Most of the literature on Afro-Modernity did not discuss infrastructure or materiality. Instead, the academic conversation surrounding Afro-Modernity is focused on culture, science

fiction, and art. The lack of analysis on material development overlooks Sub-Saharan Africa's inevitable intersection with the Chinese transnationalism under the BRI framework. It is important to start from infrastructure because it informs and shapes how we come up with abstract ideologies like nation state.

“Nation is a container for ideas about identity and culture, borders and boundaries, common descent and shared history” (Aronczyk 2017, 125). The idea of a nation is contested by multiple actors and agents including the government, citizens, and foreign sovereigns. Unlike state narratives, which are controlled and disseminated by the state, the national narrative is shaped by both the state and the public. Rather than a static definition, national narrative is a field of constant contestation over where a nation stands in the world, what it means to be a citizen of a nation, and what it means to belong or not belong in a nation. The narrative surrounding the SGR has been a combination of mixed messages: Chinese state media and the Kenyan Presidential Office broadcast hyper-modernity, local Kenyan journalism reports suspicion of re-colonization and abusive labor practices, and U.S. media calls for caution against Chinese predatory loans. The fight for the microphone displays the fight for soft power through narratives of material conditions created by the SGR. It also reveals the difference in interpretation of Afro-Modernity, as in, what does a modern Africa look like and how does a country get there?

### *Chinese Transnationalism*

Narratives surrounding the SGR have revealed the transition of motives behind Chinese-led infrastructure development in African countries from anti-colonialism to economic cooperation. Although different, the Tanzara railway that was completed under socialist China in the 1960s has paved the way for the vision of transnationalism under BRI. It is a vision that echoes Afro-China anti-imperialism coalition nostalgia and operates upon the informatized vernaculars of economic progress. Infrastructure stands at the intersection of the logic of state and capital. It is the tool that drives countries toward modernity in the Chinese model of development. The infrastructural fix in China is especially important in connecting the country and constructing the idea of the country. To achieve modernity through the Chinese model, a country has to build both physical and rhetorical infrastructure that creates literal and imaginary national unity. Through the BRI, China has established its national identity as an international leader, broadening the conception of national boundaries while reaching both physically and rhetorically into other countries' public spaces. China narrates its globalization under the framework of “a community of shared future for mankind,” creating a message of unity while promoting its standards of progress as universal standards. The SGR is an instance of China advocating for the Chinese development model to be the blueprint for Afro-Modernity.

### *Kenyan State Vision of Modernity*

The infrastructural fix has been carried over into the Kenyan state model of modern development, present throughout their 5-year plans. Köll argues that there is a “symbiotic relationship between railroads and the state” in Chinese railway development history: “railroads needed the support of a stable, although not necessarily strong, state for their successful

development as business and administrative institutions. In return, the state relied on a well-managed railroad system and transportation service to reach its political and economic goals...railroads supported the state through their services but they also symbolized the power of the state” (Köll 2019, 297). The same could be argued for Kenyan SGR development. The Kenyan state uses the SGR to project its national independence and the strength of the ruling party in leading economic progress. It allows Kenya to create a homogenous national narrative of independence through railway development. But in reality, such technology is dependent upon funding, management, and engineering expertise from China. Kenya is betting on the Chinese development model to deliver modernity, despite the economic risks associated with Chinese loans.

### *The Kenyan Civic Model of Modernity*

The challenge of a cohesive universal identity is how to include people from diverse backgrounds. The constant pull and push between state narratives and public narratives reveals the dynamic forces that are inherent to any nation. The SGR is affected by local markets, labor forces, and community needs for infrastructure. The eventful nature of the local market creates challenges for Chinese transnationalism and the Kenyan state model of modernity. While the Kenyan state broadcasts increased freights that come through the Mombasa port from China, local Kenyan journalism posits suspicion of debt traps and corruption. While both the Chinese and Kenyan states focus on quantifiable futurity and national unity, the Kenyan people have different metrics for modernity. Through investigative stories that focus on a wider range of social and political issues, the Kenyan public has broadened the definition of modernity and national development. Infrastructure does create economic and political gains. But it also influences the life of nearby residents. Economic and political progress may come at the expense of the livelihoods of everyday Kenyans. The Kenyan civic imagination of modernity and national development is essential in defining Afro-Modernity because their lived experiences contextualize statistical progress. Their voices provide multitudes of definitions for progress that center Africans.

It will take time for us to determine the impact of the SGR on both Kenya and China. The narratives surrounding the SGR demonstrate the power dynamics involved within a transnational infrastructure development project. The productive nature of these narrative engagements is less about the destination, it is about how we get there.

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# Asian American Identity and the Covid-19 Pandemic

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**Q:** In the early stages of the COVID-19 epidemic, there was some controversy in China and abroad about the Chinese government's response to the epidemic, but as the epidemic spread around the world, the situation reversed. What do you think is the psychology of the Chinese community in the U.S. during the different stages of the pandemic?

**Professor Zhou:** The fate of our Chinese in America is closely related to our country of origin. In the context of the fight against the pandemic, although the American press is free, the media is relatively more open and there are different voices and opinions, there is also a lot of misinformation being widely disseminated. In both Chinese and English channels, there is a lot of misinformation. From my personal observation, we were psychologically at a loss in the early stages of the epidemic. On the one hand, there was a lot of "blame dumping" going on. The rapid spread of the epidemic in the U.S. in a short period of time, and the lack of any immediate response, led us to be depressed and in a very worried and anxious state of mind. Now that the epidemic has lasted for over a year, it is slowly becoming clear to us that China's centralized approach has been effective in controlling the epidemic, which is very different from the highly democratic United States. The United States is more liberal and values individual liberty, but freedom comes at a price. In China, the cost of centralization is personal freedom, but it has been very effective in keeping the epidemic under control; in the United States, there are no such strong policy measures, so Covid-19 spreads very rapidly. The daily figures of infections and deaths were so shocking that we slowly became numb to them. But in the Biden administration's early months, the U.S. was more effective in preventing the spread of the pandemic and expanding vaccinations. As we watched those numbers slowly drop, our mindset turned in a

more positive direction. We've had great success in the U.S. in the fight against the epidemic, and we're now over 50 percent vaccinated and then over 40 percent of the population is fully vaccinated. The accomplishments of the Biden presidency in its first few months have been remarkable.

*Note: This interview was conducted in June of 2021, prior to the proliferation of the Delta and Omicron variants.*

**Q:** In your previous interview on Asian hate, you mentioned that Asian hate is not just the result of people's inability to overcome their emotions on a personal level. Could you share in more detail what causes such emotions to lead to such collective hate?

**Professor Zhou:** There is no real difference between Chinese hatred and Asian hatred in the United States because the American public does not differentiate internally diverse Asian peoples. Asian hatred seems to be caused by people's inability to overcome their emotions on a personal level, but it is actually related to the racial system. On the one hand, Asianophobia in the U.S. is a deep-rooted prejudice that arises from historical American racial biases. On the other hand, this prejudice is reflected in social interactions at different levels, such as at the individual level, the local community level, and the government level. The interaction between various historical and political factors and individual cultural and ideological factors creates such Asianophobia. In fact, everyone has different degrees of prejudice, but prejudice in general does not lead to such large-scale and systematic Asianophobic sentiment and behavior. When it is linked to certain political and ideological factors, such as when our former president called the Coronavirus the China virus, government-level bias immediately combines with mass-level bias to fuel a much

larger hatred.

