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COVID-19 mobility tracking and contact tracing applications: acceleration of a political technological utopia?

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Abstract

This impact paper explores how, in the current crisis, governments around the world are using or designing mobility tracking and contact tracing applications. We examine the technological utopianism that led to the worldwide adoption of these new surveillance technologies –analysed as a panopticon without tower– in order to understand the consequences to expect after the COVID crisis. There is an urgent need to consider the political dimension of what is presented as a mere technological solution to solve the crisis.

Keywords: Techno-utopianism, Surveillance, Foucault, Quantified self

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COVID-19 apps: building a new surveillance system

Diagnosis: the current multiplication of digital systems of disease detection

With the success of several Asian countries in containing the virus, systems of digital disease detection appear as the perfect solution to face the sanitary crisis. The idea is to build smartphone-based tracing apps based on participatory surveillance. Every part of the world has its own system or is racing to build one. Official governmental tracing applications already exist in countries like Saudi Arabia, Bahrain, China, Colombia, the Czech Republic, Ghana, India, Israel, Malaysia, North Macedonia, Norway, Singapore. The United Kingdom, Ireland and France are currently designing an official application. Australia and New Zealand are considering using Singapore's protocols, and Austria and Switzerland adopting an open-source solution. Other surveillance systems already exist such as the one developed by the startup BlueDot in Canada, an outbreak risk software which spotted Coronavirus at an early stage. Google and Apple are currently designing a "decentralized" solution with a contact tracing application available for every smartphone. A new term has even been coined for these solutions, "COVID-19 apps". *"COVID-19 apps are mobile software applications designed to aid contact tracing in response to the COVID-19 pandemic, i.e. the process of identifying persons ("contacts") who may have been in contact with an infected individual."* (Wikipedia, n.d.).

The principle of participatory surveillance in contrast to that of traditional healthcare surveillance is that individuals are directly part of the system. They generate relevant information for surveillance like symptoms, mobility and contact tracking. Users self-report their symptoms, then data is sent in real time to the cloud, and algorithms track patterns so as to form groups of individuals with identical symptoms. Thanks to this information, decision makers are aware of risk areas. As some Silicon Valley's experts phrase it, participatory surveillance is, above all, a way *"to empower individuals about how to remain safe and healthy in their community"*. During the online summit on COVID-19 organized by the Singularity University - a Silicon Valley think tank, incubator and education program founded in 2009 by the futurist Ray Kurzweil, Google's director of artificial intelligence, and Peter Diamandis, chairman of the X Prize foundation - experts from the Singularity University from around the entire world joined to discuss the challenges, solutions, and future impacts of this worldwide sanitary crisis (Singularity University, 2020). Some of them, like Onicio Leal Neto, showed the importance of participatory surveillance, especially in projects carried out during the 2014 FIFA World Cup and the 2016 Olympics. Other experts like Marianna Dahan condemned China which took extreme measures *"to contain the spread with an infringement of personal liberties"*. They are calling for policies similar to the ones taken in such Asian countries as South Korea and Taiwan. These countries are presented as examples because they collected "essential information" to fight against the pandemic, with total transparency, ensuring the freedom of their citizens. This data collection is, in their eyes, essential to avoid a repeat of the EBOLA crisis, where in countries which did not implement such measures, like the Republic of Congo, it took three years to contain the epidemic.

New technologies of surveillance – A panopticon without tower

“Don’t let a good crisis go to waste”. With COVID-19, governmentality can extend its grip on society. Today, technologies of surveillance are extended to the control, the surveillance and the regulation of the entire population. *“Before the crisis, these technologies already existed but only for specific cases such as the surveillance of terrorists, or for patients suffering from HIV in countries like Taiwan or China. Today, these technologies are extended to the whole population”* (Preciado, 2020). What is more, with participatory applications, the public becomes self-involved in the surveillance structure. Comparing this sanitary situation with the plagued city of the 17th century, we can see that the two situations are extremely similar:

This enclosed, segmented space, observed at every point, in which the individuals are inserted in a fixed place, in which the slightest movements are supervised, in which all events are recorded, in which an uninterrupted work of writing links the centre and periphery, in which power is exercised without division, according to a continuous hierarchical figure, in which each individual is constantly located, examined and distributed among the living beings, the sick and the dead – all this constitutes a compact model of the disciplinary mechanism. (Foucault, 1977)

For Foucault, in the plagued city, the power of the state is visible, the surveillance explicit. He opposes this model of surveillance to the panopticons. Bentham’s panopticon is an architectural figure used originally for prisons: at the center stands a tower of surveillance and at *“the periphery, an annular building”* for the prisoners. The idea is that the prisoners do not know whether there is anyone in the tower. They discipline themselves continuously because of this suspicion of been observed. According to Foucault, *“the Panopticon is a machine for dissociating the see/being seen dyad: in the peripheral ring, one is totally seen, without ever seeing; in the central tower, one sees everything without ever being seen.”* With the panopticon, the power is distributed as it is uncertain whether there is someone in the surveillance tower. In that case, individuals modify their attitude because of the possibility of being watched.

