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Privacy lost: Appropriating surveillance technology in China’s fight against COVID-19

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Abstract China’s unprecedented measures to mobilize its diverse surveillance apparatus played a key part in the country’s successful containment of the ongoing coronavirus pandemic. Critics worldwide believe these invasive technologies, in the hands of an authoritarian regime, could trample the right to privacy and curb fundamental civil and human rights. However, there is little domestic public resistance in China about technology-related privacy risks during the pandemic. Drawing on academic research and a semantic network analysis of media frames, we explore the contextual political and cultural belief systems that determine public support for authorities’ ever-expanding access to personal data. We interrogate the longer-term trajectories—including the guardian model of governance, sociotechnical imagination of technology, and communitarian values—by which the understanding of technology and privacy in times of crisis has been shaped. China’s actions shed light on the general acceptance of the handover of personal data for anti-epidemic purposes in East Asian societies like South Korea and Singapore.

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1. China’s high-tech war against COVID-19. . . With privacy in peril?

The coronavirus (COVID-19) pandemic not only poses unprecedented threats to global health and human well-being but also raises significant concerns about data and privacy breaches. This is largely due to the deployment of technological surveillance and tracking measures worldwide to help slow the spread of the disease (e.g., Ram &
Gray, 2020; Singer & Sang-Hun, 2020). Among countries that have introduced pandemic-related surveillance, China is a remarkable example that has mustered the digital contact tracing and health surveillance resources at its disposal to mitigate the effects of the virus to a significant extent (Cadell, 2020; Wu et al., 2020). A slew of surveillance systems—from drones to CCTV cameras, from digital barcodes to geospatial information on mobile apps—have established the country’s extensive, aggressive virus-tracking system (e.g., Huang, 2020; Wall Street Journal, 2020; Wu et al., 2020).

Not without controversy, the surveillance system has prompted a storm of international concern and criticism of the invasive technologies used by an authoritarian regime in ways that could trample the right to privacy and data protection (Huang, 2020; Singer & Sang-Hun, 2020). Yet, compared to the increased concern elsewhere (Sweeney, 2020), there is little public resistance and criticism domestically about technology-related privacy and surveillance risks during the pandemic in China. As illustrated in the Weibo remark above, Chinese people seem to consent to the government’s expansive virus-tracking policy (Mozur et al., 2020; see also Yang et al., 2020). Are Chinese people “comfortable with outright surveillance” (Huang, 2020) by the state, or tolerant of the government’s digital measures that would lead to the infringement of privacy rights and freedoms while stemming the epidemic? If so, why?

To answer these questions, this article explores the terrain in which the understanding of state, technology, and privacy has been shaped concerning their social and historical context in China. An analytical framework consisting of three aspects—a high level of expectation and confidence in state intervention based on the guardian model of governance, a cultural horizon of technology through which technologies are intertwined with nation-building and national rejuvenation, and a communitarian tradition with less concern over individual rights—offers a much-needed understanding of the myth behind Chinese people’s obedience to the authorities’ ever-expanding access to personal data and cybersecurity during the pandemic.

In the sections below, we first explicate our theoretical understanding of these three aspects. Second, we lay out our methodology, including case selection, data collection, and data analysis. Third, we present our findings and discussions with plausible explanations and reflections on our conclusions. We close by looking beyond China at the implications on the general acceptance of the handover of personal data for anti-epidemic purposes in East Asian societies like South Korea and Singapore.

2. The guardian model of governance

One of the biggest concerns with epidemiological tracing measures is intrusive state surveillance into citizen privacy. State surveillance carried out by either democratic or authoritarian regimes (e.g., BBC, 2020a; Ram & Gray, 2020) involves “the monitoring, collecting, and/or processing of personal data by a government” (Eck & Hatz, 2020, p. 604). While such surveillance on people’s location, activity, or biometrics is largely and increasingly used for the containment of the coronavirus, it also significantly expands state power with greater social and political control over citizens. Such control risks infringing fundamental rights such as freedom of expression and the right to privacy, as well as entrenching power imbalances between the national governments and its citizens.

