

## Asia's COVID-19 Lessons for the West: Public Goods, Privacy, and Social Tagging

Epidemiologists universally acknowledge that communities in Asia including in Hong Kong, Singapore, South Korea, Taiwan, and Vietnam have been more successful than the United States and most European countries in “flattening the curve” and limiting the spread of the COVID-19 virus among its populations. Despite the relative proximity of human-to-human transmission with China, the total number of cases and deaths as of May 2020 for these five countries is unusually small compared to the United States, Italy, and other European states. South Korea discovered its first positive case within one day of the United States but slowed the infection rate by the end of February. The United States, by contrast, exceeded 1.1 million cases and was still on the incline in late April. Singapore has demonstrated the lowest mortality rate for the virus and succeeded in initially suppressing infection rates with quarantines and social distancing. And all these Asian societies have managed to maintain some degree of normalcy and economic well-being compared with the lockdown and economic freefall in the United States.

While early response and well-executed national plans were critical, one of the commonalities among the Asian cases is the willingness of populations to adopt high-tech means of contact tracing to limit the spread of the virus. For countries in the West still suffering from the virus, political leaders struggle over the tradeoff

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between privacy rights and the use of smartphone app-tracking technology for contact tracing. For Americans in particular, whose response to COVID-19 has been neither swift nor well-executed, there may be no choice but to employ these high-tech methods absent universal antibody testing, therapeutics, or a vaccine.

In this article, I will distill some of the lessons learned from Asia's COVID-19 pandemic response for the United States and Europe. I will also look at why Asian populations have been more accepting of smartphone app-based digital tracing than the United States. The answers have less to do with culture and more to do with a civic willingness to embrace technologies that provide a valuable public good despite the privacy incursions—the confidence to feel healthy and safe as they leave the home, go to work, and engage in social activities in the new normal of virus-laden environments.

### Lessons from Asia's Responses

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When you deplane at Incheon International Airport in South Korea, a two-and-a-half-hour line awaits for body temperature monitoring. Passing through various checkpoints, you are asked about five times before exiting to baggage claim whether you have downloaded the app on your phone that will track your location. Once you are at your destination, you are required to report in the self-diagnosis app every day whether you feel any onset symptoms of COVID-19. If you test positive, your location will be tracked through the app. Others will receive a social distancing alert on their phones of your movements in their proximity.<sup>1</sup>

Americans chafe at this type of Big Brother surveillance. They see it as contrary to their freedom and values, even in these disruptive times. But as of May 1, South

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Korea had just over 10,000 people infected by the virus—one hundred times less than the US number, despite having 1/7 of the US population.<sup>2</sup> Singapore did not initially experience an explosion of infections like China or the United States. Vietnam reports one of the lowest infection rates in the world despite sharing a 900-mile terrestrial border with China and the most popular destination for Chinese tourists.<sup>3</sup> And Taiwan defied all expectations.

Sitting 81 miles off the coast of China, with 850,000 of its 23 million population (about 3.5 percent) working and residing on the mainland, Taiwan was predicted to have the second-highest COVID

importation risk of any other population in the world, especially given the millions of travelers during Lunar New Year. Yet by early May, it had only 432 cases.<sup>4</sup> Indeed, while Taiwan and Italy identified their first cases in the same week, the latter saw over 28,000 deaths while the former saw only 6. The island has a population not dissimilar to that of Australia, and yet Canberra is struggling with over 6,700 cases.<sup>5</sup>

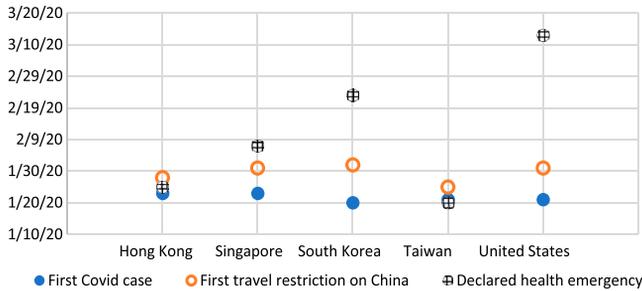
These Asian governments and societies did something right to enable them to emerge from the COVID-19 pandemic less scathed than others. There are lessons to be learned from these experiences for the United States and other countries going forward.

