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SURVEILLANCE TECHNOLOGIES IN THE COVID-19 ERA

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POLICY CENTER FOR THE NEW SOUTH
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Surveillance Technologies in the Covid-19 Era

Summary

While many states are adopting strict measures including containment and even border closures, some countries have used surveillance technologies to control the spread of the virus, and others are considering similar solutions. The most widespread device is the geolocation of smartphone data, digital tracing, cybersurveillance and facial recognition, the aim of which is to detect the movements of potentially contaminated people, warn populations likely to have been exposed to the virus, but also to control quarantines, track and locate infected individuals, as well as limit travel and try to curb the spread of the virus.

Introduction

As states are working to control the spread of the virus, some governments are considering the use of surveillance technologies, while others are implementing tracking technologies to collect data on the movement and behavior of populations. A wide range of technologies is involved, from geolocation devices, which make it possible to track individuals using their phones to better target the virus and locate contaminated individuals, to surveillance and facial recognition systems. These systems are used to analyze images to detect persons with symptoms as well as individuals who have been in contact with people found to be carrying the virus.

This paper will take stock of the surveillance technologies implemented by a number of countries in order to be able to monitor, or even control, the behavior of a society often referred to as (information society) or « surveillance society » in the era of the Coronavirus. The first step will be to look at the countries that have used these technologies in an attempt to contain the spread of Covid-19, and then to study the possible uses of these technologies for African countries.

The aim is not to discuss the consequences or dangers that these surveillance systems may pose for the respect of human rights and privacy, as well as their compatibility with democratic values and the principles of the rule of law. The analysis aims to shed as much light as possible on this thorny issue: how are surveillance technologies being used to combat the pandemic?

Cybersurveillance in the fight against the Coronavirus

« Full lighting and the eye of a supervisor capture better than darkness which ultimately protected. Visibility is a trap »[1].

In the surveillance society, many applications in the cyberspace application layer[2] have been developed to contain the Coronavirus. For example: « Researchers believe that an application for monitoring the population could contribute to the fight against the Coronavirus pandemic », one could read in the columns of the French daily newspaper Le Monde of 20 March, 2020.

At the time of Covid-19, digital surveillance seems to have become the keystone of any state strategy to contain the pandemic. As revealed by Edward Snowden[3], many states are making use of surveillance technologies and the extension of digital tracing devices, not only within the European Union (EU) but also in other countries, such as the United States, the United Kingdom, Russia, China and Italy…

The use of these technologies is widespread and data plays a crucial role, whether it is data captured by surveillance cameras, Google's data which allow to follow certain places visited, or those of telephone operators, which allow to analyze populations' movements. Consequently, the use of these digital technologies has become indispensable for quarantine control, in order to analyze the data provided by telephone operators and to monitor the collective behavior of populations, but also for geolocation (which consists in locating infected persons) in addition to digital tracing, which makes it possible to detect and track individuals who have been in contact with infected persons.

1. Geolocation: locating infected people

Virtually all devices – computers, tablets – can act as « spies », especially smartphones. These highly effective devices are equipped with a GPS tracking chip, but also with applications that allow you to obtain geographical details and record the location of people at any time, even without Internet connection. The use of geolocation data has become indispensable and is already operational in several countries around the world, such as South Korea, Singapore, Taiwan, Israel, China, and Germany, to track the movements of people in an aggregated way, but also individually in some cases; to locate infected people and enforce lockdown measures as well to reinforce measures aimed at lifting the lockdown[4].

In the United States, and according to The Washington Post (17 Mach, 2020), the government was considering the use of data provided by Facebook and Google, among

1. Foucault, Michel. Watch and Punish, 1st ed. Paris: Gallimard, 1975, p.233-234
2. Cf: « African Cyberspace: Taking Stock ». Policy Center for the New South , 19 March, 2020, https://www.policycenter.ma/opinion/le-cyberespace-africain-un-etat-des-lieux.
3. « Edward Snowden, Warning about attacks on privacy: (How much) should we be wary of Western states? » Atlantico.fr, Franck DeCloquement, 15 April, 2020: https://bit.ly/2xk7bOo: By way of illustration, Edward Snowden's revelations in 2013 provoked a serious debate that led several democracies to regularize the actions surveillance programs that had been set up illegally by their intelligence services.
4. COVID-19: Some states use geolocation to find out who respects lockdown measures, Usebk & Rica, Annabelle Laurent, 20 March, 2020. https://usbeketrica.com/article/covid-19-la-geolocalisation-pour-savoir-qui-respecte-confinement.

others, as well as the creation of a system for extending geolocation, to track the spread of Covid-19. In Israel, the green light was given on 16 March to the Shin Bet (the domestic intelligence service) to track the location of data on citizens' mobile phones. The idea was to be able to locate infected persons over a period of 14 days (prior to their diagnosis) and to identify their routes. The case of Israel is similar to that of China and South Korea, two countries in which quarantined people are tracked via a mobile application, and « where these practices are not shocking », as reported by RFI radio.