In addition, because none of us were adequately prepared for the onslaught of the new epidemic, everyone was quickly at a loss as to what to do and had no direction. Everyone had to be quarantined at home, work at home, go to school online, and this sudden change without being given proper time to transition and preparation caused anxiety. Many people don't know what to do when they are forced to stay at home. Because people are always social animals, they need to be out and about, but being confined at home all of a sudden gives them a sense of social isolation. So, when "social distancing" is emphasized, we think that the phrase "social distancing" is misleading. We should maintain "physical distancing," but continue to maintain social contact. Social distancing is not the same as physical distancing. The reference to social distancing that we have been using at the beginning is not correct. When people are socially and physically distanced, some of them would lose themselves and their sanity in high-pressure situations and act irrationally. I usually walk and exercise in my neighborhood every day, and now (after the epidemic started) I start to get a little scared because I'm Asian. Nobody wore masks at first, and then everybody wore masks. At first, I was afraid of being discriminated against when I wore a mask, but later on, I was afraid of being discriminated against even when I didn't wear a mask. Occasionally you would hear someone yelling at you to get out of their way. The first time that happens, you might accept it and think "okay, I will get out of your way, six feet apart." But after you have experienced this situation several times, you begin to feel targeted and uncomfortable. The factors that develop from personal prejudice interact with what the government, or leaders, or politicians say; in addition, there are multiple factors that interact with the socially segregated environmental climate to create what is called Asianophobia.

**Q:** As you said, in today's world where self-publishing is so advanced, a lot of information is spread without good gate-keeping. But on the other hand, people are also launching campaigns to counter racial prejudice on the Internet. From this, do you think the role played by the media in this is mainly positive or negative?

**Professor Zhou:** The media is always influenced by public sentiment, especially the Western media. Because the media itself has commercial interests, such as advertising, it must be responsive to the public's ideology, moral code and social responsibility. Many self-publishing media outlets disseminate news and information in a casual manner, not bound by ethics and social responsibility, so there are many more fake news stories circulating for the sake of eyeballs than mainstream media. Even some information may be true, it may be distorted or infinitely expanded, thus creating a negative social impact and directly affecting personal opinions. I seldom read self-published media in Chinese, and not at all during the epidemic, because many of the stories are very confusing, and I have no way to verify whether they are true or not. The mainstream media in the U.S. has its share of ideological biases, but because of the many voices and diverse representation in the mainstream media, it seems to be more reliable, and I feel I can use my personal critical analysis skills to detect the truth. Some of the self-published contents, such as videos, is just unreliable and confusing.

**Q:** Speaking of social media, we have seen a lot of cultural and

ideological clashes between many second-generation Asian youth and their first-generation immigrant parents under the Black Lives Matter movement, such as the Yale students' joint letter to parents and the subsequent anti-Asian hate march. Do you think this series of events has also influenced a change in the attitudes of Asian parents as a group on such social issues?

**Professor Zhou:** There will be a big impact. The Asian American community is a diverse immigrant community, except for Japanese, most members of this community are foreign-born. I am part of the foreign born group even though I have been in the United States for more than 30 years. The immigrant community also includes newer immigrants, who do not know much about American society. In addition, new immigrants have different experiences in the U.S. and have certain prejudices about different races. The ideology and way of thinking of newer immigrants tend to be more bicultural, i.e., based on their experiences in their countries of origin, e.g., China, and in the United States. The second generation, or children of immigrants, were born and raised in the U.S. This generation also includes those who were born abroad but came to the U.S. when they were younger than 13 years old. We also call the foreign-born children the 1.5 generation, those who are basically the same as the second generation except they do not have birthright citizenship. Because of their K-12 education and higher education in the United States, the second generation of immigrant descendants have a different perspective on race than their immigrant parents. It seems that immigrants are assimilating. Assimilating into the white middle class is the goal of social integration that immigrant parents aspire to, not so much to become white, but to expect their children to eventually achieve white middle-class social status. But the ideology and way of thinking among children born and educated here is generally more enlightened and generally more liberal. And they also feel that they do not want to be assimilated by their oppressors.

There are three points of conflict here. One is the intergenerational, or parent-child, conflict, which is also common in other American families. The second is cultural conflict, in which immigrant parents and their US-born or US-raised children hold different cultural values, and the East-West cultural conflict is particularly prominent. The third is the conflict of social experiences, as children generally have different experiences from their immigrant parents, especially in interracial interactions. Parents generally have few interracial interactions, but children have more, through formal schooling. So they generally find the Black Lives Matter movement very inspiring, and they have the same needs as other minorities and don't want to be seen and treated differently. Asian kids in particular resent being hailed as model minorities or honorary whites. In the eyes of second-generation immigrants, model minorities are treated unfairly and discriminated against as the other. But first-generation immigrants would think: "What's wrong with being called a model minority? People would look up to you." But the children know well that people the model minority as the others, "You are not we, you are they."

At the beginning of the BLM movement, some of the children wanted to communicate more with their parents, to convince them that BLM is for social justice. When they couldn't convince their parents, they would become very bitter. At the time of George Floyd's killing, I was teaching an online class on "the new second generation," in which my students would

talk about their own experiences of intergenerational conflict. Some of them would express their boredom and helplessness with their parents' opinions. Many immigrant children are torn between cultures. On the one hand, they are grateful for their parents' sacrifice and hard work to provide for them, but on the other hand, they feel very uncomfortable or even angry with their parents for their low sensitivity to social justice. In this situation, second-generation children want to have this space in the classroom to initiate meaningful discussions. I always tell them that you need to communicate calmly with your parents at home, not in a confrontational way. The problem is that parents are oftentimes "authoritarian" and make judgments based on their own experience without knowing that their their personal experience is one-sided. Parents do not see it that way, so children should communicate more rationally and patiently with their parents. Some children also have language problems, so they simply give up and let the gap between the two generations become even greater. Regular communication between children and parents has a positive effect because such communication will trigger their parents to think about the sources of difference. Without regular communication and exchange of ideas, immigrant parents would stick to their old ideas. During communication, arguments are not bad because arguments can cause parents to think, when they calm down, that the child may be right.

**Q:** With regards to Asian hatred under the coronavirus pandemic, what are the differences and shifts in perceptions and attitudes among Asian communities from different countries within the Asian American community.

**Professor Zhou:** There is a shift. The fact is that even though you may come from a different country and a different ethnic background, and you may have a different perspective and a different culture and a different language, minorities face a common experience of racialization, being treated as homogeneously Asian, in the United States. This common encounter will lead to unity. Not only do we need to unite among different Asian ethnic groups, we also need to unite members of other racial ethnic groups, because the fight for rights cannot be just for the individual, nor just for one group, but for the whole disadvantaged and marginalized group. We need to be united to achieve social justice and equality.

**Q:** You once said in an interview that the lives of Chinese Americans in the U.S. are largely affected by the relationship between China and the U.S. As a Chinese who has lived in the U.S. for many years, what are the most direct changes you have observed over the years as the relationship between China and the U.S. has changed?

**Professor Zhou:** The relationship between China and the United States is like a pendulum that swings back and forth. When the relationship between China and the United States is good, we will be proud, have heads held high, and feeling both Chinese and American. But when the U.S.-China relationship is not good, we will lower our heads, lie low, and keep a low profile, and we would also be anxious, stressed out, and afraid of being scapegoated. A lot of Asia-hating incidents are really China-hating incidents. When the U.S.-China relationship is bad, people think you're Chinese, and then they pick on you and vent their frustrations and anger on you. The impact on the individual is very direct. In life, such as finding a job or entering a certain profession, you will be directly affected.

When the U.S.-China relationship is bad, you may find getting into some science and engineering fields politically sensitive, and you may think twice if you want to pursue your career in these fields. We all hope that the U.S. and China will maintain good relations, have more civil and productive dialogues, communicate more, and try to solve problems through diplomatic channels rather than simply bashing each other to exacerbate tensions. Although we can't force each other to accept ideological and faith-based opinions, there is still a lot of common space for cooperation and communication.