### **Lesson I: Acknowledge Early and Respond Quickly, if not Proactively**

The first lesson learned is to respond quickly. Officials in Hong Kong, Singapore, South Korea, Taiwan, and Vietnam placed a premium on time and speed when responding to COVID. They moved early to acknowledge the magnitude of the problem and start mitigation efforts almost immediately. In Taiwan, for example, as soon as reports emerged in China of an unrecognizable strain of pneumonia on December 31, 2019—a full month before the World Health Organization (WHO) declared a “public health emergency of international concern” on January 30, 2020—Taiwanese officials proactively began screening for symptomatic passengers on planes arriving from Wuhan.<sup>6</sup>

President Tsai Ing-wen activated emergency pandemic response procedures and established a toll-free hotline for citizens to report symptoms and receive expert health information such that the country was fully mobilized even before they found their first case on January 21.<sup>7</sup> A week after the diagnosis of the first case, the government started working on an electronic database and tracking system to prevent an epidemic from overrunning its health care facilities.<sup>8</sup> Less than two weeks later, Hong Kong closed all border crossings with China, Vietnam tightened restrictions on incoming travelers and stood up an emergency COVID task force, and Singapore became one of the first to ban incoming flights from China, despite harsh criticism from Beijing. By contrast, the WHO still called for countries not to ban international travel as late as February 4.<sup>9</sup>

Taiwan, Hong Kong, and Singapore have relatively small populations, which may have made them better suited to manage the crisis. But South Korea, with a population of over 50 million, successfully placed a similar premium on speed of response. From the first detected case on January 20, it took only nine days before the Korean Center for Disease Control (KCDC) and the National Health Insurance Service established a national “1339” call center to inform the public and to receive data about cases. Ten days after the first case, the

**Figure 1: Timeline of COVID-19 Responses**

Korea Occupational Safety and Health Agency started supplying over 700,000 masks to vulnerable workplaces. And about two weeks after the first case, COVID-19 test kits capable of producing results in six hours were approved and distributed.<sup>10</sup> The country proceeded to test over 20,000 people daily.<sup>11</sup>

The first reported COVID-19 case in the United States in Washington state came within one day of Korea's first case; yet, President Moon Jae-in declared a national emergency (code red on the infectious disease alert) on February 23, about three weeks before Trump did the same (see Figure 1). Trump has boasted about the six million-plus tests conducted in the United States as of early May 2020 as the most of any country in the world. This is not true. Italy has performed more tests per million (approximately 20,000 versus 11,000), and South Korea has tested as many per capita (approximately 10,800) as of mid-April.<sup>12</sup> The only metric that matters for sick people is whether the average citizen—not an NBA star, oil company CEO, or the president himself—can get a test if they want one. You can in Korea; you cannot in the United States.

### Lesson 2: Don't Lead from behind Locals

A second lesson from the Asian cases is that national governments listened to their health experts and delegated implementation of response plans to the local levels; however, they also understood that some tasks could only be led at the national level. Nowhere is this more apparent than in the case of face masks.

South Korea faced the same N-95 face mask shortage as the United States, which led to hoarding behavior and price-gouging. On March 5, the Korean government purchased 80 percent of national production.<sup>13</sup> It prioritized hospitals for distribution and then created a price control and ration system. A mask costs about \$1.27 and could be purchased at a pharmacy, post office, or agricultural cooperative. But to prevent hoarding, citizens were allowed to purchase masks on a

designated day based on the last digit of one's birth year (for example, if one's birth year ends in 0 or 5, then "mask day" is Friday). In Singapore, the government also centralized the distribution of critical medical items like N-95 masks and personal protective equipment (PPE) to caregivers.

In Taiwan, the Central Epidemic Command Center (CECC) played an active role in resource allocation, including setting the price of masks and using government funds and military personnel to increase mask production such that on January 20, the day *before* Taiwan discovered its first positive COVID case, the CECC announced that the government had under its control a stockpile of 44 million surgical masks and 1.9 million N95 masks<sup>14</sup>—in striking contrast to the haphazard US response with states fighting with each other for federal stockpiles and foreign imports of test kits, ventilators, and other medical equipment.<sup>15</sup>

To coordinate the mitigation and tracing efforts, the Taiwanese government integrated its national health insurance card database with the immigration agency's database and ran algorithms to determine which citizens, based on their 14-day travel records, were most at risk of having contracted COVID. Because this effort was led by the government, it was accomplished in one day.<sup>16</sup> Most importantly, citizens trusted the daily briefings coming from the government as they were expert-based rather than political (run by the health minister at the head of the CECC and by the vice president, who is a US-trained epidemiologist).