Nevertheless, this concern about all-powerful states does not appear to be relevant in the case of China. Rather, the guardian model of governance (Lu & Shi, 2015; Shi & Lu, 2010)—which promotes paternalistic leadership—generates a favorable or supportive condition for the Chinese regime to impose, in this case, tech-enabled state surveillance during a public health crisis. Studies on the China-specific political model have consistently revealed that the regime enjoys a substantially higher level of political trust, popular support, and confidence (e.g., Chu et al., 2008; Chu et al., 2020; Steinhardt, 2012; Wang, 2005), despite the lack of the institutional fixtures of a representative democracy. For instance, the Asian Barometer Survey showed a high percentage of respondents trust and obey the Chinese government (Steinhardt, 2012). To account for the pattern of political support and regime legitimacy, scholars have adopted Dahl’s (2008, pp. 52–53) term government by guardians, “a perennial alternative to democracy,” to scrutinize the influence of Confucian values on Chinese politics. The guardianship model of governance entails the persistence of paternalistic power, including obedience to political authority (Pye & Pye, 2009) and superior-inferior relationships (Pye, 1999). Shi and Lu (2010, p. 125) explained the Chinese theory of government in this way:

Under the steady hand of elites according to Confucianism, which holds (like all ‘guardian’ concepts of governance) that ‘rulership should be entrusted to a minority of persons

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*References have been removed to focus on the natural text.*
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... who are specially qualified to govern by reason of their superior knowledge and virtue.’

More specifically, the guardianship discourse advocates that "the guardians be endowed with the discretionary power and authority that is necessary to make decisions on public issues" (Lu & Shi, 2015, p. 25).

Against this backdrop, the Communist Party of China (CPC) has been deliberately indoctrinating the Chinese people within the guardianship discourse to embrace paternalistic leadership that gives rulers discretionary power in policymaking. For instance, the survey found that high proportions of citizens agree or strongly agree with statements such as "You can generally trust the people who run our government to do what is right;" "You can generally trust decisions made by the central government;" or "The government can be trusted to do what is right without our having to constantly check on them" (Wang, 2005, p. 158). Such guardian discourse further diverts people’s attention away from the role of the institutions, procedures, or routines of a democratic system to "the substance and outcomes of its [the regime’s] policies," or "what a government does—how well it performs and cares for its people—is more important than how it came to be" (Shi & Lu, 2010, p. 126). Subsequently, the guardianship discourse convinces subordinates to believe—and welcome—that the state should intervene in civil society for the sake of social benefits and judge the governance capacity in terms of the outcomes.

This guardianship model of governance is particularly exemplified in the politics of public emergencies and disasters in China (Lyu, 2012; Xu, 2016; Zhao et al., 2017). As studies have uncovered, the politics of public emergencies and disasters consists of two key issues: paternalistic compassion and accountability (Xu, 2016, p. 420). Paternalistic compassion speaks to a continued strong, prevailing public expectation that the "rulers’ primary obligation is to benevolently and sympathetically protect and enhance the subsistence rights of the ruled as a collective good" (Hung, 2013, p. 196) in precarious situations. Accountability, then, indicates that the authorities must demonstrate that they were accountable for the people’s suffering, hence directing public attention towards the state’s effective response (Xu, 2016, p. 424). In turn, by projecting a publicly expected image as a "grandpa state" (Xu, 2016, p. 421) to safeguard its "children" (Zhao et al., 2017, p. 369), the state makes efforts to secure popular approval, maintain its legitimacy, and strengthen its resilience. We thereby ask our first research question (RQ1): How do media discourses implicate the guardianship model of governance beneath their narratives in COVID-19 coverage?

