

Not Tracking: The Antipolitics of Contact-Tracing Applications

PAULA KIFT

The COVID-19 pandemic has brought the destructive forces of Anglo-American hypercapitalism to the fore: the progressive dismantling of public health care and social security has directly contributed to the destruction of livelihoods and to hundreds of thousands of avoidable deaths. The neoliberal wave of deregulation and privatization that swept across the US and UK in the late 1970s, and continues to wash over us today, has hollowed out the foundation of the global socioeconomic and ecological order. Historic levels of inequality, systemic racism, and the acceleration of job losses caused by automation further contribute to the impression that the system has reached a breaking point.

The collapse of the social-welfare state is a systemic problem that demands a political solution. But with the arrival of the COVID-19 crisis, a widespread temptation was to turn to technology instead. Contact-tracing applications in particular were proposed in the hope that, if we tracked the trail of the virus, we could also contain the spread of the disease. More specifically, only if “we”—the individual consumers—purchased the newest devices, followed the protocol preordained by private corporations, and made ourselves legible to the state, would “we”—as a society—be able to survive.

But such an approach shifts the responsibility for protecting public health away from the government to the individual user. It also fails to protect those who, by virtue of their profession or socioeconomic background, cannot avoid exposure. The poor are doubly suspect in this scheme: less likely to be able to participate in contact tracing, they are at the same time more likely to contract the disease; thus invisibility is increasingly associated with irresponsibility.

The success of contact-tracing applications is premised on the presence of social conditions that the delegation of public-sector responsibilities to the private sector, however, can preclude. Technology in this case not only has politics. It prevents politics. By propping up a system that is otherwise prone to collapse, it preempts social change. Structural problems cannot be solved with app-based solutions. Before ask-

ing how to return to normal, we should be asking ourselves what definition of normal is worth returning to.

.

Contact tracing has a long history in the management of infectious diseases. If implemented early, it can contribute to interrupting chains of transmission by identifying and isolating individuals who have been in the proximity of infected persons. The success of contact tracing depends on individuals knowing that they have been in contact with an infected individual, getting tested, isolating themselves in case of a positive result, and notifying anybody else with whom they themselves have been in contact while infectious.

In the early days of the COVID-19 pandemic, governments around the world responded with lockdowns to contain the spread of the disease. But as the social and economic cost of these measures became increasingly apparent, officials were desperate to find alternative approaches that would enable them to balance the reopening of the economy with keeping case numbers at bay. App-based contact tracing seemed like an attractive solution. Rather than relying on infected individuals themselves to retrace their steps over the period of time in which they were able to transmit the disease, contact-tracing applications promised to automatically detect when two users were close enough to transmit the virus and send notifications to potentially infected users in real time. Instead of having to impose lockdowns on entire populations, governments could with the help of contact-tracing applications isolate only those individuals who were directly exposed to the virus.

When it became apparent that states might seek to use app-based contact tracing as an alternative or, more often, as a complement to social-distancing and quarantine measures, civil society organizations, advocacy groups, and academics rushed to devise principles for the applications' design and deployment. One question turned on whether the applications would take a centralized or a decentralized approach. Under the centralized model, Bluetooth matches are made on a remote server. Under the decentralized model, by contrast, Bluetooth matches are made on the phones themselves. Centralized solutions can afford government and health authorities greater control over contact-tracing regimes, but also risk infringing on the rights to privacy, autonomy, and informational self-determination of the participating individual. Decentralized solutions, by contrast, give users greater control over their data, but also limit the ability of officials to launch targeted public-health interventions (Criddle and Kelion 2020).

A further question turned on whether contact-tracing applications would use location-based (GPS) or Bluetooth technology. When based on GPS technology,

contact-tracing applications generate a detailed record of a user's movements over time. This can enable governments to trace the development of an outbreak and identify hot spots. However, GPS-based contact tracing lacks precision, drains batteries, and raises significant privacy concerns. App-based contact-tracing applications now more commonly rely on Bluetooth instead. A popular protocol developed by Apple and Google leverages low-energy wireless transmissions to capture the length and level of proximity of two smartphones on which the application has been activated. A set of randomly generated ID numbers are logged to keep track of the interaction and enable phones to broadcast notifications to users who may have been exposed without revealing the identity of the infected individual (Nield 2020).

