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COVID-19—Extending Surveillance and the Panopticon

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Abstract Surveillance is a core function of all public health systems. Responses to the COVID-19 pandemic have deployed traditional public health surveillance responses, such as contact tracing and quarantine, and extended these responses with the use of varied technologies, such as the use of smartphone location data, data networks, ankle bracelets, drones, and big data analysis. Applying Foucault's (1979) notion of the panopticon, with its twin focus on surveillance and self-regulation, as the preeminent form of social control in modern societies, we examine the increasing levels of surveillance enacted during this pandemic and how people have participated in, and extended, this surveillance, self-regulation, and social control through the use of digital media. Consideration is given to how such surveillance may serve public health needs and/or political interests and whether the rapid deployment of these extensive surveillance mechanisms risks normalizing these measures so that they become more acceptable and then entrenched post-COVID-19.

Keywords COVID-19 · Public health · Surveillance · Panopticon · Foucault · Smartphones · Drones

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Introduction

Much media coverage and wider social discourse have presented the COVID-19 pandemic as "unprecedented," but in some ways this is not the case. Throughout history, outbreaks of disease have ravaged humanity, producing profound, enduring effects, even occasionally leading to the collapse of civilizations. What *is* unprecedented about the COVID-19 pandemic is the different type and extent of surveillance that has been deployed in response to it. In this paper we examine various examples of this surveillance in relation to Foucault's (1979) notion of the panopticon and consider current and future implications.

Surveillance and Foucault's Panopticon

Eighteenth-century English social reformer and utilitarian philosopher Jeremy Bentham designed the panopticon, a circular or rotunda shaped prison with an inspection room in the centre so that "a functionary standing or sitting on the central point, had it in his power to commence and conclude

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a survey of the whole establishment in the twinkling of an eye" (Bentham, quoted in Steadman 2012, 4). Foucault used the underlying concept as a metaphor for the disciplinary regime that prevails in modern society, in which the key form of social control has moved from *spectacle*, which prevailed in pre-modern societies, to *surveillance* (Foucault 1979). The panopticon allows disciplinary power to be enacted through hierarchical observation, examination, and normalizing judgement (Foucault 1979). In many settings, including in medicine and public health, the regime of power is all-pervasive: the *few* watch the *many,* undertaking surveillance using "methods of fixing, dividing, recording" throughout society (Foucault 1979, 305).

As a form of social control, this ubiquitous panoptic surveillance contributes to the feeling of being under continual surveillance, and so in response to this individuals become their own agents of surveillance by complying with normative expectations and conventions without having to be actually under surveillance. People willingly participate in this surveillance. In this manner panoptic surveillance is an apparatus of discipline which makes the exercise of power more efficient and effective—it is a subtle form of coercion (Foucault 1979), and thus the power is enacted invisibly and inapparently, permeating all aspects of social life. Self-surveillance and discipline in these ways have become the primary source of social control in modern society. In relation to health we see this self-surveillance reflected and embedded in common expressions such as "taking care of yourself," "keeping an eye on your weight," "watching what you eat," "watching the speed limit," and "watching your fluid (or alcohol) intake" (Couch et al. 2016, 62).

Foucault used an earlier pandemic, the outbreak of plague, to demonstrate how modern forms of governance and surveillance arose:

> … the plague gave rise to disciplinary projects … an organization in depth of surveillance and control, an intensification and a ramification of power.… those sick of the plague were caught up in a meticulous tactical partitioning in which individual differentiations were the constricting effects of a power that multiplied, articulated and subdivided itself… (Foucault 1979, 198)

Foucault's notion of panoptic surveillance has been practically applied to various public health issues and provides a useful framework for considering surveillance responses during the COVID-19 pandemic.

Surveillance and COVID-19

Surveillance is a core function of all public health systems. In the course of the COVID-19 pandemic many standard surveillance techniques have been applied, including contact tracing (World Health Organization 2017), global seroprevalence studies (Vogel 2020), selective nasopharyngeal swabbing of cases, contacts, and the general population, and testing of blackwater for viral fragments (Mallapaty 2020).