3. The cultural horizon of technology

Apart from the concern over the surveillance state, the large-scale collection, use, sharing, and further processing of vast amounts of personal and nonpersonal data for purposes related to the COVID-19 response has drawn criticism from civil society groups and nongovernmental organizations, which have labeled the pandemic surveillance tech "privacy-infringing" (Ienca & Vayena, 2020, p. 463) technologies. Yet, a different language that articulates the "cultural horizon" (Feenberg, 1992, p. 307) of technology—or more precisely, a sociotechnical imaginary (Jasanoff & Kim, 2009, 2013) that ties technology with national development in China—offers another essential framework for the sense-making and acceptance of the massive adoption of a digital contact tracing apparatus to monitor individuals’ movements.

Feenberg (1992, p. 307) said that although "technology ought to be subject to interpretation like any other cultural artifact . . . [w]e are assured that its essence lies in a technically explainable function rather than a hermeneutically interpretable meaning." The technically explainable function, or "social meaning" of technology (Feenberg, 1992, p. 307), indicates the goal of the technology but leaves no room for its meaning in its concrete social context. Instead, the hermeneutically interpretable meaning, or the "cultural horizon" of technology, manifests "culturally general assumptions that form the unquestioned background to every aspect of life" (Feenberg, 1992, p. 309). These assumptions condition, shape, or constrain the adoption and development of technology, hence making "technology’s contextual causes and consequences visible rather than obscuring them behind an impoverished functionalism" (Feenberg, 1992, p. 308).

One way to uncover the cultural horizon of technology beyond functionalism is through an exploration of sociotechnical imaginaries. Sociotechnical imaginaries encapsulate "collectively held, institutionally stabilized, and publicly performed visions of desirable futures, animated by shared understandings of forms of social life and social order attainable through, and supportive of, advances in science and technology" (Jasanoff, 2015, p. 4). In other words, the visions of desirable futures regarding a specific technology—"typically grounded in positive visions of
social progress” (Jasanoff, 2015, p. 4)—epitomize culturally general assumptions and norms for such technology and further guide technological development.

Scientific and technological development has been intertwined with visions of nation-building and national rejuvenation among social elites and political leaders in the modernization of China (Elman, 2009). This emerged as early as 1862 and especially grew after the defeat in the Sino-Japanese War of 1894—1895 (Kuo & Liu, 1978) when the adoption of Western (military) technology was regarded as “the primary task” for the “self-strengthening (Ziqiang)” movement of Chinese state-building (Kuo & Liu, 1978, p. 492). The first populist movement—The May Fourth Movement in 1919—that pursued China’s modernity exalted Western ideas, Mr. De (“democracy”) and Mr. Sai (“Science”), as the only ways to revive China (Poo, 2019). Likewise, Mitter (2005, p. 233) observed “a strong romanticist tinge in the tendency to glorify industrial technology...for the virility and power which it seemed to offer the nation” in the transition from pre-modern to modern.

The enthusiasm for science and technology as the key to national rejuvenation perpetuates and swells after the rise of the CPC (Hughes, 2006; Yang, 1990). Yang’s review (1990) of the Chinese government’s policies prioritizing technology development showed that the leadership portrays technology as crucial for the country to catch up with advanced industrial countries. For instance, the Chinese propaganda apparatus launched a full-swing campaign in the 1980s to promote Deng’s famous theory that “science and technology constitute a primary productive force” (Yang, 2018). Science and technology were viewed as nothing but the driving force behind economic development (Song, 2008, p. 236). Through mass media and institutions, the government has constructed dominant discourses like “rejuvenating China by technology and education” (Na, 2003), “enhancing trade by relying on science and technology” (Fan & Watanabe, 2006, p. 307), and, most recently, the ambitious plan “Made in China 2025,” through which China aims to become a self-reliant technology power by reducing its reliance on foreign technology (Wübbeke et al., 2016). In short, the discourses encompass a sociotechnical imaginary of technology as a means and promise of rejuvenating the country. This discourse, as Liu (2005, p. 309) argued, “excludes any other alternative version of science and technology and exempts any challenge of the ‘power of science and technology.”