In Asia: The government of Hong Kong announced on 18 March, 2020, that all new comers to the city were required to wear an electronic bracelet connected to their phones and a geolocation application for a two-week home quarantine period. In Taiwan, infected people were given a mobile phone to record their GPS position so that the police could « monitor their movements and ensure that they do not move away from their homes »[5]. In China, a QR code is generated on all citizens' smartphones to guide their movements according to three colors: green, yellow or red. This system was created by the giant Alibaba connected to Alipay.

In Russia, Moscow planned to use the geolocation of smartphones to track the movements of foreign visitors and tourists, via a system that would provide daily updates on the movements of tourists based on data from their SIM cards, Yandex is one of the candidate suppliers for this system[6].

In Europe: On 6 April, 2020, the European authority for the supervision and protection of personal data called on the EU Member States to develop a pan-European mobile application to replace the multiple national applications envisaged or already implemented by several states, allowing geolocation by telephone in order to find people who have come into contact with patients infected with Covid-19, as well as to monitor those who are in isolation, in order to monitor and limit the spread of the pandemic. To track the Coronavirus pandemic, some countries, such as Great Britain, Germany, France and Italy, are planning to launch smartphone geolocation applications, which are linked to systems developed by Apple and Google for anonymous tracking of the population once the lockdown is lifted. Germany, for example, launched its own application for iOS Android on 7 April, 2020. France has done the same and launched « CoronApp », to geolocate virus carriers, tracing their movements for 14 days. Also, in France, the « StopCovid » application was disclosed on 8 April and implemented on 2 June, to warn users who have been in contact with people infected with the Coronavirus.

In Africa, however, governments remain very cautious on the issue of geolocation measures. So far, no government initiative has been taken in this respect. However, tracking applications, which originated in Asia, are beginning to appear in Africa, particularly in North Africa. These applications aim to identify and track almost instantaneously if an individual has been in close proximity to a person who has tested positive through geolocation.

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5. COVID-19: « We should have been inspired by Taiwan, but it's too late », Pablo Maillé. https://usbeketrica.com/article/covid-19-il-aurait-fallu-s-inspirer-de-taiwan-mais-c-est-trop-tard.

6. Times, The Moscow. «Moscow Plans Coronavirus Surveillance for Foreigners - Kommersant». The Moscow Times , 9 April, 2020, https://www.themoscowtimes.com/2020/04/09/moscow-plans-coronavirus-surveillance-for-foreigners-kommersant-a69928.

2. Surveillance technologies: Quarantine control

Throughout the world, populations are placed under surveillance to ensure that confinement in public spaces is respected. According to Human Rights Watch, « Governments are increasingly using digital surveillance to monitor and contain the pandemic. Twenty-four countries are tracking based on geolocation of telecommunications and fourteen countries are using applications to track contacts and quarantine compliance »[7]. However, surveillance is a characteristic feature of modern societies, which consists in observing the actions and activities of target persons through technological means (communications interdiction systems, facial recognition, surveillance cameras, etc.)[8]. The importance of such surveillance is reflected in the means put in place to gather and collect information.

All means are being used to combat Covid-19, in particular digital means. Indeed, surveillance and the use of thermal cameras in public places make it possible to identify people with Covid-19 symptoms. In China, these cameras, combined with facial recognition technologies and citizens' medical information, make it possible to strengthen contact tracing and geolocation.

In the European Union, these applications are used to control the isolation of individuals carrying the virus. In Belgium, this technique makes it possible to assess compliance with the measures taken and to assist in political decision-making, while at the same time strengthening control and containment measures. Drones, equipped with surveillance cameras and loudspeakers, help Brussels police officers to ensure compliance with social distancing measures in public places and to monitor individuals in quarantine. In Poland, the government has launched an application allowing quarantined users to send a selfie from their home several times a day. In Europe and the United States, technology firms have begun sharing anonymous data to better monitor the spread of the virus.

In the United States, agencies are already using surveillance technology, said the Wall Street Journal, in its edition of 15 March, 2020, explaining that the initiative is partly coordinated by a working group in liaison with the White House and the US Chief Technology Officer, in association with giants such as Google, the subsidiary of Alphabet, Facebook, Microsoft Corp, Amazon as well as start-ups.

Argentina had also launched the CoTrack application to geolocate, track and record the geographical movements of its users. These applications detect signals of proximity to people who have tested positive for Covid-19. In particular, Urbetrack had launched a geofencing application called « Cuidate en casa (take care of yourself at home) », to help enforce quarantine measures. In the event that these measures are broken, the application generates a « radial geofence », and alerts its users when they move away from their homes or when they do not respect isolation. At the same time, a notification is sent to the relevant government agency in the district.