Today, like in the plagued city, governments are enforcing laws to control individuals such as making people stay home, closing shops and public areas, or enforcing social distancing. However, with participatory applications the public becomes self-involved in the surveillance structure. The current “plagued city” adopted a panopticon-type decentralized system of surveillance. There is therefore a mix between the panoptic and the plagued-city surveillance. What is more, we stay home, but our home is no longer a closed space. It is a worldwide open space, electrified and digitalized (Preciado, 2020). It is because this place is connected that each citizen can take part in the generalized surveillance. With COVID-19 apps, the difference with the Panopticon described by Foucault is that we do not need the tower anymore. We are modifying our behaviors without the tower, just by providing data. This suppression of the tower seems to be in the essence of the panopticon schema. *“Without disappearing as such or losing any of its properties, [it] was destined to spread throughout the social body; its vocation was to become a generalized function”* (Foucault, 1977). It is therefore key to understand how the panopticon schema became a generalized function in our societies. It requires understanding the sociological and cultural roots of these new forms of surveillance. The expansion of a techno-utopianism perspective during the past thirty years sheds some light on how governments and experts came to envision

these measures as the best solution and how citizens became involved in global surveillance.

Exploring the societal and political roots of a new surveillance system

From quantified self and techno-utopianism to COVID-19 apps

The measures of surveillance based on mobility tracking and contact tracing implemented during the COVID-19 are in line with movements like the quantified self. The quantified self is a belief that thanks to advances in science and technology, we can improve each individual, and also society. It is a form of technological utopianism that emerged in the 1990s in the Bay Area in the context of the American counterculture and the advent of the information age. The Californian ideology (Barbrook & Cameron, 1996) “*combines the freewheeling spirit of the hippies and the entrepreneurial zeal of the yuppies. This amalgamation of opposites has been achieved through a profound faith in the emancipatory potential of the new information technologies.*” (p. 45). The link between these two a priori antithetical movements is the digital utopia, the profound belief that advances in science and technology will lead to a form of utopian society. This unique mindset also appears in contemporary movements such as transhumanism, whose aim is to improve the human race with the help of technologies, “*to eliminate ageing and to greatly enhance human intellectual, physical, and psychological capacities*” (Bostrom, 2003). The quantified self is the global cultural phenomenon of self-tracking in order to improve physical, mental, emotional performance. By using self-tracking tools, this community of users aims to gain “self-knowledge through numbers”. The term was coined in 2007 by the two Wired editors Gary Wolf and Kevin Kelly. During the Singularity University summit, experts like Sabine Seymour explained how individuals are now able to “*use data to monitor [their] lifestyle (from food to exercise) to boost [their] body's resilience against diseases*”. The boundary between the quantified self as a way to improve our health, and the mobility tracking and contact tracing measures as a means to tackle the virus is extremely blurred.

In a Foucauldian perspective, this movement of quantified self represents a form of modern panopticon, exactly the same as the COVID-19 apps. They follow the same panoptic form: we are providing information and modifying our behaviors so to speak “without the tower”, just by providing the data. With modernity, in order to ensure discipline, we are not using technologies of violence and death anymore (no more public punishment). On the contrary, we are using biopolitical technologies, technologies able to manage and maximize the life of the whole population (Preciado, 2020). The quantified self is an example of this new model of peaceful surveillance continued with COVID-19 tracking measures. Marianna Dahan, an expert from Singularity University's online summit, explains that South Korea, contrary to China, is a good example of implementation of surveillance practices, as they handled it “*without jeopardizing human rights*”. Indeed, “*they have used digital identity to inform mobile phone owners, to establish a climate of transparency and accountability, and not something of coercion*”. As such, to her eyes, they represent a political model we need to follow and implement.

A technological or a political issue?