Asian governments also fostered public-private sector partnerships for supplies of medical equipment, contact tracing, social distancing, and everything in between. In South Korea, national health authorities partnered with twenty medical and pharmaceutical companies to produce test kits under an expedited regulatory approval regime. This response stands in stark contrast to the United States, where the CDC fumbled its first effort to produce test kits and the FDA did not expedite the regulatory approval process, losing precious weeks in the national response.

In Hong Kong, the government partnered with private sector software developers to build digital, real-time maps of mask stocks at local pharmacies, as well as real-time apps to alert citizens to movements of disembarked passengers of the Diamond Princess cruise ship.<sup>17</sup> And in Singapore, government authorities partnered early with private sector business to develop telework plans and provided emergency locations to encourage companies to adopt split shifts and social distancing to limit contagion. The United States also attempted public-private sector partnerships, but on the whole these came almost a month later in the COVID response timeline than in Asia, as the Trump administration preferred to put

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responsibilities into the hands of the states, with the federal government playing a supporting role.

### **Lesson 3: Innovate, Innovate, Innovate**

The third core lesson from Asia is the ability of governments and the private sector to fashion innovative responses to the COVID pandemic. Some of the more elegant innovations have been common sense ideas that saved lives and slowed the spread. For example, in South Korea about one month after the first positive case, health officials came up with the simple idea of a drive-thru test facility. The first one was set up in the parking lot of a university; this eventually grew to over sixty facilities nationally that allowed for large-volume daily testing of thousands in open-air spaces that enabled social distancing while patients waited safely in the confines of their vehicles.

The other simple but pragmatic idea was the “designated site” (DS) system. The South Korean government designated which hospital facilities would handle exclusively COVID cases and which ones would treat other ailments. This information was made available in a phone app and served to reduce the spread of the virus by avoiding the intermingling of COVID-afflicted patients with regular patients. Large signs were placed in facilities in case someone did not have the app. And failing that, a person in a hazmat suit stood at the entrance to the facility to direct walk-in patients to DS and non-DS areas.

### **Lesson 4: “Social Tagging” Is Not Autocratic**

The fourth lesson of Asia’s COVID experience is that employing digital means of tracking the virus is not necessarily a tool of autocrats only. The innovation that has gained the most attention is Asia’s use of digital data to “socially tag” COVID-positive cases and create opportunities for contact tracing and social distancing.

**T**Tracking is being conducted with safeguards to leave users with control over their data.

Language matters, and while different literatures have referred to these smartphone apps as “digital surveillance” or “digital tracking,” I use the term “social tagging” because the usage of this app technology in non-autocratic societies is moving away from the general surveillance practiced in China and toward more effective ways to “tag” the sick to stay inside while ensuring privacy so that broader society can come out of lockdowns with confidence.

This tracking is being conducted with safeguards to leave users with control over their data, thereby preserving individual privacy rights. For example, Singapore’s digital tracking app for contact tracing

**Figure 2: Types of Digital Social Tagging Technology Used in Asian Countries to Combat COVID-19**

Country/territory	Digital social tagging technology
Australia (COVIDSafe)	Smartphone app that uses Bluetooth sensors to store the Bluetooth key of the phones used by others that the user comes into close contact with. User has the option to upload this record of contacts to public health authorities if tested positive.
China (Alipay Health Code)	Users sign up through Alipay wallet app and input their unique citizenship identification numbers. Data is collected on the user's travel history, contacts, and health records, and a health code (red, yellow, green) is displayed in the app that dictates limitation on user's movement.
Hong Kong (StayHomeSafe)	Tracking system for overseas arrivals subject to 14-day quarantine. Arriving passengers are given a wristband at airport with a unique QR code. They must download StayHomeSafe app and then scan the QR code to pair with the wristband. Movement is tracked within the home, and if quarantine is broken, an alert to the government is triggered.
Singapore (TraceTogether)	Smartphone app that uses Bluetooth technology to store two weeks' worth of interactions of a threshold distance and duration on the phone. If the user tests positive for COVID-19 or is exposed to someone who tested positive, they are encouraged to upload the data to the health ministry database for purposes of contact tracing.
South Korea (Corona 100m)	Smartphone app that provides data to app users of diagnosed COVID-19 patients who move within a 100-meter radius of app users along with the patient's diagnosis date, nationality, age, gender, and prior locations. Uses a push notification and a visual map.
Taiwan (Electronic Fences)	Uses cellular phone signals to track location of an individual in quarantine. If the user turns off phone or loses signal, an alert system is triggered to locate the individual and next of kin through push notifications and phone calls to enforce quarantine.