# Red Hordes: American Perception of Chinese Troops During the Korean War

Todd Qiu

Harvard '22

**Abstract** This paper examines popular American perceptions of Chinese troops during the Korean War using personal accounts from both sides, military intelligence reports, and military education texts. While American perceptions of Chinese troops were often dominated by the image of soldiers using “human wave” tactics, Chinese troops employed complex and organized offensive and defensive strategies. Ultimately, this paper finds that beliefs of ideological, intellectual, and military superiority distorted American perceptions of Chinese troops, leading to dehumanizing, inaccurate portrayals.

**Keywords:** Korean War, Chinese People’s Volunteer Army, the forgotten war, human wave tactics, human swarm

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## Introduction

Shortly before midnight on November 25, 1950, the Chinese People’s Volunteer Army, or PVA, began its offensive against United Nations forces in North Korea. For the U.S.-led UN forces, what was meant to be a swift final push to defeat the remnants of the North Korean army, which they had pushed back against the Yalu River on the Chinese border, turned into a retreat as the 250,000-person Chinese force overwhelmed UN lines. The action extended the war by nearly three years as it pushed the boundaries back towards the middle of the Korean Peninsula. After an American counterattack, both sides entrenched in lines along the 38th parallel, close to the pre-war border until an armistice was negotiated (Peters and Li 2004). The war is often referred to as the “forgotten war” as it has fallen into obscurity in the minds of the American public, especially when compared to World War II which preceded it and the Vietnam War that followed (Cummings 2010). However, this popular amnesia betrays the significant impacts and implications of the conflict. In addition to contributing to the “military-industrial complex” as explained by President Eisenhower in his farewell address, many forget that the conflict directly pitted young Americans and Chinese against one another in vicious combat, leading to over 36,000 American deaths and Chinese deaths numbering in

the hundreds of thousands.<sup>1</sup> However, despite strong arguments for the importance of the Korean War, scholarship has also often overlooked the conflict, with one researcher noting that “...you will find rack after rack on the Vietnam War, and just one or two for the Korean War. Halberstam actually counted them, in a public library in Key West: eighty-eight books on the Vietnam War, four on Korea” (ibid).

One aspect of the Korean War that is symptomatic of this greater trend in scholarship, is the question of perceptions held by the military and public during the conflict, and its implications. This study aims to contribute to gaps in this field by explaining how American perception of their Chinese adversaries in the Korean War was dominated by the image of seas of soldiers attacking using “human wave” tactics, sacrificing vast manpower to overcome American technology. Yet evidence from military reports and individual accounts suggest that these tactics were employed very rarely by the PVA, and this popular perception may instead have arisen from Americans viewing the Chinese from a perspective of ideological superiority, higher individual agency, and dehumanization.

<sup>1</sup>Precise casualty figures are not universally accepted. Estimates for PVA deaths range from 180,000 according to Chinese authorities to over 400,000 according to UN estimates.

## Literature Review

There is currently no published research which focuses on the topic of American perceptions of the Chinese during the Korean War. However, one dissertation centers around US-China perception during World War II, and two other works touch upon American perceptions of the Chinese during the Korean War despite it not being the focus of the research.

Zach Fredman's dissertation "From Allies to Occupiers: Living with The U.S. Military in Wartime China, 1941-1945" was focused on the question of perception. His study examined how interactions between U.S. troops and Chinese soldiers, interpreters, prostitutes, and other civilians led to American and Chinese people to hold negative perceptions about one another. American crime, sexual misconduct, violence, and superior attitudes led to deep Chinese resentment while Americans felt that their allies were incompetent and unhelpful. Fredman reveals that these perceptions made "these allies into adversaries even after Stilwell left China but also long before Cold War animosities solidified" (Fredman 2016) and were exploited by the Chinese Communist Party after the war to gain support in their fight against the Kuomintang. The study shows the importance of perception in war, not just among leaders, but among individual soldiers and civilians.

*The Korean War: A History* by Bruce Cumings analyzes the history leading up to and encapsulating the Korean War, which he argues has largely been forgotten, ignored or misunderstood (Cumings 2010). The book covers the course of the war, the conditions that made it inevitable, atrocities committed by both sides and the tendency of Americans to forget or know little about the war despite its lasting impacts. Additionally, Cumings analyzed American memoirs and literature and argues that Americans were rather inattentive in their perception and recounting of the Korean War, and rather leaned into "the accumulated baggage of 1950's stereotypes about the good and bad guys" which was dominated by the popular image of "Chinese swarms" charging through the snow (ibid). Cumings contrasted the "ephemeral traces Korea made on American minds," with the perceptions and works of Chinese troops which were "closely observed and much-pondered" (ibid). His belief in this contrast was made clear when Cumings posed the question, "How is it that a Chinese foot soldier sees these things, but Americans apparently didn't?" in reference to differing attitudes towards civilians held by troops (ibid).

Blaine Terry Browne's dissertation "A Common Thread: American Images of the Chinese and Japanese, 1930-1960" reinforces Cumings assertion of Chinese swarms dominating American perception of the Korean War. He argues that American stereotypes of Chinese and Japanese people have existed since before the 1930's and developed over time. Additionally, Americans would fall back on these stereotypes during times of war or alliance, emphasizing certain attributes that suited the then current situation (Browne 1985). The near universally accepted image of the Chinese during the Korean War was that of the brainwashed, tough, and cruel soldier, defined by a complete disregard for human life, of both their own and their enemy's. Browne explains, "perhaps the most horrific aspect of facing a hostile China was the thought of China's countless masses, with their known disregard for life, being hurled against Americans. The pervasiveness of this image is remarkable; it suffused virtually all accounts of

warfare in Korea" (ibid, 385). From the common American perception, this Chinese "contempt for human life" manifested itself in "human sea" attacks where "hordes of Chinese" smashed against American troops, "completely heedless of death" (ibid, 384).

No literature specifically centers on perception during the Korean War, and even research that is related to the topic is limited, as demonstrated by two of the three abovementioned works consisting of dissertations rather than books. This paper will contribute to these notable gaps in current research by explaining American perceptions of the Chinese during the Korean War and its causes using primary sources including personal accounts from both sides, declassified military intelligence reports and after action reports, and military education texts.

## The Myth of the Human Swarm

The image of the Chinese launching human swarm attacks without regard for their lives or those of their enemies is extraordinarily prevalent in American media, public and troop perceptions at the time. Firstly, the definition of a "human wave" (alternatively human swarm or human sea) is an attack involving launching high concentrations of infantry in front assaults against enemy lines to overwhelm enemy defense with numbers and engage in close combat (Appleman 1990). Media routinely used "hordes" or "human sea" to fearfully describe Chinese attacks, which ceaselessly dominated news headlines after Chinese entrance into the war (Browne 1985, 385). This depiction was not only popular in the U.S.; evidence strongly suggests these views were common among American servicemembers in Korea, from the lowest ranks to the generals (ibid, 387). One American soldier was quoted as complaining, "they breed them faster than we can kill them." Major General Charles Willoughby attributed Chinese military successes to "inexhaustible Asiatic cannon fodder" (Clark 1954). Lieutenant Colonel Robert Rigg stated that the Chinese launched "wave after wave of ochre-uniformed troops" in "useless sacrifice and slaughter" (Rigg 1952).