With these specifications in mind, we ask the next research question (RQ2): How do media discourses elicit the specific sociotechnical imaginaries in which technologies are intertwined with nation-building and national rejuvenation beneath their narratives in COVID-19 coverage?

### 4. The communitarian tradition

Privacy protections have been portrayed as one of the victims of COVID-19 (Meyer, 2020; Singer & Sang-Hun, 2020) as the fight against the pandemic has introduced aggressive and evolving mass digital surveillance measures to record and transmit personal health and geolocation data that may involve personally identifiable information (Sharma & Bashir, 2020). While debates heat up in Western countries regarding whether key tenets of democracy, especially the protection of the fundamental right to privacy, should be set aside during the pandemic to enable a more effective response (e.g., Bollyky & Kickbusch, 2020; Greitens, 2020), Asian societies—including Singapore, South Korea, Hong Kong, and the Chinese mainland—have been successful in curbing the spread of the virus, with their populations being “more accepting of smartphone app-based digital tracing . . . despite the privacy incursions” (Cha, 2020, p. 2). The answer to the acceptance of technologically enhanced surveillance, despite the issue of privacy and cybersecurity breach, has less to do with regime type and more to do with communitarian citizenship (Etzioni, 1996; Janoski, 2014).

Communitarianism is a social philosophy that underlines the importance of a community or society-based definition of the common good and shared value (Etzioni, 1996, 2007, 2014). Often considered in contrast to liberalism, which advocates the centrality of the individual, communitarianism prioritizes community and societal interests over those of the individual. As Taylor (1995, p. 186) explicated, in essence, “[t]he ethic central to a liberal society is an ethic of the right rather than the good,” with basic principles involving “the respect of individual rights and freedoms.” In other words, liberalism “does not in the first instance define what goods the society will further” (Taylor, 2003, p. 197). Rather, individuals should formulate the goods “on their own, without membership in, influence from, or regard for a community” (Etzioni, 1996, p. 4). By contrast, communitarianism takes a community-oriented perspective to support “a sense of a shared immediate common good” (Taylor, 2003, p. 197).
200). It is collective-based units such as the family, schools, and associations—all parts of communities—that articulate shared conceptions of the good. After determining the shared values or the common good, "communities command centripetal forces that seek to pull in members' commitments, energies, time, and resources for what the community as a collectivity endorses as its notion of the common good" (Etzioni, 1996, p. 5). Subsequently, from a communitarian standpoint, the centripetal forces push the communities and other social entities toward collectivism (Etzioni, 1996, p. 9).

Scholars address the communitarian tradition when expounding the distinctive Chinese pattern of state-individual relations (Pye, 1991, p. 446) and citizenship in China (see also De Bary, 1998; Janoski, 2014). Pye (1991, p. 446) suggested that "the dominant feature of Confucianism was a pervasive hostility to the notion of personal autonomy and individualism...there was no notion of individual rights" in China. Consequently, "in China's cultural tradition, 'individuals have always been closely linked with society...and individuals have never been placed above society, and the values of individuals have always been unified with the responsibilities of society'" (Pye, 1991, p. 447). China's collectivist culture subsequently glorifies the common good—defined mostly by the (Party-)state as "an expression of the majority interests of society" (Pye, 1991, p. 447)—and praises self-sacrifice in the face of public good (Egri & Ralston, 2004) as selflessness, a virtuous form of communitarianism. A crucial rhetoric for public mobilization, the advocacy of communitarian virtues like duty, responsibility, and self-sacrifice soars during crises and disasters like the Severe Acute Respiratory Syndrome (SARS) outbreak (Ding, 2014), the Sichuan Earthquake (Rosen, 2009; Sorace, 2016), and the COVID-19 pandemic (Palko & Xiang, 2020, p. 206). These types of events cultivate a deep commitment to taking collective action (Xinhua Net, 2020). Given this, we ask the third research question (RQ3): How do media discourses portray the state-individual relationship and, especially, communitarianism beneath their narratives in COVID-19 coverage?