does not share the users' record of meetings with the government without user consent (presumably in the case of a positive COVID test), and the data automatically gets erased from users' phones after 14 to 16 days. South Korea's apps provide the public with the tracking routes of an infected patient but do not reveal the patient's identity. While the methods differ, [Figure 2](#) shows how each society leveraged smartphone app technology to publicize private locational data for public consumption.

### **Why the Different COVID-19 Approaches between the West and Asia?**

While the practice of social tagging for COVID-19 proliferated in Asia, it has gained less ground in the West despite promising technologies being developed in places like MIT and large-scale commercial collaborations between the likes of Apple and Google.<sup>18</sup> Controversies over data privacy and distrust of large data harvesters like Facebook or the US government run rampant in American society such that political leaders reflexively avoid the topic. When the White House first met with high-tech company leaders to help with the COVID-19

response, the issue of mobile app tracking technologies reportedly never came up.<sup>19</sup> The reason, as MIT professor Yasheng Huang has observed, is “[a] fundamental conflict between these [surveillance] requirements and deeply entrenched Western liberal values, such as the expectation of privacy, consent, and the sanctity of individual rights.”<sup>20</sup>

Similar views prevail in Europe where previous attempts to track influenza using smartphone apps like Fluphone and Influenzanet have met with little societal penetration of the technology.<sup>21</sup> Why, then, have Asian societies embraced the technology? More importantly, why has the West not fully embraced social tagging as inevitable to combat a COVID-19 emergency environment given the absence of other pathways to end the lockdown and reopen the economy?

### **Regime Type**

One possible explanation for the uneven use of social tagging apps in Asia and the West is differences in regime type. Non-democracies face fewer constraints than democracies in adopting this technology in terms of civil liberties, legislation, and norms of privacy; authoritarian regimes don’t fret over class action lawsuits filed against them for digital surveillance.

However, regime type does not explain everything, as some US leaders would have citizens believe. When asked on April 2, 2020 why the United States would not adopt the phone app tracking systems used so effectively by South Korea, Administrator for Medicare and Medicaid Services Seema Verma argued that Korea was not a “free country” like the United States.<sup>22</sup> Her explanation might make sense for China, which used draconian lockdowns of entire cities and instituted the dystopian Alipay Health Code that classifies each citizen with a red, yellow, or green QR code designation, but it makes no sense in democratic South Korea.

Aggregate global data of COVID-19 cases show that regime type does not select for performance in terms of pandemic response. That is, those countries that best contained the virus were not weighted toward authoritarianism, and those that performed poorly were not weighted toward democracies. In fact, two of most successful cases of virus containment using digital social tagging have been two of Asia’s most vibrant democracies—Taiwan and South Korea.

In the former case, mass student “sunflower protests” against the ruling party’s policies in 2014 and direct presidential elections in a two-party democracy resulted in the country’s first female president, Tsai Ing-wen, in 2016.<sup>23</sup> South Korea saw one of the most bloodless transitions to democracy in 1987.<sup>24</sup> It too has direct presidential elections, and in 2017, the world witnessed a historic impeachment of a democratically elected, but corrupt, president, and an orderly constitutional

process to elect a new president to replace her. These cases demonstrate that democracies can choose to incorporate these technologies.