Prisoner interrogation, military intelligence, personal accounts from both sides and military after action reports all strongly suggest that this perception did not reflect the reality of most PVA military operations. Now declassified U.S. Army after-action reports (AAR) used intelligence from prisoner interrogations and gathered by troops to confirm that the standard tactics of the Chinese volunteers were far from human waves, though there were rare exceptions such as the 1951 attack on Chipyeong-ni.<sup>2</sup> Standard procedures for attacks usually involved three days of reconnaissance, probing attacks, and engaging with civilians for intelligence (Headquarters 1952, 15). Plans were based off this intelligence, with attacks set against weak points in UN lines, normally gaps between units or areas of the line held by South Korean Army units (ibid). Attacks took place almost exclusively during the night, as were intermediate moves of forces into position, as to prevent vulnerability to aerial reconnaissance and attack (ibid, 16). A typical attack would involve a single assault battalion, though the plans could scale based off the size of the attack,

<sup>2</sup> The Battle of Chipyeong-ni took place between American led UN forces and the PVA in February of 1951. The smaller UN force achieved decisive victory, having entrenched themselves and beat back Chinese attacks over three days of heavy fighting. The Chinese used human wave infantry attacks, leading to 1000 Chinese deaths and 51 UN soldiers killed (Marshall 1951).

penetrating the enemy line. Five battalions would then flow through the recently created gap and engage UN reserve forces, preventing them from restoring their lines. Two battalions would flank the section of the line as UN forces scrambled to hold and restore the line (ibid, 17). Simultaneous with the assault, small units would engage with larger UN units along other parts of the line, confusing them on where the actual attack would be and tying up forces that might otherwise reinforce the actual targets (ibid). Reserves were also utilized to exploit enemy weaknesses, and gains were entrenched before morning when Americans would once again be able to fully leverage their air superiority.

Chinese defensive tactics were no less complex and organized. Fortifications were well built and resistant to American artillery and aircraft, automatic and heavy weapons were strategically placed at varying depths within their defense, decoys were used to confuse the enemy and draw fire and ranges were set to ensure the proper weapons were used when they were most effective (ibid, 23). Additionally, Chinese defensive strategy heavily emphasized counterattacks when positions were lost, which once again displayed complex tactics built upon a solid understanding of military science. Flanks and gaps between enemy reserves and frontline troops were targeted, and the counterattack forces divided into “widely extended small groups of squad and platoon size” which moved in “stealthily” and attacked “swiftly,” utilizing their favored tactics of envelopment, penetration and turning maneuvers (ibid, 24). A collection of first-hand accounts commissioned by the U.S. Army to teach officers and non-commissioned officers lessons in strategy and leadership described the effectiveness of these strategies, explaining “it appeared that the Chinese had made it easy for IX Corps troops to advance so that they, in turn, could launch their own attack when friendly forces were extended and before they had a chance to dig in securely again... Front lines crumbled within an hour or two” (Gugeler 1954, 154).

Focusing in on these offensive and defensive tactics reveals their incompatibility with the popular perceptions of Chinese human swarms smashed against American troops with little regard for casualties, a fact noted by some troops and commanders. Firstly, Chinese forces went to great lengths to gather intelligence, make careful plans, and use sophisticated tactics to maximize chances of success while minimizing casualties. Additionally, in contrast to the popular image of massive formations of Chinese troops overwhelming UN positions in charges, both attacks and counterattacks were carried out by smaller units which were usually spaced out and utilized stealth, nighttime darkness and terrain to close in with their enemy (Marshall 1951). Some troops were fully aware of these realities and were frustrated with the inaccuracy of the widespread belief in Chinese human wave attacks. Marines mockingly asked, “How many hordes are there in a Chinese platoon?” contrasting popular exaggerations of Chinese hordes with the actual standard-sized infantry units they fought against (Montross and Canzona 2015). Some after action reports reinforce this understanding, explaining that “accounts have given the impression that the Chinese attack in great numbers closely concentrated...but intense concentrations are the exception. The Chinese do not characteristically employ mass, for example, in the way the Red Army used it against Germans...coming on in such numbers that the human sea absorbed and ultimately smothered the fire volume” (ibid). While casualties could accumulate over a night of fighting,

American intelligence and interrogation confirmed that the Chinese attacked used smaller units often consisting of three-man fireteams, which could support one another using different squad formations, such as interlocking wedges and lines or individually maneuver (Headquarters 1952, 1).

Additionally, assault units for both attacks and counterattacks were also often carefully selected based on strength, health, character and experience. They were also given additional rest and food, carefully memorized plans and used new or seldom used routes to maintain surprise prior to their attacks (ibid, 20). These assault teams were heavily armed with submachine guns and bags which held up to twenty hand grenades, ideal for clearing out defensive positions according to field studies and prisoner interrogations (Headquarters 151, 39). Perhaps most shockingly, assault units were often smaller than the UN units they were attacking. A U.S. Army report found that during the Chinese Army’s often successful counterattacks, UN positions held by units larger than a regiment in size were typically attacked by assault units of company to regiment size (ibid, 24). It appears then that Chinese success often arose from intelligent tactics, maneuvering and planning, combined with well-armed units of specially selected assault troops, rather than numbers alone.

Accordingly, Chinese attacks are more in line with German shock trooper tactics which were first created specifically to offer an alternative to human wave attacks during the First World War.<sup>3</sup> Additionally, these Chinese tactics demonstrate an effective understanding and execution of military science principles that are also fundamental to American military doctrine, such as infiltration, defeat-in-detail, and elastic defense.<sup>4</sup> A U.S. Army report confirmed the martial competence of the PVA, explaining that “Tactics employed were similar to Western tactics...it is believed that air superiority, firepower, and mobility of the UN Forces provided the difference between the two forces” (Headquarters 1951, 128). Furthermore, the report acknowledged the disconnect between the reality of Chinese strategy and popular perception, noting that “enemy tactics were sound and well-executed. Contrary to popular conception of the enemy as a ‘screaming horde,’ the NK and CC forces were well-coordinated fighting machines. Enemy attacks showed considerable planning and good judgement for the most part” (ibid).

## Explanation for Disparity in Casualties

Despite the tactical proficiency displayed by the PVA, there was a staggering disparity in casualty rates between U.S. and

3 Stoßtruppen, or shock trooper, tactics were pioneered by Austrian and German forces in World War I due to the massive casualties and lack of results massed infantry attacks provided in trench warfare on the western front. German forces formed small units of experienced troops to spearhead assaults on a narrow front, providing them with weapons and grenades that were particularly effective in trench attacks. Larger regular army units would then follow to occupy the gained territory and launch further attacks (Schneck 1998, 27).

4 Infiltration tactics involves advancing units through and past enemy front lines, allowing units to attack the enemy from unexpected directions or attack rear positions. Defeat-in-detail involves concentrating larger portions of a side’s army against smaller portions of the enemy force in sequence, achieving local superiority in engagement even if the overall strength of the attacking army is smaller. Elastic defense involves yielding space in deep defensive systems, rather than relying on a single strong line, so that the enemy forces can overextend and become vulnerable to counterattack (Ranger Training Brigade 2011).





Chinese forces in Korea (*ibid*, 129).<sup>5</sup> Combined with the fact that the PVA consisted almost entirely of infantry, people may assume they used human wave tactics to explain this lopsided outcome. In reality, these disproportionate casualties resulted from inferior Chinese technology, logistics chains that struggled to provide adequate supplies including winter clothes, poor medical technology, and expertise and very importantly American air superiority (*ibid*, 129). Indeed, air attacks constantly terrorized Chinese supply lines and troops, especially in the winter when travel was more limited to roads and troops stood out against the white earth. Superior U.S. aircraft and artillery killed many Chinese troops even outside of battles, as noted by an American corporal who discovered a field littered with the bodies of 600 Chinese soldiers who were killed by a barrage of U.S. rockets and artillery as they were repositioning (Peters and Li 2004, 105). Other military forces such as Vietcong guerillas, Afghan insurgents and American airborne units were similarly infantry based and suffered heavy casualties against heavier armed opponents. However, despite encompassing these same characteristics, these other forces were not often mistakenly believed to be using human wave tactics.