Beyond the architecture of contact-tracing applications, the concerns of researchers include that app-based contact tracing should meet basic data-protection requirements, such as necessity, proportionality, purpose limitation, and restrictions on retention (Amnesty International 2020). Others tried to take into account social and ethical factors as well, such as reliability, accessibility, and inclusivity (Morley et al. 2020). The overarching issue was whether contact-tracing applications could achieve their purpose in a way that preserved privacy and civil liberties.

• • • • •

What was less commonly questioned, at least initially, was whether contact-tracing applications could achieve their purpose at all. If the goal of contact-tracing applications is to interrupt chains of transmission by identifying and isolating those individuals most at risk of exposure, several conditions need to be met. First, a large enough proportion of the population needs to be willing to download the application. A widely referenced study from the University of Oxford posited that if around 80 percent of all smartphone users and about 60 percent of the overall population participated in app-based contact tracing, then “the epidemic can be suppressed” (Hinch et al. 2020: 3). Second, those who are willing to download the application also need to be able to use it. Note that not only does a potential user need to own a smartphone but also that the smartphone needs to run an operating system that is compatible with the app. Finally, those who are willing and able to download and use the application need to be able to act on any notification that they might receive. This depends on at least some users developing symptoms, the ability of those users to get tested, and, in case their test for the presence of the pathogen comes back positive, their willingness to submit their health status back to the application. Users also need to be willing and able to isolate themselves and seek medical assistance.

Needless to say, these imagined users do not cover the class of all potential users. More egregiously, they exclude those most at risk of bearing the brunt of the disease. First, app-based contact tracing is most effective in densely populated environments. The model of the aforementioned study, for instance, assumes an urban population of 1 million individuals. Rural residents are not considered, presumably because chance encounters in remote areas are harder to come by. At the same time, rural residents face significantly greater obstacles to accessing medical care (Miller et al. 2020). Furthermore, the requirement to own a smartphone excludes most children and the elderly. While children tend to be less likely to develop symptoms, their role in transmitting the virus remains fundamentally unclear. Uncertainties around school openings also place an outsize strain on families and the economy as a whole. The elderly, of course, are known to be among the most vulnerable. Contact-tracing applications might reduce the number of infected individuals visiting nursing homes, for instance. But once an outbreak in a nursing home occurs, contact-tracing applications contribute nothing to containing it. Finally, the fact that some of the most common contact-tracing applications only work on the newest smartphones adds a socioeconomic limitation, as not everyone will be able to afford the technology necessary to participate in the contact-tracing regime (Reader 2020). Given these limitations, it is unlikely that enough users would be willing and able to use the technology for app-based contact tracing to work in practice. The technology fails, even by the standards of the technology.

Some might argue that, even if contact-tracing applications cannot suppress the pandemic, they can still have a protective effect as “every successful notification means a life potentially saved” (O’Neill 2020). But this assumes that those willing and able to participate in app-based contact-tracing regimes are also able to follow through on any notification that they might receive. This implies the ability to notify the relevant health authorities and get tested. But the pandemic quickly demonstrated that countries with overburdened health systems not only suffered from shortages and delays in testing, but tests were also unevenly distributed among the population. In the United States, racial and ethnic minorities were disproportionately affected by the coronavirus outbreak. Bias in the administration of medical treatment meant that they were at the same time significantly less likely to receive the necessary care (Eligon and Burch 2020).

If users of contact-tracing applications test positive for COVID-19, they also need to be able to isolate themselves. The aforementioned study assumes that users can simply remain in quarantine as needed. However, this requires governments and private companies to create the conditions in which infected persons can stay safely at home. Those at the bottom of the socioeconomic ladder often cannot afford to

miss work lest they risk losing their livelihoods and, in the United States at least, their health insurance, too. They often also work jobs in which they cannot avoid exposure.