In addition to these traditional methods, COVID-19 has seen the development of a range of novel surveillance techniques. A multitude of smart phone apps have been devised to improve symptom tracking and contact tracing. Emergency powers have been widely enacted, and police, military, and government surveillance activities to ensure people are complying with COVID-19 restrictions have been greatly extended. The following is a partial list of additional forms of surveillance recently introduced:

- *United Kingdom and United States*: COVID Symptom Study (this was initially called COVID Symptom Tracker), a symptom tracking app developed by King's College London, Massachusetts General Hospital, and Zoe Global Ltd which collected data from 2,450,569 U.K. and 168,293 U.S. individuals between March 24 and April 21, 2020 (Menni et al. 2020).
- *Australia*: BeatCOVID19Now, a symptom tracking app which collects anonymized data that can be shared with health authorities and researchers and can identify geographical clusters of COVID-19 spread (Slezak and Timms 2020; Swinburne University of Technology 2020).
- *Australasia*: FluTracking, an existing website focused on tracking flu symptoms in Australia and New Zealand, incorporating new questions to track COVID-19 (University of Newcastle, Hunter New England Population Health, and Hunter Medical Research Institute 2020).
- *Singapore:* TraceTogether, a contact tracing tool promoted as a means to "protect ourselves … our loved ones and … our community" (Government of Singapore 2020).
- *Australia*: COVIDSafe, a contact tracing app promoted as providing government with the confidence to "find and contain outbreaks quickly" to allow

easing of restrictions "while still keeping Australians safe" (Australian Government 2020).

- *Israel*: measures approved to allow the Shin Bet internal security service to access mobile phone data to retrace movements of infected individuals (ABC News 2020b).
- *Taiwan*: use of mobile phone location-tracking data to *geofence* people, erecting an "electronic fence" to notify police if people breach quarantine requirements (Lee 2020).
- *Hong Kong*: wrist bands linked with a smart phone app to ensure compliance with self-quarantine measures, notifying authorities if an individual leaves their dwelling without authorization (Saiidi 2020).
- *Australia and the United States*: ankle bracelets to be used when people fail to comply with quarantine or self-isolation requirements (Kallingal 2020; Hendry 2020).
- *China*: co-opted and repurposed industrial mapping and surveying by drones to undertake crowd management and disease detection, incorporating loudspeakers, high-definition zoom lenses, flood lights, thermal sensors, and chemical spray jets for large-area disinfectant dispersal (Liu 2020). The drones have reportedly been used to break up mah-jong games and accost people in the street, with one elderly woman advised: "Yes auntie, this drone is speaking to you. You shouldn't walk about without wearing a mask. You'd better go home, and don't forget to wash your hands" (D'Amore 2020).
- *Western Australia*: drones deployed by police in public places to ensure people practise distancing in adherence with government rules (Rimrod and McNeill 2020).
- *Italy*: drones reportedly used by police to take people's temperature without their consent (The Star 2020).
- *Globally*: in response to privacy concerns, Google and Apple released an app which decentralizes the data collected by locating contact-matching on devices themselves rather than via a centrally controlled computer server (Kelion 2020).

In addition to these responses, researchers and private sector companies have used COVID-19 to promote both existing surveillance technologies and new ones under development, such as an automated fever scanning system that operates via CCTV cameras to assess the temperatures of individuals in crowds (Daly 2020). New pandemic drones are being developed which go even further, employing a "specialised sensor and computer vision system that can monitor temperature, heart and respiratory rates, as well as detect people sneezing and coughing in crowds, offices, airports, cruise ships … and other places where groups of people may … congregate" (Gibson 2020, ¶1). Global technology companies have presented their aggregated location data as a service to help address COVID-19 issues—Google has its *Community Mobility Reports* (Google 2020) and Facebook has its *Data for Good* which publishes daily maps about population movements (Jin and McGorman 2020).

Extending the Panopticon?

The COVID-19 health emergency has produced unprecedented levels of surveillance. Acceptance of this new, enhanced disciplinary regime has been gained on the basis of appeals about the importance of health and healthcare and fears of infection and death affecting individuals and their families. The preponderance of these appeals and fears may have reduced scrutiny and questioning about both the need for an advanced, all-pervasive panopticon and its long-term implications.

The construction of the system has been stimulated by governments and supported by public health experts, and it has complemented other methods of data collection and surveillance developed in the private sector, in some cases originally for other purposes. Collectively, vast troves of data can now be accessed. While the specific details may vary across countries and cultures, we have seen extensive and remarkably uniform changes. Consistent with Foucault's (1979) description of how the plague allowed increased social control, during COVID-19 we have been witnessing a similar systematic, underlying process.

The novel regimes of surveillance can be considered to exemplify a form of "biosurveillance" that integrates aspects of public health surveillance with techniques employing the use of big data formerly reserved for the maintenance of state and national security (Lee 2019). Prior to the advent of COVID-19, concerns had been raised around the lack of transparency regarding how big data algorithms were developed and applied and how biases built into these algorithms can exacerbate racial and socioeconomic inequalities and vulnerabilities (Hacker and Petkova 2017; Gianfrancesco et al.

2018). The nature and extent of the power exercised through big data analytics, the identity of those on whose behalf such power was exercised, and to whom—if anyone—they were accountable has been the subject of scrutiny (Couldry and Powell 2014); these concerns are even more relevant now with the introduction of multiple new forms of surveillance.