## Reasons for Misconception

Evidence suggests that American beliefs of ideological, intellectual and military superiority offer an explanation for the widespread misconceptions about Chinese military operations. Reports and individual accounts from U.S. troops and POWs (prisoners of war) frequently dehumanize Chinese troops, portraying them as cruel, feeble-minded, and lacking individual agency. One American first sergeant who was captured in 1951 explained that among American POW's, "there were a few individuals, however, who were either so weak or so uneducated they went along with the Communist line of thinking," showing his belief in communist unintelligence (Peters and Li 2004, 239). An Army officer explained in his book that the brutality of Chinese troops could not be "found within men of the better educated areas of the world" (Rigg 1952). Douglas MacArthur, commander of all UN forces in Korea, similarly expressed a belief in the Chinese being uneducated when he frustratedly said to an American author in Japan, "I can't throw these educated, well-nurtured boys against hordes of coolies" (Vining 1952).

Major General Dean, the highest-ranking American POW of the war, shared his view that the Chinese lacked individual agency directly with his captors. He recounted his interrogation in his memoir, saying "'Why did I think the Chinese 'volunteers' had come in and were fighting us?' I said, 'Because their master told them to, because Stalin told them to'" (Dean and Worden 1954). His sentiments were shared by many American servicemen, who were reported calling Chinese troops "slaves in uniform" (Martin 1951). A lieutenant colonel similarly described the Chinese as "uniformed robots" and then went further to explain that Chinese men were "trained like dogs. Point out an enemy and they will attack and viciously tear him apart" (Rigg 1952). Another officer remembered feeling pity when he realized that "they never had and never would experience the freedom that we have in America" (Peters and Li 2004, 215). Despite the captain's sympathy, a clear pattern emerges of Americans viewing Chinese troops as unfree to

make their own decisions.

This widespread American perception of their Chinese adversaries as uneducated, ideologically inferior, and lacking individual agency can explain why American troops and media often did not acknowledge, or even become aware of, the sophisticated and effective military tactics of the PVA. Logically, it would make more sense for the "animal-like" Chinese troops to charge against UN lines in reckless human waves than for them to understand sophisticated military tactics and in some cases outmaneuver American units (Almond 1953). Feelings of American superiority and failure to acknowledge positive military attributes of Chinese forces are made apparent in after action reports and annotated military reports released by the U.S. Army. The texts' purpose were to provide officers and NCOs with accurate descriptions of battles and decisions to learn from. However, they often fail to account for or even acknowledge Chinese military strategy and characteristics.<sup>6</sup> Firstly, the texts often describe acts of personal courage such as a Chinese soldier continue to fire his submachine gun despite having been seriously wounded as well as American forces failing to capture an enemy prisoner despite numerous raids and heavy casualties on both sides (Gugeler 1954, 108; Villahermosa 2009, 184). However, such events are narrated in a matter-of-fact fashion and do not acknowledge Chinese courage while similar American sacrifices are praised. Additionally, one text describes an American unit collapsing after being outmaneuvered and attacked from three sides (Gugeler 1954, 154). Yet, it does not praise the effective tactics of the Chinese unit that outmaneuvered the U.S. forces.

Meanwhile, the Army documents do describe Chinese officers as "arrogant" for walking near injured American troops and criticizes PVA mistakes, explaining "for if the Chinese had used any ingenuity at all, the task force would have lost all its tanks on its return trip" (Villahermosa 2009, 222). The military texts also repeatedly referred to Chinese troops as "communists" or "Chinese communists," attaching them to their ideology. Similarly, the writings claimed that the American soldiers of the 92nd Armored Field Artillery Battalion "could not be made to panic" as "each man accepted his share of duty" and because "individuals responded with the initiative of free men who know discipline without tyranny" (Gugeler 1954, 164). The focus and language of these documents seem to be consistent with previously mentioned ideas of American ideological superiority and the corresponding failure to acknowledge Chinese military ability.

It is possible racism played some role in the misconceptions. Indeed, Browne argues that public perception of the Chinese was influenced by stereotypes about Asians formed over time and some army officers have been quoted as ascribing negative traits such as brutality and cunning to Asians (Browne 1985). However, during the course of this research, primary accounts and army documents dehumanize and describe inferiorities based on the PVA's communist ideology far more often than to race. Furthermore, a public opinion poll in 1946 found that the five traits Americans ascribed most commonly to Chinese people were hardworking, honest, brave, religious and intelligent (Hughes 1951). The willingness of Americans to ascribe such idealized traits to Chinese people in peacetime just years before the conflict strengthens

<sup>5</sup> 36,000 U.S. deaths and an estimated 400,000 plus Chinese deaths according to UN figures

<sup>6</sup> NCO stands for non-commissioned officer. NCOs are enlisted service members who have been promoted to positions of authority or leadership.



the view of American superiority during the Korean War being based more off ideology and wartime resentment than racism. Furthermore, evidence suggests U.S. troops came to overwhelmingly respect their South Korean allies by the end of the war and treat them more or less as equals (Qui 2020). Additionally, the U.S. military was racially integrated by the time of the Korean War, and many Asian Americans served with distinction, with several earning the Medal of Honor and even leading combat battalions (New Jersey State Government 2003). American soldiers serving alongside and even under ethnically Asian comrades may have also reduced racism's influence on U.S. perceptions of adversaries. Alternatively, this dynamic may have reduced the tendency of American troops to openly express racist sentiments about the Chinese even if they did view their enemies from a racist lens. As a result, the admittedly limited research was unable to conclude how much of the American perception of PVA troops was affected by racism relative to previously mentioned factors such as ideology and this could be a topic for further research.

## Conclusion

Understanding perceptions held by Americans about their adversaries has significant implications. Firstly, perceptions of an adversary's characteristics and military strategies, accurate or otherwise, directly impacts an army's own military decision making. For instance, the most effective tactics to counter human wave attacks are different from the defensive postures ideal for defeating other types of attacks. Underestimating an enemy's military dexterity can also lead to false confidence among troops and commanders and a lack of readiness. Learning from historical examples of misperceptions, as well as their roots and consequences, such as those in the Korean War could inform measures to combat such mistakes recurring in future conflicts.

Additionally, perceptions held by troops may impact how they treat enemy combatants and prisoners of war. Troops dehumanizing their opponents could lead to poor treatment and abuses which were common within United Nations POW camps in the Korean War according to personal accounts.<sup>7</sup> These problems appear to have continued into the Vietnam War, when atrocities such as the My Lai Massacre took place. Understanding perceptions is particularly pressing when considering that evidence also suggests that dehumanization and mistreatment continue to be a problem in the ongoing War on Terror. Service members such as U.S. Army Lieutenant Michael Behenna have been convicted of executing surrendered enemy combatants, and the recent trial of U.S. Navy Petty Officer Edward Gallagher who was accused of the same crime has been the subject of many headlines.<sup>8</sup>

Research into the Korean War is particularly important going forward because, in addition to the conflict being largely forgotten by the American public, it has come to the point where fewer and fewer Korean War veterans are still alive to share their stories. The war and all its corresponding lessons, stories, and experiences may continue to fade further from our collective memory unless work is done to preserve and learn from the conflict.

<sup>7</sup> Lack of food, beatings by guards and failure of guards to prevent rampant violence and murder within the prisoner population all occurred within Koje prison camp (Peters and Li 2004).

<sup>8</sup> 1st Lieutenant Michael Chase Behenna was convicted for the 2008 murder of prisoner Ali Mansur (Mihir 2019; Phillips 2019).

An additional topic for further research would be the implications of American perceptions — not only of Chinese troops during the Korean War but of China in general — on policy after the war. Korean War veterans went home and shared their perceptions and experiences which could have had long lasting impacts. Additionally, future research could shed light on the impacts of this sharing of perceptions and how it affected U.S. policy decisions towards China after the war, such as during the First and Second Taiwan Strait Crisis which occurred soon after in 1954 and 1958, respectively.