In summary, contact-tracing applications are more likely to be accessible to those who live in densely populated environments and can afford the newest smartphones. They are more likely to achieve their intended effects among those who can get tested, who do not fear negative repercussions from reporting their test results back to the application, and who can afford to stay at home should they test positive for the presence of the virus. By contrast, they are less likely to interrupt chains of transmission among poor people who do not have the luxury of retreating to the privacy of their homes, essential workers who are not in a position to avoid exposure, blue-collar workers who cannot afford to miss work to protect themselves, and children and the elderly, who are less likely to own a smartphone and move around independently in urban spaces. In other words, contact-tracing applications are least likely to be useful to those who are most likely to suffer the pandemic's worst effects.

.

If those most likely to suffer the worst consequences of COVID-19 are also the least likely to benefit from contact-tracing applications in practice, the question arises: Who does? Here we need to turn our attention to those who develop and deploy contact-tracing applications, namely technology companies, on the one hand, and governments, on the other. Technology companies benefit because public-health interventions are made to depend on privately owned devices. For instance, the exposure-notification system developed by Google and Apple, which lays the groundwork for some of the most widely used contact-tracing applications, depends on people owning and using the newest smartphones, as these are the only ones able to run the operating systems necessary for contact-tracing applications to work (Bradshaw 2020). Younger and wealthier users are again at an advantage. Of course, this also happens to be one of the most attractive customer demographics.

Governments benefit because app-based contact tracing allows them to focus public attention on treating the symptoms of the pandemic rather than addressing its cause. Contact-tracing applications shift responsibility away from governments that enabled the local outbreak of a virus to turn into a global pandemic to the individual user struggling to contain its worst effects. In so doing, contact-tracing applications change the definition of failure (Appadurai and Alexander 2020). If case numbers go back up, this is not because people are forced to go back to work to maintain their income, because it is impossible for blue-collar workers to follow

guidelines for social distancing, because of cramped conditions on the shop floor, or because a sustained economic downturn reflects poorly on the presidents of companies and countries alike, but because not enough users downloaded the application, enabled the Bluetooth tracking functionality, submitted their health status back to the application, and so on. Changing the frame also changes the liability. Rather than faulting the government and corporations for forcing individuals to work in unsafe conditions, governments and corporations can fault the individuals for failing to take the steps necessary to protect themselves.

To be clear, governments cannot be faulted for the mutation of a virus. What they can be faulted for, however, is failing to prepare for scenarios in which the mutation of a virus gets out of hand (Butler 2020). When pandemics will happen is unpredictable. That they will happen is not (*Economist* 2020). Contact-tracing applications can make a meaningful contribution to containing the virus for some. They are geared toward enabling some of us to return to the office, meet our colleagues for lunch, go shopping, travel for business, and fly out on vacation, as if there were no pandemic. When we do so, though, we also risk jeopardizing the health of many others who have no choice but to work the gas stations, coffee shops, restaurants, retail shops, hotels, and airplanes just to get by. And for the vast majority of people, “just about getting by” is also the “normal” to which we would be returning. By encouraging individuals to maximize their personal preferences rather than the collective health of the community, contact-tracing applications reinforce rather than resolve existing inequalities. Connectivity does not translate to sociality. The biggest risk associated with contact-tracing applications, then, becomes whether, in helping us return to normal, they also encourage us to maintain, or even deepen, this status quo.

.

The COVID-19 pandemic forces us to think about ways in which we could do things differently. It changes the horizon of the possible. Contact-tracing applications are one attempt of governments to leverage a technological solution to balance the protection of public health with the reopening of the economy. But the success of contact-tracing applications is built on the foundation of a functioning social welfare state that runaway capitalism has worked hard at eroding. Contact-tracing applications act as a stopgap measure to uphold a political fiction.

But contact-tracing applications not only do not solve the problem they are asked to solve. They are also solving the wrong problem. Contact-tracing applications are blunt instruments of policy intervention. They are indiscriminate in that they do not distinguish between the likelihood of a person contracting the virus

and the likelihood of that person developing symptoms that translate to a disease (Canguilhem 1991). Part of the challenge is distinguishing those who are most at risk of developing severe symptoms from those who are less so, as the workings of the novel coronavirus are not yet fully understood. Based on the evidence available, however, we are already in a position to make some reasonable assumptions, namely that the severity of the symptoms correlates strongly with age, race, the presence of preconditions, and socioeconomic status. Those who are least likely to develop the most severe symptoms are at the same time most likely to receive and be able to afford the medical treatment they need if they do. Equality in theory does not translate into equality in effect when applied to historically unequal populations. The same applies to contact-tracing applications. They fail to protect the most vulnerable among us by design.