One of the key issues raised about surveillance using smart phone apps has been potential breaches of "privacy," in response to which assurances about data protection and anonymity have been provided. Previous scholars have noted that the very rich data derived from location-focused surveillance can be employed to draw inferences of a deeply intrusive nature (Clarke and Wigan 2011; Michael and Clarke 2013). The potential use of such data against already vulnerable people, such as domestic violence survivors, whose abusers may access and use contact tracing app location data via physical or spyware access to their phone (WESNET 2020) may also be of great consequence, as is the danger of misuse by others, such as cybercriminals who commonly target health-related data for black market activities (Ablon et al. 2014). However, we contend that, while privacy is an important issue and concern for many, compared with the other concerns raised by these technologies, breach of privacy is a relatively minor issue. We are interested in the broader cultural questions that are at stake—of the way in which the COVID-19 epidemic is being used to introduce what may emerge as a system of social control unprecedented in scope and power.

Foucault referred to the inconspicuous and invisible "guards at the gates, at the town hall and in every quarter" that "ensure the prompt obedience of the people" (Foucault 1979, 196). We have learnt to live with "guards" in the form of the microregimes of power associated with everyday customs and ideologies and the deployment of reason, knowledge, sexuality, and many other social practices. Added to these we now have drones, wrist bands and ankle bracelets, smart phones, microchips, thermal sensors, and many other technologies to surveil our biometrics, our behaviours, and our movements. Originally installed for beneficent purposes by governments acting in plain sight, these new techniques of surveillance have been accepted actively and enthusiastically by many, although there are instances where there are concerns with uptake rates and apps have been made mandatory (Al Jazeera News 2020; ABC News 2020a) or there are government efforts through strategies and recommendations to make app use pseudo-voluntary and hence compulsory in effect (Greenleaf 2020).

There is nothing secret about the all-pervasive system of surveillance now in force. Indeed, its very conspicuousness and its dependence on the active participation of the individuals subject to it guarantees what Foucault referred to as their "own subjection" (Foucault 1979), enforced through internalized self-surveillance and self-disciplinary practices. The knowledge gleaned from the masses of data and the power flowing seamlessly from it generates conformity to prescribed norms (Pylypa 1998) and rapidly emerging habitual practices. What had once seemed alien quickly becomes incorporated into the mundane greyness of the everyday. Handwashing, the maintenance of physical distance, new ways of in-person greeting, a sense of revulsion or danger associated with personal contact, the wearing of face masks, and the protocols and good manners associated with Zoom meetings, virtual parties, and on-line professional conferences, integrated with the already well-established dependence on mobile phones and social media, are only the superficial marks of a deeper, more insidious, and thoroughgoing process of organization and control. It will only be with time that the more detailed, micro-effects on our personal affective lives, on our casual and intimate social interactions, on our senses of the self, will become more clearly apparent.

The new highly refined and perfected forms of power are stabilized, magnified, and extended through news and social media, movies, music, and other forms of popular culture, where people watch others' experiences of COVID-19 and then participate in furthering the messages by demonstrating their own compliance and encouraging others also to comply (Couch et al. 2015). The promotion of the use of contact tracing apps and the mass dissemination of—and complicity with—social media hashtags like #lockitdown, #stayathome, #covidiot, and so on through Twitter and other forms of information dissemination encourage well-governed citizens. "Inspection functions ceaselessly" with these ubiquitous, multifarious modes of surveillance and public participation in and support of it. "The gaze is alert everywhere" (Foucault 1979, 195). The *gaze* is the government; it is the private sector; it is social media; it is apps in our phones and drones in the sky; it is the stories in the news; it is our friends online. In this way, the loci of power are inexorably diffused and enabled across society.

Beyond the "State of Exception"

The massive surveillance response during the COVID-19 pandemic has occurred within a "state of exception." There has been an unusual extension of power of governments, and people's rights have been diminished or rejected in the process of claiming this extension of power (Agamben 2005). The true power, and its likely enduring effects, relate not to the obvious "states of emergency" enacted through valid and openly declared legal mechanisms. Rather, it is the deeper, more insidious transformations of our personal habits, affective responses, and day-to-day interactions that carry its true force. As with all states of exception, a risk, or indeed a likelihood, exists that the newly established structures will persist—not the laws and regulations but the social and cultural ways of living, the behaviours, and the embedded emotional and psychic responses.

The COVID-19 pandemic has strengthened and justified a shift to more intense and penetrating forms of surveillance culture. It is likely that this process will have long-reaching cultural, political, and economic impacts and will fundamentally reshape the structures of the societies which emerge and our personal affective lives. The normalization of the extended surveillance poses risks and raises questions which should become the subject of ongoing, critical dialogue.

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Compliance with ethical standards

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