### Cultural Differences

Another misguided argument about the varied responses focuses on cultural differences between Asia and the West. The examples above dispense with the vapid arguments that Asians are somehow more submissive to authority than democratic Westerners. The cultural differences stance instead assumes that there is a collectivist Confucian mindset internalized among Asian societies and makes them more amenable to social tagging practices than does the rugged individualism of Americans. In Europe, moreover, a deep history of struggle against fascism and communism in the twentieth century manifests an innate suspicion of Big Brother technologies and a passionate attachment to individual freedom and privacy.<sup>25</sup>

There are two problems with this argument. First, without detouring into philosophical debates, Confucianism values hierarchy and order no more than it values individual moral agency and conscience in the face of authority, contrary to popularized Singaporean “Asian values” arguments.<sup>26</sup> Just as Western societies value a degree of civil order such that individuals can enjoy their freedom proscribed under the law, Confucianism does not see a conflict between civil liberties and hierarchy. In both societies, it is the balance between order and freedom that matters.<sup>27</sup>

**T**here are two problems with the collectivist Confucian mindset argument.

Second, digital social tagging as we have seen in places like Hong Kong, South Korea, and Taiwan is far more pervasive in the West than many realize. Israel, for example, used cellphone data to track positive cases of COVID-19 after Prime Minister Netanyahu gave the internal security agency the authority to use cellphone location data it had been collecting since 2002 from Israeli carriers. Public health authorities can track positive cases and send self-quarantine push notifications reminders.<sup>28</sup> In France, where there is “a sensitivity to freedom that is inherent in French culture,” the government continues to experiment with a French app StopCovid, which is modeled on Singapore’s TraceTogether, using Bluetooth technology to maintain a record of the user’s contacts on the phone in case of the need for contact tracing.<sup>29</sup> In April 2020, the Australian government launched a cellphone app called COVIDSafe, a digital tracker, amid the anticipated ambivalence of its freedom-loving citizens. Social tagging does not work effectively if a critical mass of the population does not download it, and so Canberra hoped to convince one million citizens to try the app in the week

following the initial launch. Within three days, three million Australians signed up.<sup>30</sup> Empirically, digital social tagging is not just an Asian thing.

### **Pandemic Context**

There are two factors that best explain why Asian societies embrace digital social tagging more than the West. The first relates to the cognitive lenses through which Asian and Western governments and societies view the COVID-19 pandemic. For Asia, the pandemic was framed in the context of the 2003 Severe Acute Respiratory Syndrome (SARS) and the 2015 Middle East Respiratory Syndrome (MERS) outbreaks. Both were coronaviruses that caught populations in Asia unawares. The hardship, panic, and mistakes associated with these experiences had the effect of sensitizing governments and publics to health emergency

**F**or Asia, the pandemic was framed in the context of the 2003 SARS and 2015 MERS outbreaks.

planning, including streamlined regulatory processes, public health emergency command and control procedures (e.g., Taiwan's National Health Command Center and Central Epidemic Command Center), and changes in domestic legislation regarding privacy and use of data in a way that was completely absent in the West.<sup>31</sup>

South Korea's willingness to adopt digital social tagging apps for the COVID-19 pandemic stemmed directly from lessons learned during the 2015 MERS outbreak. The

country suffered the largest number of cases (186 cases and 38 deaths) outside of Saudi Arabia, and the government response was not just seen as slow, but the sparsity of test kits, absence of isolation wards, and the inability to contact trace worsened the situation unnecessarily.<sup>32</sup> A 68 year-old businessman who returned from the region went undiagnosed for several days while visiting four separate health facilities, making him one of five superspreaders that accounted for 83 percent of transmission.<sup>33</sup>

After this experience, South Korea passed the Infectious Disease Control and Prevention Act in 2015 that required the government to disseminate all relevant information during a public health emergency on virus spread—permitting health officials to use proactive tracing technology to locate contagious individuals. This tracing included the use of personal data such as GPS data from smartphones, credit cards, and CCTV footage.<sup>34</sup>

In the cases of Hong Kong, Singapore, and Taiwan, the SARS epidemic in 2003–04 engendered a level of public awareness that had been absent in the United States until COVID-19. Hong Kong suffered 1,755 cases and 399

deaths; Taiwan saw 346 cases and 73 deaths; and Singapore saw 238 and 33. More important than the statistics, as Coffee Ngai, a worker in Amnesty International's regional field office in Hong Kong, wrote in a testimonial, general publics were frightened by a new strain of highly contagious pneumonia tearing through their societies amid the ineptitude of government notifications and insufficient information.<sup>35</sup>