Protecting the most vulnerable among us does not mean downloading an application. It means providing frontline workers such as medical personnel, supermarket cashiers, bus drivers, shopkeepers, caterers, and others with the personal protective equipment they need to do their jobs safely. It means providing paid sick leave to those who fall ill, and access to affordable childcare to those whose children can no longer go to school. It means making safe spaces available for victims of domestic abuse who can no longer escape the confines of their homes (Taub 2020). Factory owners need to create safe working conditions on the shop floor, which includes ensuring workers can reasonably meet their production targets while also maintaining the ability to adhere to social-distancing guidelines (Pollan 2020). Retirement homes need to devise careful strategies for how to administer care and, to avoid isolation, welcome visitors, without unduly putting their residents at risk. Churches and other religious institutions need to facilitate ways in which their congregants can practice their faith remotely. These are challenges for society, not technology, to solve.

• • • • •

Some might object that the measures being proposed here are too expensive and will fail to attract broad-based support, particularly in an already polarized political environment. But the human and financial costs associated with refusing to take these measures are even greater. Lawmakers in the United States in particular have already spent trillions of dollars on a relief package aimed at keeping workers and businesses afloat (Tankersley and Cochrane 2020), and that was only one month into a crisis that was sure to last at least until the end of the year, and whose economic effects will likely be felt for long after. At the same time, more and more jobs will be lost to automation, as companies' efforts to minimize human contact in the

short term may have serious consequences for the availability of jobs in many sectors in the long term (Chandler 2020), further unraveling the social fabric on which the stability of our political and economic system depends. We might find that rein-ing in runaway capitalism is not only the basis for the prosperity of the American working class but a prerequisite for the continuation of the American project as a whole (Deaton and Case 2020).

We have been here before. In the course of the Industrial Revolution in Germany, masses of people flocked from the countryside to the industrial centers to work long hours in factories, mines, and textile mills, at poverty wages and with minimal protections. A severe economic depression in the late 1840s further aggravated already dismal conditions, and in 1848 widespread popular discontent turned into a full-blown political revolution. While the revolution was ultimately unsuccessful, it forced the ruling class to reconsider the “social question” with urgency. On the heels of yet another economic crisis, in the 1870s, that further threatened the stability of the prevailing political system, then chancellor Otto von Bismarck decided to introduce a series of social reforms including health insurance, accident insurance, and old-age and disability insurance designed to take the wind out of the sails of socialist revolutionary movements (Stolleis 2013). It bears mentioning that these policies were at the time fiercely opposed by representatives of the property-owning class. However, in staving off revolutionary tendencies by incorporating left-wing reforms into the prevailing political system, they ultimately benefited capitalism because they prevented the system from destroying itself (Gough 1979).

Similar measures were passed in more recent history on the other side of the Atlantic, too. On July 30, 1965, President Lyndon B. Johnson signed the Social Security Act Amendments into law, which, among other programs, established Medicare and Medicaid. Johnson recognized the relationship between race and class. In his State of the Union address one year prior, he had lamented that “many Americans live on the outskirts of hope—some because of their poverty, and some because of their color, and all too many because of both” (Johnson 1964). Among his landmark pieces of legislation were the Civil Rights and Voting Rights Acts. Of course, Johnson, a Democrat, was also notoriously racist (Serwer 2014). But he passed these wide-ranging reforms because the civil rights movement of the 1960s forced him to grapple with the structural aspects of racial inequality (Taylor 2020). President Richard Nixon, Johnson’s Republican successor, initially continued down the path of social welfare reform, with his Family Assistance Plan, which would have provided poor families in the United States with a minimum guaranteed income. Among the politicians who provided the research to support this plan were Donald Rumsfeld and Dick Cheney (Heller 2018). The Family Assistance Plan ultimately died in the

Senate, due to opposition from Republicans and Democrats alike (Prideaux, Howard, and Fasman 2020). And endorsement by both Republicans and Democrats of the moral construction of poverty (Bridges 2017), which distinguishes between the “deserving” and “undeserving” poor (Steensland 2017: 120), ultimately unraveled some of the promising progress that had initially been made.