5. Methods

This study explores thoughts and ideas beneath narratives through interrogating media discursive frames as important units of analysis. Gamson and Modigliani (1989, p. 3) referred to such called these media packages: "interpretive packages that give meaning to an issue." Media frames denote structured semantic representations of associated contextual and cultural information grounded in broader cultural belief systems (Werner & Cornelissen, 2014). To examine media frames uncovers the background structure of shared reality and identifies "the role of political culture and practices in stabilizing particular imaginaries" (Jasanoff & Kim, 2009, p. 121). Given the idea of associative framing (Ruigrok & Van Atteveldt, 2007), this study operationalizes media frames as complex patterns of associations between different concepts, with the main associations in a message being its central organizing idea (Gamson & Modigliani, 1989). In other words, media frames involve not only the selection of concepts but also their mutual associations that stand for schemata of interpretation. We examine such associative framings through semantic networks derived from the occurrences and co-occurrences of concepts.

5.1. Semantic network analysis

This study employs semantic network analysis to explore media frames of COVID-19, technology, and privacy in news coverage in the Chinese mainland. Semantic network analysis has its origin in cognitive science, arguing that human memory contains a structural meaning system (Collins & Quillian, 1972). Semantic network theorists have thus argued that the frequency, co-occurrence, and distances among words and concepts allow researchers to explore a text’s embedded meaning (Danowski, 1993; Doerfel, 1998). While there have been different methods to conceptualize network ties (e.g., traditional content analysis, shared perception, and word association) in existing semantic network analysis research (Doerfel, 1998), this study adopts the word association (concept co-occurrence) method, which maps the relationships among words by indexing pairs of concepts. Extending beyond the standard content analysis of texts and frequencies of concepts, semantic network analysis reveals the manifest meaning structure of the text and indirectly represents the collective cognitive structure among the text's creators (Danowski, 1993). The analysis, with secondhand data from news sources, follows the framework consisting of three aspects and the research questions proposed above.

5.2. Data collection

To identify and collect data, we first performed an extensive search of news coverage in Chinese
published on the Chinese mainland. Data collected was published between December 1, 2019, the date of the first known COVID-19 case, and December 1, 2020. We used the keyword-screening method in the Huike News Database—the Wisers Information Portal1—the most professional Chinese media content database. Instead of contact tracing apps, terms including “健康码 (health code),” “健康通行码 (health QR code),” and “追溯App (tracing app)” has been used in the Chinese mainland to refer to a traffic-light style personal identification code to declare people’s health status and to upload documents such as test certificates, passports, and itineraries to permit travel from one area to another (BBC, 2020b). The codes are based on a combination of big data and information submitted by the users themselves. Next, the keywords “新冠肺炎 (COVID-19)” in combination with “health code,” “health QR code,” “tracing app,” or “隐私 (privacy)” were used in all fields to locate news articles covering COVID-19, technology, and privacy, if any, yielding 1,010 news articles and commentaries.

5.3. Data cleaning and analysis

The next step was to conduct semantic network analysis and explore the discursive network of COVID-19, technology, and privacy in news coverage through the following three steps. The corpus of 1,010 news articles and commentaries was first preprocessed and cleaned. We segmented raw texts into words using the Chinese lexical analyzer Jieba and filtered punctuation, numbers, common Chinese stop words, and non-words. Second, we submitted the corpus consisting of space-spliced words to WORDij 3.0,2 a text analysis tool that counts the frequency of each word and the co-occurrence of word pairs. Word pairs with a raw co-occurrence frequency higher than 5 were retained for further analysis, following the suggestion of Church and Hanks (1990), who noted that the mutual information score becomes unstable and meaningless when the count is smaller than 5. Third, we visualized the semantic network of news coverage on COVID-19 using Gephi,3 specifically employing its modularity partition algorithm (Newman, 2006) to detect concept communities for semantic networks. The generated semantic network identifies major COVID-19, technology (such as health QR code), and privacy-related concepts in the text data as nodes linked together by the frequencies with which each concept co-occurs with other concepts. Network clusters that emerged organically from the large network were further identified and categorized deductively using three predetermined themes: the guardian model of governance, the (cultural horizon of) technology, and the communitarian tradition.