In between ideology and utopia (Amsallem, 2017a), these optimistic views of the future see science and technology as a way to solve humanity's biggest problems, such as the COVID

pandemic. Technological advances in information technology but also more recently in nanotechnology, biotechnology, computer science, artificial intelligence are converging, producing an acceleration of technological advances (Amsallem, 2017b). These technologies are growing so fast that, according to Ray Kurzweil, Google's director of artificial intelligence and co-founder of the Singularity University, Singularity –the time when machines will be smarter than men– could happen by 2045. What is put forward as powerful advances in technologies is in fact highly political. It is a political project based on the use of technologies to solve societal problems (Alexandre, 2011; Turner, Vannini, Le Crosnier, & Cardon, 2012). Some authors highlight the expansion of what they consider a Silicon Valley political ideology (Alexandre, 2011). This ideology generates debates especially in Europe. Reports from the European Commission in 2004 and the European Parliament in 2009 emphasise the need to consider the societal and ethical issues linked to projects such as gene editing and robotics (Amsallem, 2017b). However, the boundary between science fiction and reality, between reparation and augmentation, between humans and machines is becoming more and more blurred (Alexandre, 2011; Bostrom, 2003). We are already enhancing ourselves in order to counter diseases or determine our biological future. In her 2009 TED talk, "My 12 pairs of legs", Aimee Mullins shares her experience of this blurred frontier when talking to a friend of hers at a fancy party: *"“But you're so tall!” And I said, “I know. Isn't it fun?” (...) And she looked at me, and she said, “But Aimee, that's not fair”. And the incredible thing was she really meant it. It's not fair that you can change your height, as you want it. And that's when I knew - that's when I knew that the conversation with society has changed profoundly in this last decade. It is no longer a conversation about overcoming deficiency. It's a conversation about augmentation”* (Mullins, 2009). As Aimee exemplifies it, she is no longer perceived as a disabled person but as an enhanced person likely to *“design their bodies from a place of empowerment”*. With the crisis, the boundary between reparation and augmentation is becoming even more porous.

Accelerating techno-utopianism with COVID-19: for what future society?

In a situation of sanitary emergency and global emotional distress, the current pandemic represents an opportunity for techno-utopians to prepare society for more extreme solutions. The idea is not as much to adopt radical measures today – as many experts are calling today to respect privacy in the collection of data in Europe and United States – but to promote the techno-utopian political project in the long term.

The pandemic can be envisioned as a global political campaign in favor of a techno-utopian society. A number of experts are indeed emphasizing the need to prepare for future emergencies. For instance, Jamie Metzl, a Singularity University expert, claims that bigger challenges than the Coronavirus are coming our way such as *“climate change, oceans, thinking about the future of artificial intelligence (AI), autonomous killers AI, can't be sufficiently addressed because we haven't laid the foundations for that kind of processes”*. According to him, we therefore need to develop technologies likely to build this “new normal”. For Bradley Twyham, *“the reality is that for all of its hype AI has not been leveraged where it counts the most during this pandemic”*. Artificial Intelligence for instance can be used, in his opinion, for augmenting policy and decision making, for making predictions based on artificial intelligence solutions like BlueDot, for assisting doctors or even for finding potential treatments much more quickly. For Sabine Seymour, the aim is to *“democratize healthcare data to use biometrics data captured around different devices and then use that data for disease predictions”*. What these experts are presenting are not just

technological advances but their vision of a future society: a political program. To their eyes, the current threat reveals the essential role of technology when facing future pandemics and challenges. As a consequence, in their opinion, the crisis represents an opportunity for change in the “right direction”. For Dr. Tiffany Vora, the question is *“how do we harness the energy from this crisis to make this world a better place.”* And Christina Gerakiteys answers: *“We take the best of the technology that we are experiencing, and the best of humanity, and that is what we are going to come up with the moonshots, that help us progress, get out of this situation”*. These Singularity University experts, able to “predict the future” and to provide tools to “solve the crisis”, can be perceived as a glimmer of hope in a worldwide disastrous situation. Amid the generalized mood of powerlessness, they make people feel anything is possible.

The massive adoption of COVID apps is a sign of the political penetration of technoutopianism. We are now immersed in a logic of crisis prevision through technologies. It is time to consider these measures for what they are: a political project. It is only by considering the political consequences of this project for our societies that we will fully comprehend the societal, ethical, business consequences of this situation. If we follow the reasoning of solving every issue with moonshot innovations, the day will come when we will think it is not fair to die.

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