The provision of social welfare is thus not a partisan issue, or at least has not historically been. Republicans and Democrats have found themselves on either side of this debate. As millions of Americans again find themselves deprived of their basic means of subsistence through no fault of their own, while at the same witnessing, and participating in, one of the largest protest movements against systemic racism in the history of the United States (Buchanan, Bui, and Patel 2020), lawmakers today not only have an opportunity but also an obligation to demonstrate how social and economic objectives can be reconciled (Henderson 2020).

.

We came to discuss contact-tracing applications and ended up talking about social welfare states. But this conclusion should not surprise us. To return to the initial argument: there are limits to what technological solutions can achieve in terms of addressing complex social problems (Eubanks 2017). Technology is always already embedded in a context that comes with constraints, not all of which can be addressed with technology alone (Nissenbaum 2009). Contact-tracing applications can contribute to containing the spread of the virus, but only to the extent that users of contact-tracing applications have access to health care, childcare, labor protections, and equality before the law. The biggest risk of contact-tracing applications is that, in treating the symptoms of the disease rather than addressing its cause, they distract from more systemic failures in our social and political system. What all of us want is to be able to live a meaningful and dignified existence. For better or worse, there is no app for that.

Paula Kift is the EU data protection lead at Palantir Technologies. Prior to joining Palantir, she was a doctoral student in the Department of Media, Culture, and Communication at New York University. The focus of her work and research is on the legal and ethical dimensions of technological change.

References

Amnesty International. 2020. “Joint Civil Society Statement: States Use of Digital Surveillance Technologies to Fight Pandemic Must Respect Human Rights.” April 2. www.amnesty.org/download/Documents/POL3020812020ENGLISH.pdf.

Appadurai, Arjun, and Neta Alexander. 2020. *Failure*. New York: Polity Books.