6. Findings

There are 636 words and 343 edges in the news articles semantic network. We created a visual of the semantic network for Chinese news articles (Figure 1) using Gephi (Bastian et al., 2009). We ran the average degree to calculate the node strength for each word. The node degree is determined as the number of edges that are incident on that node. The average degree refers to the average number of edges per node. Only words with more than 3 degrees were collected for further analysis (average degree = 2.975). The 784 words with the highest node strength are displayed in the figures. Each node represents a word, and its size indicates the node strength calculated by summing the weights of the edges belonging to the node. Edges are undirected and weighted. The modularity partition algorithm suggested that the network could be divided into 13 communities, with a modularity score of 0.509.

We identified topics for each word community by their top words and inductively summarized those topics into three themes. Five main clusters can be identified from the semantic network, including one general cluster (pandemic) and four specific clusters, in ranking order: technology, service, state, and health QR code. Table 1 presents the themes and top words for the semantic networks.

The pandemic cluster (Figure 2) offers the context for news coverage. This cluster involves terminology related to the pandemic, such as “新冠 (COVID-19)” and “肺炎 (pneumonia).” It also encompasses words describing campaigns to combat COVID-19 like “措施 (measures),” “防控 (control),” “保护 (protest),” “消毒 (disinfect),” and “抗体 (antibody).”

The technology cluster (Figure 3) is the largest in the semantic network. Within the cluster, the word “technology” is generally associated with “数字 (digital)” and “数据 (data).” The utility of the term technology during the pandemic is specifically delineated through the use of words such as “检测 (test)” and “抗疫 (anti-pandemic).” The remaining
keywords, in essence, address the benefits of technology and technological applications, such as “发展 (development),” “创新 (innovation),” “改革 (reform),” and “现代化 (modernization).” Words like “推动 (enhance),” “重要 (important),” “智慧 (wise),” “提升 (improve),” “助力 (boost),” “快速 (swift),” and “赋能 (empower)” also encapsulated positive expectations for and assessment of technology.

The second-largest cluster is service (Figure 4), which also addresses aspects of technology or technological applications in the COVID-19 campaign with keywords such as “平台 (platform),” “智能 (intelligence),” “人脸识别 (face recognition),” and “扫码 (scan).” The cluster also points to technological development in the campaign with words like “保障 (safeguard),” “优化 (optimize),” “完善 (improve),” and “简化 (simplify).”

The next cluster is that for state (Figure 5), which identifies the state and government as the main actor in handling the pandemic. It refers to the Party-state, Chinese government, and political leader with keywords including “中国 (China),” “国家 (state),” “习近平 ([President] Xi Jinping),” and “政府 (government).” Action verbs such as “加强 (reinforce),” “开展 (launch),” “支持 (support),” “维护 (maintain),” “制定 (formulate),” “组织 (organize),” “研发 (R&DI),” and “整治 (overhaul)” specify the role of the state in the campaign, while words like “治理 (governance),” “安全 (safety),” and “稳定 (stability)” further underline the importance of the state’s role in the pandemic.