In Hong Kong, for example, the public felt terrorized as they watched the first major cluster of this unknown virus emerge at a local hospital, infecting doctors and patients and then spreading by the hundreds to housing communities.<sup>36</sup> Hospitals were not set up for isolation wards—given the contagious nature of the disease, they ran out of PPE and started to set up pop-up tents in parking lots to deal with patient overflows, not unlike the scene in COVID-19 hot zones in New York and Washington, DC earlier this year.<sup>37</sup> Hong Kong ER doctors reported that their staff members were scared as nearly half of SARS cases were frontline healthcare workers.<sup>38</sup> Augmenting the fear was the atypical nature of the pneumonia strain, the absence of antiviral agents, and a sense that no one knew what to do.

By contrast, the United States saw only 27 SARS cases and 2 MERS cases in the entire country. It barely registered a blip on the national consciousness. Similarly, the Ebola outbreak in West Africa in 2014 did nothing further to move the needle with only eleven cases nationally. Thus, precautionary public health measures put in place after SARS—that remained alien to most Westerners—became internalized in Asian communities as the “new normal” including ubiquitous hand sanitizer dispensers in public spaces, fever monitors at office buildings and airports, anti-viral tape on elevator buttons, latex gloves, and of course, a plethora of face masks.

In addition to these mitigation tools, Asia emerged from SARS socialized with the expectation that both the public and the government must do much better in the next crisis with the distribution of data and information. As infectious disease specialists reported, SARS awakened Singapore and Hong Kong in particular to wanting efficacies in epidemiological surveillance, quarantine monitoring, and contact tracing.<sup>39</sup> Thus, though all of these measures might seem weird or compulsive in the West, they were seen as purposeful preparation to stop the next super-spreader event in Asia. They made people feel safe and therefore not as panicked when the next coronavirus came along.

### **Socialization of the Public Good**

This experience leads to the second legitimate explanation for Asia's embrace of digital social tagging. It's a fallacy to say that Asian societies were no less cautious about embracing Big Brother technologies than the West—civil liberties groups

**Asian societies shifted to treat these technologies as a public good, which takes on four different forms.**

and human rights commissions questioned the appropriateness of these measures and continue to demand, at a minimum, the anonymization of data.<sup>40</sup> But in the end, Asian societies shifted in the direction of treating these technologies as contributing to a *public good* that is well worth the temporary and necessary incursions of privacy.

This public good takes on four different forms. The first is *transparency*. Digital social tagging is part of an overall shift in public health disaster preparation—from previously inept information dissemination during SARS and MERS to real-time, transparent, and granular information delivered directly to the citizen. Asian societies have been socialized

to expect this level of transparency and have normalized the delivery of detailed information about the location of the infected and the routes they may have taken, without revealing personal identity.

The second type of public good is *confidence*. Once communities can download this volume and specificity of information in real time, they feel more confident in the government and in themselves to manage through the pandemic. More is known than unknown, which reduces feelings of despair. In a crisis when there is no information coming from the government, it seems a sense of helplessness drives consumers to do the only thing they can control—hoard materials. One manifestation of this public good in Asia was that they didn't see the hoarding of cleaning supplies and toilet paper in Asia like in the United States during COVID-19.

The third type of public good is *autonomy*. Social tagging is undeniably tough on the infected as it attaches a stigma, driving the rest of society away from them. But presumably, this sort of tagging gives all of society a sense of control over the ability to be safe. Digital location means that you can control your environment by knowing what routes have seen potential recent COVID-19 contamination. One can know in real time whether there is a super-spreader event emerging. Digital contact tracing allows both the infected and non-infected to produce an accurate record of two weeks' worth of interactions for public health authorities to investigate and to care for. People feel safe; they feel like they can protect their children and the elderly family members; and they feel like they are in control of their surroundings when they step outside of the home.