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## Appendix: Note From the Author

I have built upon this paper in a chapter of my currently in-progress senior thesis titled "American Perceptions of Allies and Adversaries during the Korean War." During this process, I have added evidence and arguments and updated others, so this paper does not represent the most complete and up to date version of my research. However, the central arguments and thesis of my research on this topic remain largely unchanged from this paper.

# Was China's Use of Blockchain Technology to Combat the COVID-19 Pandemic Successful?

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**Abstract** The COVID-19 pandemic has had a devastating impact on public health and economic development worldwide. During the pandemic, many countries looked to use technology to combat these challenges, and blockchain technology has received much attention due to its many potential applications in key stages of disease control and economic recovery processes. China is among the first countries to use blockchain technology to respond to COVID-19, which makes its experience worth examining. China primarily used blockchain technology in three different areas: philanthropic supply chain management, financial data management, and contact tracing. While China's use of blockchain technology has been successful in financial data management, it did not achieve its desired effect in the other two areas, mainly due to the lack of blockchain infrastructure. Still, its success in financial data management demonstrates its potential to play a key role in countering future global public health and economic emergencies.

**Keywords:** blockchain, Covid-19 pandemic, supply chain management, financial data management, contact tracing

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## Introduction

As of May 2021, COVID-19 has caused 3.19 million deaths worldwide (World Health Organization 2021). The pandemic has also crippled the world economy: many businesses were forced to close, some industries were disproportionately affected, and unemployment sharply rose. Right from the start, many governments sought to use technology to combat the health and economic challenges posed by the COVID-19 pandemic, and blockchain technology, a fast-growing technology in recent years, was widely considered as a promising solution. Although blockchain technology is most well-known for its applications in cryptocurrencies, it also has a range of other uses, many of which can help to alleviate the impacts of the COVID-19 pandemic.

After the initial outbreak in Wuhan, China was quick to adopt new technologies, including blockchain technology, to combat COVID-19. The case of China is unique as it has been able to mostly recover from the pandemic: the number of new infections has been low nationwide for months and the economy grew by 2.3% overall in 2020 (National Bureau of Statistics of China 2021). As China was one of the first countries to adopt blockchain technology to respond to the pandemic, examining the opportunities and challenges involved in the process can provide a reference framework for the rest of the world.

## Blockchain Technology

In short, blockchain is a decentralized database where all the information is confirmed and recorded in nodes. A typical example of blockchain is shown in Figure 1. For example, in

the transaction of bitcoin, when two nodes trade, one node will broadcast the transaction's information to all nodes in the blockchain, and the information will then be checked and confirmed by all nodes. When the confirmed transaction information (T1 to Tn) reaches a certain number, one node will package the information, add a time stamp, a hash (a function required to solve for a blockchain computer) of the former block, and a series of random numbers to form a "block." Individual blocks are connected to form a "blockchain," in which data can be instantly downloaded and updated by all nodes (Zheng et al. 2018).

Since it is a decentralized database, blockchain must solve three problems: 1) how to avoid data tampering, 2) how to confirm the source of information, and 3) how to check for conflicting information, such as overpayment and duplicate transaction. Blockchain uses cryptography to solve these three problems.

For a typical blockchain system (public chain), data can be modified, but just theoretically. If a node wants to modify a record, it needs to find the block which is packaged before the record is broadcasted and package from there to generate a branch. According to the consensus mechanism of blockchain, all nodes can only recognize the longest chain, so the data modifier must make its own chain longer than all the other chains (Zheng et al. 2018). However, blockchain packaging has a cost in that one must first solve for a complex mathematical problem. The system will generate a string, which includes the hash of the previous block as well as a string of random numbers. The node needs to adjust the string of random numbers to make the result of the hash operation meet certain requirements. If the node gets the correct result, it can package the block, and the result will be the head of the next block (Zheng et al. 2018). In a typical blockchain system, there is an incentive system in place where all nodes can get rewards for

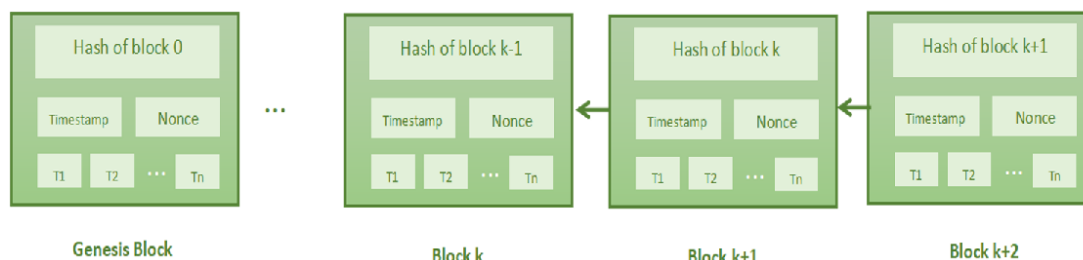


Figure 1. Visual representation of blockchain technology. (Zheng et al. 2018)

packaging. This means that if a data modifier wants to make their chain longer than all other chains, their computing power would need to be greater than that of all nodes combined, which is nearly impossible to achieve.

As for how to confirm the source of information, blockchain uses an asymmetric encryption system. As shown in Figure 2, each node has a private key. When a user registers, its private key generates a public key and address that is disclosed to all other nodes through a hash operation. The private key can encrypt the information, while the public key can decrypt it. When a node sends its own information, it also sends an abstract (generated by hashing the information) and a code (generated by encrypting the abstract). Other nodes need hash the statement to get Abstract 1 as well as decrypt the code with the public key to get Abstract 2. If the two abstracts are the same, the verification would be successful. If the two abstracts are different, all other nodes would reject the message (Zheng et al. 2018).

Lastly, blockchain uses information tracing to check for conflicting information. Since all information in existing blocks are downloaded to each node, everyone who packages can see whether there is conflicting information (Zheng et al. 2018).

		Actor A				
		Enemy/ containment	Ally/ institutional cooperation	Degenerate/ revisionism	Imperialist/ independent fortress	Colony/ intervention
Enemy/ containment	1	Tit-for-tat reciprocity Occasional crises				
Ally/ institutional cooperation	2	Inverse: cooperation Appasement Favorable	3	Institutionalized alliance and functional interrelation		

Figure 2. Blockchain’s asymmetric encryption system. (Zheng et al. 2018)

## Literature Review

Research on the potential applications of blockchain technology in the context of the COVID-19 pandemic is mainly focused on three aspects: supply chain management, data management, and population flow management.

For supply chain management, some researchers were able to design and develop a vaccine supply chain supervision system using blockchain and machine learning (Yong et al. 2020). Meanwhile, in another study, researchers demonstrated that blockchain can reduce public distrust in charities, which can in turn promote crowdfunding for medical supplies (Khurshid 2020).

With regards to data management, some people have pointed out that blockchain technology can be utilized in medical insurance claim processing as well as loan processing as it can reduce the large volume of paperwork needed in the processes (Bhardwaj 2021). Furthermore, it has been shown that blockchain technology is able to effectively ensure the security, integrity, and traceability of patient data (Wang, Liu, and Cao 2020).

As for population flow management, some researchers have proposed a system that combines blockchain technology and artificial intelligence to facilitate self-testing (Thompson and Crayton 2020), while others have suggested using a blockchain-based system to detect and prevent crowd aggregation (Garg, Bansal, and Padappayil 2020). Another research study that focuses on international travel also recommended that governments adopt blockchain to manage population flow between different countries (Bansal, Garg, and Padappayil 2020).

In addition, more specific studies have touched on the existing applications of blockchain in China in response to the pandemic, with some examples being the use of the technology to track donations, help small businesses apply for loans, and facilitate travel.