The health code cluster (Figure 6) involves words that narrate practical information regarding the use of contact tracing, such as “登记 (registration)” and “申领 (application).” It is noteworthy that this cluster contains words related to data security and privacy, but with two opposite stances. On the one hand, words like “公共 (publicity)” and “群体 (community)” highlight society’s general interest. On the other hand, individual and privacy related to the health code are also addressed, yet with a relatively lower degree; both “隐私 (privacy)” and “个人信息 (personal information)” gain only 5 degrees, while “泄露 (leakage)” has 4 degrees. In comparison, “公共 (publicity)” and “群体 (community)” obtain 23 and 10 degrees, respectively.

7. Discussion

While concern is increasing in the West over privacy trade-offs with rush-to-release data surveillance applications for the ongoing COVID-19 health crisis, less controversy has unfolded in China over the privacy and security of such applications beyond public
health utilities. Less is known about why Chinese people are tolerant of such surveillance tools—as along with the regime’s expansive tracking policy—that also gives the regime a great deal of power over and knowledge about its people (Huang, 2020). In this study, we propose a framework with three aspects to understand the lack of concern over privacy risks in China. We support our proposed framework with exploratory results from a semantic network analysis of media coverage of COVID-19 in the Chinese mainland.

Cultural orientations provide the setting for politics, while the relationship of society to the state is a part of political culture (Moody, 1994, p. 735). Our first question concerns the guardianship model of governance beneath media narratives in COVID-19 coverage. As illustrated in the analysis, the state has been described, with its paternalistic role, as the pivotal actor in caring for and serving the people through various activities—such as policies and R&D—in the campaign against COVID-19. Terms like “治理 (governance),” “安全 (safety),” and “稳定 (stable)” not only imply paternalistic meritocracy as the outcome of the guardian model of governance, but they also legitimize the guardian role of the (Party-)state in China through evaluation of government policies dealing with COVID-19 in people’s daily life.

“A government for the people, rather than government by the people” (Shi & Lu, 2010, pp. 123–130), is further illustrated in the association between the words elder and service in the service concept cluster. The pandemic exacerbated the digital divide, particularly for China’s rapidly aging population, as elders without smartphones or who do not know how to use a health QR code are encountering many inconveniences in daily life or even finding it nearly impossible to travel with.
public transportation (China Global Television Network, 2020). The state subsequently responded with solutions—exemplified by terms like “简化 (simplify)” and “便利 (convenient)” for this tech dilemma to help seniors, and the words “服务 (service)” and “老年人 (elder)” then marked the media frame for a government that considers people’s interests when making decisions. This, in turn, would facilitate Chinese people’s acceptance of and subsequent expectations for the state in terms of the guardianship discourse (Lu & Shi, 2015), rather than democratic institutions and procedures. As Cha (2020, p. 12) explained, in a public health emergency like COVID-19, when “the government’s responsibility” to provide services meets with demands from the public, society gains confidence, and civic trust in the regime increases. In short, the acceptance of state surveillance in China, which is well-equipped with data applications, is embedded in the country’s unique sociopolitical environment...
and cultural heritage and is thus significantly different from Western norms and values built around individual freedom and rights.

Our second research question queries the specific sociotechnical imaginaries in which technologies are intertwined with nation-building and national rejuvenation to underpin media narratives in COVID-19 coverage. The culturally general assumptions (Feenberg, 1992, p. 309) of technologies thus determine the sensemaking process of pandemic-related surveillance technologies. Such sensemaking and social imaginaries are exemplified through words like "推动 (enhance)," "提升 (improve)," "创新 (innovation)," "助力 (boost)," "赋能 (empower)," and "加强 (reinforce)," all of which imply that the employment of state-imposed surveillance technologies and policies is both a necessity and a promise to contain the pandemic. As said, social imaginaries suggest particular ways in which people view their relationships with artifacts—in this case, public health surveillance. Our analysis reveals that the media frame on surveillance technology mirrors the general cultural horizon of technology in China. Underneath the acceptance of the politics of surveillance technologies is, without question, a sociotechnical imaginary rooted in a nationally bounded collective vision in China that pushes the adoption of such technologies as mandatory for wide distribution in everyday situations. The controversies around surveillance technologies in the West center on their benefits as bounded, while its risks are unpredicted and unmanageable (Ram & Gray, 2020; Singer & Sang-Hun, 2020). The sociotechnical imaginary of COVID-19 surveillance technology in China, however, represents a sense of cultural continuity with the view of technology as beneficial to national development and, in this case, to the nationwide battle against COVID-19.