- Bradshaw, Tim. 2020. "2bn Phones Cannot Use Google and Apple Contact-Tracing Tech." *Financial Times*, April 20. www.ft.com/content/271c7739-af14-4e77-a2a1-0842cf61a90f.
- Bridges, Khiera. 2017. *The Poverty of Privacy Rights*. Stanford, CA: Stanford Law Books.
- Buchanan, Larry, Quoc Trung Bui, and Jugal K. Patel. 2020. "Black Lives Matter May Be the Largest Movement in U.S. History." *New York Times*, July 3. www.nytimes.com/interactive/2020/07/03/us/george-floyd-protests-crowd-size.html.
- Butler, James. 2020. "Follow the Science." *London Review of Books*, April 16. www.lrb.co.uk/the-paper/v42/n08/james-butler/follow-the-science.
- Canguilhem, Georges. 1991. *The Normal and the Pathological*, translated by Carolyn R. Fawcett, in collaboration with Robert S. Cohen. New York: Zone Books.
- Chandler, Simon. 2020. "Coronavirus Is Forcing Companies to Speed Up Automation, for Better and for Worse." *Forbes*, May 12. www.forbes.com/sites/simonchandler/2020/05/12/coronavirus-is-forcing-companies-to-speed-up-automation-for-better-and-for-worse/.
- Criddle, Cristina, and Leo Kelion. 2020. "Coronavirus Contact-Tracing: World Split between Two Types of App." BBC, May 7. www.bbc.co.uk/news/technology-52355028.
- Deaton, Angus, and Anne Case. 2020. *Deaths of Despair and the Future of Capitalism*. Princeton, NJ: Princeton University Press.
- Economist*. 2020. "Pandemic-Proofing the Planet." June 25. www.economist.com/science-and-technology/2020/06/25/pandemic-proofing-the-planet.
- Eligon, John, and Audra D. S. Burch. 2020. "Questions of Bias in Covid-19 Treatment Add to the Mourning for Black Families." *New York Times*, May 10. www.nytimes.com/2020/05/10/us/coronavirus-african-americans-bias.html.
- Eubanks, Virginia. 2017. *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor*. New York: St. Martin's Press.
- Gough, Ian. 1979. *The Political Economy of the Welfare State*. London: Palgrave Macmillan.
- Heller, Nathan. 2018. "Who Really Stands to Win from Universal Basic Income?" *New Yorker*, July 2. www.newyorker.com/magazine/2018/07/09/who-really-stands-to-win-from-universal-basic-income.
- Henderson, Rebecca. 2020. *Reimagining Capitalism in a World on Fire*. New York: Public Affairs.
- Hinch, Robert et al. 2020. "Effective Configurations of a Digital Contact Tracing App: A Report to NHSX." University of Oxford, April 16. 045.medsci.ox.ac.uk/files/files/report-effective-app-configurations.pdf.
- Johnson, Lyndon Baines. 1964. "Annual Message to the Congress on the State of the Union, January 8, 1964." LBJ Presidential Library. www.lbjlibrary.net/collections/selected-speeches/november-1963-1964/01-08-1964.html.
- Miller, Ian F., Alexander D. Becker, Bryan T. Grenfell, and C. Jessica E. Metcalf. 2020. "Disease and Healthcare Burden of COVID-19 in the United States." *Nature Medicine* 26, no. 8: 1212–17.
- Morley, Jessica, Josh Cowls, Mariarosaria Taddeo, and Luciano Floridi. 2020. "Ethical Guidelines for COVID-19 Tracing Apps." *Nature* 582, no. 7810: 29–31.
- Nield, David. 2020. "How Covid-19 Contact Tracing Works on Your Phone." *Wired*, July 6. www.wired.com/story/covid-19-contact-tracing-apple-google/.
- Nissenbaum, Helen. 2009. *Privacy in Context: Technology, Policy, and the Integrity of Social Life*. Stanford, CA: Stanford University Press.
- O'Neill, Patrick Howell. 2020. "No, Coronavirus Apps Don't Need 60% Adoption to Be Effective." *MIT Policy Review*, June 5. www.technologyreview.com/2020/06/05/1002775/covid-apps-effective-at-less-than-60-percent-download/.
- Pollan, Michael. 2020. "The Sickness in Our Food Supply." *New York Review of Books*, June 11. www.nybooks.com/articles/2020/06/11/covid-19-sickness-food-supply/.
- Prideaux, John, Charlotte Howard, and Jon Fasman. 2020. "Poor Choices—Will Covid-19 Change the Politics

- of Poverty in America?" *Checks and Balances*, July 10, podcast, MP3 audio, 37:00. www.economist.com/podcasts/2020/07/10/poor-choices-will-covid-19-change-the-politics-of-poverty-in-america.
- Reader, Ruth. 2020. "Apple and Google's Contact Tracing Apps Only Work on New Phones. That's a Problem." *Fast Company*, August 24. www.fastcompany.com/90542415/apple-and-googles-contact-tracing-apps-only-work-on-new-phones-thats-a-problem.
- Serwer, Adam. 2014. "Lyndon Johnson Was a Civil Rights Hero. But Also a Racist." MSNBC, April 11. www.msnbc.com/msnbc/lyndon-johnson-civil-rights-racism.
- Steensland, Brian. 2017. *The Failed Welfare Revolution: America's Struggle over Guaranteed Income Policy*. Princeton, NJ: Princeton University Press.
- Stolleis, Michael. 2013. *Origins of the German Welfare State: Social Policy in Germany to 1945*. Berlin: Springer.
- Tankersley, Jim, and Emily Cochrane. 2020. "Congress Shovels Trillions at Virus, with No Endgame in Sight." *New York Times*, April 24. www.nytimes.com/2020/04/24/business/congress-coronavirus-stimulus-bill.html.
- Taub, Amanda. 2020. "A New Covid-19 Crisis: Domestic Abuse Rises Worldwide." *New York Times*, April 20. www.nytimes.com/2020/04/06/world/coronavirus-domestic-violence.html.
- Taylor, Keeanga-Yamahtta. 2020. "How Do You Change Things?" Interview by Adam Shatz. *LRB Conversations*, June 30, podcast, MP3 audio, 57:00. www.lrb.co.uk/podcasts-and-videos/podcasts/lrb-conversations/how-do-you-change-things.