In our research process, we noticed that while extensive literature can be found on the prediction of future trends and the current applications of blockchain in the public health sector, there is a lack of in-depth analysis on whether the use of the technology has been successful or not. Even though the technology is already highly developed, there are still many challenges associated with using it, which is why we believe that we should reflect on its applications before promoting it. Such reflection is crucial for the long-term prevention and control of COVID-19 and other infectious diseases. In this paper, we will focus on specific applications of blockchain related to COVID-19 in China and examine whether or not the technology has brought about the desired effect. For the applications that did not achieve the optimal effect, we will further analyze the potential underlying issues and the future outlook.

## Analysis of Findings

### Philanthropic Supply Chain Management

#### Issues With the Traditional System

The growth of China in the global economy is a concomitant of the flourishing of supply chain management. However, the COVID-19 pandemic has severely challenged supply chain management in both China and the whole world as it has led to a huge shortage of medical supplies like masks and ventilators. Traditional supply chain management of emergency supplies



relies on a centralized instruction center for the allocation and distribution of medical supplies. While such a system has worked adequately for decades, its inefficiency was evident in the COVID-19 pandemic, and an alternative solution using blockchain was proposed.

In China, it is often difficult for charities to obtain substantial support. Due to numerous high-profile scandals related to charities like the Red Cross in recent years, public trust in charities is low (Pan 2020). To regain public trust, charities need to re-establish their credibility, and one of the ways that they can do that is by improving the transparency of donation information.

Donation information transparency has been a long-lasting issue in China for several reasons. First of all, staff members can tamper with donations without being held accountable. Second, even if there is no tampering, it is very hard to track donations at all. Organizations need to actively collect information about the donors, beneficiaries, and logistics centers, which would inevitably lead to higher labor and operational costs (Ren 2021). For the above reasons, in traditional donation tracking, donors would often only know toward which project their money would go but not who the specific recipient was, how much of the donation was received, or the time at which the donation was received. In other words, donors suffer from information asymmetry, which makes them more hesitant when considering whether to donate.

### Blockchain as a Theoretical Solution

Blockchain has been proposed as a solution to these aforementioned issues because of its unique characteristics. For one, the decentralized nature of how blockchain collects information can guarantee the credibility of information. Not only is it very difficult to change information that is uploaded to the database but also everyone with access to the database can verify the information. The automatic verification process can ensure information is sent by the correct user (e.g., donor, recipient, logistic center, etc.) and the mutual verification process can make sure that the information sent by each user is credible (Guo 2018).

Additionally, blockchain enables the use of smart contracts, which can improve tracking efficiency. Information uploaded to databases can be processed using smart contracts, which are sets of code that define and execute the terms of an agreement between two parties (Lipton and Levi 2018). When a donation arrives at a logistics center, relevant information can be uploaded to the database. After that, a set of code can verify the information, record the flow of the donation, and send the information to relevant users (Guo 2018). Smart contracts can also process information on people's demands, enabling the distribution of supplies efficiently based on urgency (Lei 2020).

In terms of financing for a blockchain-based solution, while developing the system would likely require a sizable initial investment, in the long run, the code-based tracking system can significantly reduce labor and operational as well as minimize subsequent disputes.

### Luoying Shanlian as a Case Study

Luoying Shanlian is a platform created by Wuhan University

during the pandemic with the goal of smart-matching medical supply donations with hospitals. The platform was developed with blockchain to track the flow of donated medical supplies. It was expected that the use of blockchain could make donation information more transparent and encourage people to donate. On the platform, hospitals across the country could directly list their demands, and donations could be completed with the services provided by the platform; there was no cumbersome procedure. Given that information about donations is often trivial yet complicated, using smart contracts could significantly increase efficiency (Tuoluo Caijing 2020).

While the platform could theoretically have been very successful, the data suggests otherwise. The platform ceased operations after February 26, 2020 (it stopped updating its progress). In the two months of operations, while the platform was able to complete donations to 133 hospitals, hospital demand greatly exceeded donor supply. Nine hundred and twenty five hospitals listed their demands on the platform, but only 56 people donated through the platform (Luoying Shanlian 2020).

One of the reasons why this platform did not live up to its full potential is that it was unable to find the right balance between information transparency and efficiency, an issue that most similar platforms face. Blockchain's solution to the lack of public trust relies on its decentralized nature. However, in application, most blockchain-based donation platforms, including Luoying Shanlian, use a partially decentralized blockchain—that is, only a few authorized institutions could directly upload data to the database and access the data. While the public could still find the data, they could only do so on secondary release platforms (Luoying Shanlian 2020). For this reason, data can still be tampered with, and this is clear to the public.

While the platform could switch to using a public chain, the tradeoff would be efficiency. If a public chain were used, whenever data was uploaded to a node, there would be a verification and synchronization process, which would slow down the process. Even though the delay would not be huge, it would be counteractive to the goal of meeting hospitals' emergency demands (Sina Finance 2020). In addition, for hospitals, integration of blockchain into their original systems requires additional costs and efforts, which may slow down the process as well.

As illustrated by the case study of Luoying Shanlian, the application of blockchain in philanthropic supply chain management in China has yet to achieve definitive success due to certain limitations. Nevertheless, most of these limitations arose due to technical challenges associated with using blockchain. With the development and increased adoption of blockchain technology, finding the right balance between information transparency and efficiency would likely become easier.

## *Financial Data Management*

### Issues With Financial Data Management

Following the COVID-19 outbreak, most non-essential businesses in China were forced to shut down, with small and medium-sized enterprises (SMEs) being hit the hardest. A study

done in early February 2020 showed that in 2,349 previously sampled SMEs 14% were unable to last beyond a month on a cash flow basis. Export firms suffered more than non-export firms due to the employment of migrant workers and the vast cancellation of international travel and trade fairs (Zhang 2020). The permanent shutdown of these export SMEs would significantly shrink China's GDP and economic growth.

### Blockchain as a Solution

On the front of financial data management, China has utilized blockchain to increase the efficiency of loan processing. For example, in March 2019, China's State Administration of Foreign Exchange (SAFE) launched a cross-border pilot blockchain platform (Jun 2019). The blockchain system was designed to facilitate cross-border business activities by tackling issues associated with the traditional model of trade financing, such as a slow verification process and a lack of information transparency (Cheng 2020). Under the new system, a process that would normally take weeks can be shortened to as little as a day, in which businesses that wish to trade with foreign enterprises can create permanent and easily accessible records of key documents needed in the loan application process. Banks can then use these documents as a basis of trust to determine the loan size (Cheng 2020). The influence of the platform on the Chinese economy was especially notable immediately following the COVID-19 outbreak in Wuhan. According to Xuan Changneng, the vice director of SAFE, in January 2020 alone, 87 China-based businesses received more than US\$200 million in loans through the platform.

### China's Blockchain Pilot as a Case Study

Even though the blockchain platform was not initially intended to tackle the pandemic, it was quickly utilized as a tool to aid economic recovery following the shock of the pandemic. Lu Lei, deputy head of SAFE, announced plans to expand the platform at a press conference in January 2020, and data show that these plans were able to achieve their desired effect.

On top of the immediate impact, the blockchain-based platform was also able to create a positive self-reinforcing cycle for blockchain development in financial data management. Lack of public awareness is a major challenge associated with blockchain development in China, which was evident in the fact the platform was not widely reported or known after its initial launch. However, following the COVID-19 outbreak, the platform gained much attention, both domestically and internationally, due to its effectiveness in supporting SMEs. The increased exposure attracted several financial institutions to join at the start of 2020 (Cheng 2020), which raised public awareness and could, in turn, lead to the development of more applications of blockchain in financial data management. Considering the long-term impacts of the blockchain system is important because businesses that need to frequently engage in cross-border transactions are likely to be affected by COVID-19 for a longer period compared to their counterparts (international demand is not recovering as quickly as domestic demand).