The semantic analysis further disclosed the positive outcomes of technological adoption as the only emphasis in the media frame—"创新 (innovation)," "智慧 (wise)," "提升 (improve)," "助力 (boost)," "赋能 (empower)," "智能 (intelligence)," and "保障 (safeguard)—regardless of the accountability mechanisms over, for instance, data collection, analysis, storage, and removal (e.g., Kavanagh & Singh, 2020; Lin et al., 2020). Concerns such as state interference or technology-driven solutions, including voluntarily surrendered personal data, have been addressed with sufficient procedural safeguards—as illustrated in words like
Although worrying reports about leaks of personal data have emerged (e.g., Xu, 2021), the legitimacy of government surveillance derives from “what a
government does” (Shi & Lu, 2010, p. 126) instead of the procedures of governance. To sum up, the continued strong faith in technology and administrative reasoning in the media frame not only underpins but also buttresses the shared sensemaking embedded in the country’s imaginary on surveillance technologies in the COVID-19 campaign.

We asked our third research question regarding communitarianism beneath media frames in news coverage of COVID-19. As our analysis uncovered, terms addressing collectivism and communitarianism occupied more prominent positions than personal privacy concerns. This signifies the broad support for and cooperation with collective interest through individual responsibility, fidelity, and even sacrifice in the COVID-19 campaign (He et al., 2020). This media frame resonates with, for instance, the central government’s lockdown of Wuhan and other cities in Hubei as decisions for “the greater good,” with “heroic sacrifice” made by both the Chinese people and China as a nation (Rolland, 2020, pp. 28–29). More importantly, it pinpoints the decisive role of the (Party-) state in defining the publicly supported good in the battle against the pandemic. In essence, communitarian values drive a civic willingness and obligation to embrace high-tech means that would limit the spread of the virus as a valuable public good.

To conclude, we scrutinized the three dimensions we proposed to interpret the wide adoption of surveillance technologies in the Chinese mainland: the guardian model of governance that generates high expectations of and confidence in paternalistic leadership to lead the anti-pandemic campaign, a sociotechnical imaginary that establishes a belief in mass surveillance’s positive outcomes in fighting the pandemic, and the communitarian values that downplay individuals’ right to privacy but advocate a conception of common interest defined and espoused by the state. To understand China’s unprecedented measures to mobilize its surveillance apparatus and popular support, Pye (1991, p. 445) calls attention to the fact that “the weight of tradition cannot be easily set aside.”

8. Unearthing regional exceptionalism

This study offers a much-needed elaboration on surveillance technologies and their unchallenged acceptance in China, which is significantly different from Western concern over potential personal data breaches and privacy risks in the face of an all-powerful state. While attributing the effectiveness of the measures deployed by the Chinese regime in containing the epidemic to state capacity, one should not overlook the underlying factors fueling or leading to widespread support from the Chinese people. Our findings are not only indispensable to make sense of the discussion in China, but also beyond China. For instance, the guardianship discourse exists in both China and Singapore (Lu & Shi, 2015), while the majority of East Asians in other countries with a Confucian legacy also tend to be attached to paternalistic meritocracy (Chu, 2013, p. 8). Likewise, communitarian values span Asian countries and must be kept in mind to understand why Asian populations seem broadly tolerant of pandemic-related surveillance (Cha, 2020). A contextual, comprehensive understanding of cultural orientations and institutional performance helped us unpack Chinese (and East Asian) exceptionalism regarding (the lack of) privacy risk and security concerns in the ongoing containment of the COVID-19 pandemic.

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