The final public good relates to *civic cooperation*. Rather than rejecting these technologies as invasions of privacy, Asian communities have come to accept them as part of a social contract between the state and society in times of crisis. That is, in a public health emergency, it is the government's responsibility to

provide the best information possible as quickly as possible to the public through smartphone apps, push notifications, public service announcements, etc. Society gains confidence, and civic trust emerges in the information they are given. Then it becomes the people's civic obligation to cooperate to reduce the spread of the virus based on the information. Westerners might frame state and society in antagonistic terms on this issue, but one epidemiologist in South Korea distilled the concept of civic responsibility practiced in Asia: "Everybody's freedom is affected. We have to ask ourselves if one person's privacy is more important than the lives of a family or other people."<sup>41</sup>

In the end, though, in a public health crisis like COVID-19, most people want more and accurate information from their government, not less. Notwithstanding some protests against stay-at-home orders in Michigan and other states in the United States, most people would prefer to be safe with their families rather than exposed to sickness. In Asia, the containment of the virus has led to widespread support of those in charge and confidence in digital tracing. In Taiwan, 80 percent of the public support the methods used by the CECC for handling the pandemic and the president enjoys a 70 percent approval rating for it.<sup>42</sup> In South Korea, the Corona100m app was downloaded more than a million times in the two weeks after its launch in February, and surveys find the majority support the sharing of personal data in a public emergency.<sup>43</sup> In Australia, the COVIDSafe app was tentatively rolled out by health authorities, and the public downloaded it one million times in the first day.<sup>44</sup> The information conveyed through these apps are seen as a responsibility of the government to gain the civic trust of society rather than as an incursion of privacy.

### **The Least Bad Alternative?**

The United States bungled several aspects of its early pandemic response. President Trump initially believed that suspending travel from China and from Europe would be enough to stop the virus from entering the United States, which was deadly wrong. Test kits produced by the CDC failed initially, wasting valuable time. And in a perfect storm, the FDA did not expedite its regulatory approval process, leading to even further delays. But America's next steps could flip the narrative, with positive implications for the infection and survival rates of its citizens. It's never too late to learn from some best practices found in Asia.

Perhaps the most important benefit of Asia's embrace of social tagging is that society has been able to open up, at least partially, and create some semblance of

**It's never too late to flip the narrative and learn from some best practices found in Asia.**

normalcy in business and in life. Many cities in Asia are not locked down like in the United States. Tourist attractions are not barren in Asia as they are in Europe. Asians are going about their daily lives, riding public transportation, hitting Starbucks, going to work, having picnics, and even voting in national elections. As restrictions on gatherings get relaxed, Asian cities appear equipped to manage both the recovery and the possible setbacks that might occur (as recent cluster outbreaks in Singapore, Tokyo, and Hong Kong might suggest). Citizens in the United States, however, are only starting to emerge from a twelve-week lockdown in early May and are desperate for ways to arrest the country's economic freefall.

In the best of circumstances, the United States would have started its pandemic response earlier in the crisis, but it didn't. Once infection rates stabilize, the key challenge all states are confronting is the economic pressure to reopen without sparking another health crisis. A pre-requisite to even a partial re-start of the economy is universal testing and a comprehensive national contact-tracing regime to determine where clusters of outbreaks may emerge. However, Trump has said that all 325 million Americans would not be tested.<sup>45</sup> And a vaccine will take at least one year to eighteen months from January 2020 for clinical trials before it could be brought to market.<sup>46</sup> What we are left with is partial testing and, most importantly, contact-tracing and social distancing as the only ways to contain the spread of the virus.

One way to contact-trace is to enlist and train an army of technicians to map out the web of interactions for each infected individual. This solution, being pursued in states like Massachusetts, could be a great jobs program for the graduating class of 2020, who will be entering the worst job market in decades. However, human contact tracing takes time when speed is of the essence (all of the contacts for a positive case must be reached within 48 hours), and a patient's memory is fallible, leaving holes in the effort.<sup>47</sup>

A more feasible idea, however, is for national, state, and city authorities to follow Asia's lead in leveraging the one piece of technology that almost every citizen possesses: a cell phone. Autocracies may use such digital tracing apps as a form of Big Brother surveillance, but Asia has shown that this is not the only path. Non-autocratic societies like South Korea, Hong Kong, Singapore, and Taiwan have demonstrated how safeguards can be implemented in these technologies to protect individual privacy such that countries like France, Australia, New Zealand, and the UK are now experimenting with the technology.<sup>48</sup> Availing themselves of social tagging technology may not be the easiest option for the United States and the West, but it may be the least bad choice at the moment.

## Notes

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