However, a concern raised about the application of blockchain to manage financial data is whether it can or cannot contribute to the accumulation of bad loans and zombification, a situation where businesses barely contributing to the economy are

kept alive by loans. The current blockchain-based system encourages businesses to borrow, which can cause several issues. For one, because it is unclear how long it will take for the economy to fully recover, it is likely that businesses will default on their loans. In 2020, there was already a significant increase in outstanding non-performing loans for small businesses in China (Trivedi 2021). Furthermore, many SMEs were already struggling to survive before the pandemic due to a slowdown in economic growth and trade frictions (Trivedi 2021), which means it is likely just a matter of time before they shut down, yet they are surviving on loans. This can cause a reduction in productivity.

Overall, the case study shows that China's use of blockchain in financial data management was able to help SMEs stay open in the short-term and can promote further developments in the long-term, both of which aid economic recovery. Even though the accumulation of bad loans is a concern, it is largely a result of policies rather than the adoption of blockchain, which merely makes it easier for businesses to borrow.

### Contact Tracing

#### Issues with Traditional Approaches to Contact Tracing

Since the COVID-19 outbreak, the most adopted approach to contact tracing in China has been the use of QR codes. In as early as February 2020, VastChain, a technology company in Hangzhou, launched the health code program *Chu Ru Tong*, through which residents can access QR codes that indicate whether they have or have not come into contact with an infected individual (Mozur, Zhong, and Krolik 2020). Later, provinces began to sign mutual recognition and cooperation agreements with each other, enabling people to use local health codes when traveling (Zhang 2021). The use of QR codes to aid domestic contact tracing has been very effective. However, some concerns were raised about data privacy and security, especially at the beginning of the pandemic, which led many researchers to propose a blockchain-based alternative solution.

#### Blockchain as a Theoretical Solution

Theoretically, a blockchain-based app or platform can be a more secure alternative solution. However, no such apps or platforms were developed in the mainland during the pandemic, which illustrates that a blockchain-based approach to contact tracing is likely not suitable for use in the mainland.

Blockchain's main advantage is that it can more securely store and process data, which is based on its decentralized fundamentals that separate the process of developing, running, and utilizing data. However, if a blockchain contact tracing system were to be implemented in the mainland, it would have to be led by the government in a centralized way. Currently, China operates a blockchain platform with the government as the underlying architecture, integrating all stakeholders in the form of distributed nodes (Haldane 2021). This would not solve the concerns of data privacy and security.

More broadly speaking, blockchain's immutability can also become a burden in contact tracing. Blockchain's immutability, which refers to the ability of a blockchain ledger to remain unchanged, protects blockchain systems from cyber-attacks (Hasan et al. 2021). While protection against cyber-attacks

is important, many argue that in the case of contact tracing, it is more important to make sure that people's information is accurately recorded. If a blockchain-based approach were used, the immutability of blockchain would make it difficult to update incorrect test results.

### Cross-Border Contact Tracing as a Case Study

Even though no blockchain-based contact tracing apps or platforms were developed in the mainland during the pandemic, in May 2020, a blockchain-based health code was launched to facilitate travel between Macao (a Special Administrative Region) and mainland Guangdong by serving as an electronic pass. This health code makes use of China's open source blockchain platforms FISCO, BCOS, and Weldentity, which help store user information. As long as travelers have a negative COVID-19 test result within seven days, they can apply for and receive a certificate code in 100 seconds (Nanfang Daily 2020).

This example illustrates that compared to domestic contact tracing, the use of cross-border blockchain would likely be more effective. Unlike the use of blockchain to store and pass on contact and travel information between provinces, the use of blockchain in the cross-border context is simpler as it focuses only on the outcome of the information (i.e., whether a person is compliant with regulations). An advantage of blockchain in cross-border contact tracing is that blockchain does not require a central authority. For information to be passed between multiple governments, using traditional methods of contact tracing requires there to be a central authority responsible for supervision, which is hard to implement. On the contrary, blockchain's decentralized fundamentals can be utilized to make coordinating multilateral relations in the process more convenient (Idrees, Nowostawski, and Jameel 2021).

## Discussion

### Potential Improvements

In theory, blockchain can promote better operations in philanthropy. However, in practice, due to the limitations of its computing power, the technology cannot currently strike a balance between efficiency and transparency. Under such circumstances, it is very difficult for hospitals and logistical centers to adapt to or manage any blockchain-based platforms.

The first potential improvement, and the most direct one, is to improve the computing power of the computer. This would resolve the tradeoff between efficiency and system transparency. However, this is a long process that primarily depends on the development of the technology rather than policies.

The second, more feasible improvement is for the government to provide charities with state grants that can be used to offset the increased management costs of adopting a blockchain-based platform. This can not only maintain the healthy operations of blockchain-based charity platforms in the short-term, but also may encourage more charities to join in on the innovative approach and thus promote the long-term growth of blockchain in supply chain management.

One may think that it is not worthwhile to increase fiscal expenditures just to support blockchain-based charity platforms alone. However, one cannot overlook the fact that the application of blockchain is interconnected across industries. In other words, increased expertise in blockchain-based charity supply chain management can be transferred to other fields.

Besides, although we believe that blockchain-based contact tracing is not best suited for use in the mainland due to its' conflict with the political system, we believe that the Chinese government can reach agreements with neighboring countries through multilateral and bilateral negotiations to establish a unified contact tracing system like that used between Macau and Guangzhou.

### Global Implications

The Macau and Guangzhou example has shown that blockchain can be effectively used in contact tracing. With the gradual normalization of the pandemic, the world needs to establish a unified contact tracing system to reduce the impact of the pandemic on the cross-border movement of people and goods. In this context, other countries can potentially take inspiration from the Macau and Guangzhou system and establish small blockchain systems at locations with high population or trade flow.

On the flip side, the inefficiencies of China's blockchain application can also serve as a warning to other countries. For one, China has shown that the application prospects of blockchain in charity supply chain management are far from ideal and that others, especially those with weak medical and technological infrastructures, should act with caution when incorporating blockchain technology into philanthropy (e.g., what happens to donations if the platform fails?).

## Conclusion

During the COVID-19 pandemic, blockchain technology was widely discussed as a potential tool to aid disease control and economic recovery efforts, which led to the development of numerous new applications. In China, these developments can be mainly divided into the categories of philanthropic supply chain management, financial data management, and contact tracing. In philanthropic supply chain management, blockchain technology could theoretically aid donation track and reduce public distrust in charities; however, the effect was not optimal as it was difficult for platforms to find the right balance between ensuring efficiency and keeping all information transparent. In financial data management, blockchain technology was used with the goal of speeding up the verification procedure involved in loan processing, and it was able to accomplish this aim. In contact tracing, although there were no successful applications of blockchain technology in domestic contact tracing, there is potential for blockchain technology to aid cross-border contact tracing in the near future.

Although blockchain technology was not able to achieve its theoretical effect in many cases, the reason why it failed to do so in most cases is the lack of domestic blockchain infrastructure in China. In many parts of China, technological progress remains slow, making it hard to integrate blockchain



into existing systems. For this reason, it is hard for blockchain-based applications to reach the larger public (e.g., attract donors nationwide or achieve nationwide contact-tracing). On the other hand, when reaching everyone in the country is no longer a concern (e.g., attract SMEs and financial institutions only or achieve border-specific contact tracing), blockchain-based applications worked well. The lack of domestic blockchain infrastructure is not something that can be fixed easily and quickly, but with the rapid growth of blockchain technology in recent years and, in particular, during the pandemic, the outlook for the development of blockchain-based solutions to public health emergencies remains optimistic.

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