In Asia and the Middle East: From China to Israel, governments already control the movement of their citizens through electronic means. In Taiwan, authorities are using

7. « States must respect human rights as part of their COVID-19-related surveillance ». Human Rights Watch, 2 April, 2020, https://www.hrw.org/fr/news/2020/04/02/les-etats-doivent-respecter-les-droits-humains-dans-le-cadre-de-leur-surveillance.

8. COVID-19 Isn't the Only Threat to Privacy. Mai 2020. www.foreignaffairs.com, https://www.foreignaffairs.com/articles/2020-05-22/covid-19-isnt-only-threat-privacy.

smartphones to monitor people in quarantine and are even going further, using geolocation data from smartphones to check that isolated residents stay at home. They receive a warning message in the event of non-compliance with containment measures and the police intervene at the slightest infraction. As in South Korea, where « if a person does not respect the period of isolation, or a citizen goes to a busy place such as a shopping mall or the subway, the alert is triggered. His or her phone rings and, of course, the alert is transferred to the health authorities, which can report its location to the police »[9].

China is going so far as to assign color codes (green, yellow, red) to smartphones via the Alipay Health application to control the movement of populations. In Hong Kong, people coming from abroad wear tracking bracelets, and in Singapore, a team of digital detectives is monitoring people in quarantine. In India, the Aarogya Setu application, launched by the government on 2 April, 2020[10], tracks Covid-19 cases and helps fight the virus at the individual level. Amitabh Kant, CEO of NITI Aayog, said that: « the application has reached 50 million uploads in 13 days, making it the most widely used application in the world ». In Australia, a contact search application was launched, based on Singapore's TraceTogether, with a second application, ConTrace, being under development.

In Africa, it is still difficult to assess the extent to which digital surveillance is used. However, Kenya is monitoring the mobile phones of people who are in self-isolation, in order to arrest those who violate their travel restrictions. According to Privacy International, in order to enforce the mandatory 14-day quarantine orders, Kenyan authorities have been tracking the phones of suspected Covid-19 positive individuals. In this connection, « a mobile application is being developed to provide detailed information on their movements », government spokesman Cyrus Oguna told the BBC. In South Africa, the authorities, in partnership with telecommunications companies, are working to collect geolocation data that would allow tracking and monitoring of people who have been in contact with Covid-19 patients.

In addition to surveillance via smartphones and surveillance cameras, many countries are interested in digital « tracking » of contaminated people.

3. Digital tracing: Tracking infected persons

One of the main problems with containment is that transmission is common. Infected cases can transmit the virus 1 to 3 days before they develop the symptoms that make them ill. « Contact tracing [11]», a strategy well known to epidemiologists, involves identifying and tracking people exposed to the disease to prevent the infection from spreading. The Coronavirus has, in fact, accelerated the use of this technique. The Singaporean application « Trace Together », launched on 20 March, using Bluetooth to alert users who come across people who have tested positive with Covid-19, is inspiring decision-makers in Germany, the United Kingdom and France.

9. « Geolocation: Towards greater government control of containment? » Blog SFAM , 9 April 2020, https://blog.sfam.eu/geolocalisation-controle-confinement-pouvoirs-publics/.

10. Delhi, Côme BASTIN, at New. « Coronavirus. In India, the giant tracking app is a controversial issue ». Ouest-France.fr, 22 May, 2020, https://www.ouest-france.fr/monde/inde/coronavirus-en-inde-l-appli-geante-de-tracage-fait-polemique-6843395.

11. « Opinion | COVID-19 tracking data and surveillance risks are more dangerous than their rewards ». NBC News, March 19, 2020, https://www.nbcnews.com/think/opinion/covid-19-tracking-data-surveillance-risks-are-more-dangerous-their-ncna1164281.

In Asia: Especially in China, people use Alipay Health code which, when travelling, at the entrance of shops and in transport, flashes smartphones in check-points to reveal a color code. Red establishes a 14-day ban on leaving the house, yellow refers to a 7-day quarantine, while green authorizes traffic. These data are then transmitted to the police force.

In Israel, with the confirmation of the first cases at the end of February 2020, engineers from the « Silicon Wadi », the equivalent of the « Silicon Valley », were working to try to curb the pandemic through technology. Their work gave rise to the HaMagen application, which cross-references the journeys of infected people based on data provided by the Ministry of Health with those of the application's[12] users and identifies the people they have come into contact with, alerting them by SMS that they should remain in quarantine. The same process has been used in South Korea.

Within the EU, the Pan-European Privacy-Preserving Proximity Tracing, (PEPP-PT) project, presented in early April 2020, brought together experts from 18 European countries to develop an interoperable solution, which would circumscribe the virus via the Bluetooth-enabled chain of contacts of sick people, Reuters[13] reported on 8 April. The objective is to build a common front line on the digital components of the fight against Covid-19 and to propose technologies to ensure the digital tracking of proximity contacts (contact tracing) in compliance with the RGPD[14] regulation, based on anonymity, consent and privacy.

Indeed, the European common approach has cracked quite quickly and most countries are considering the possibility of developing their own applications to accompany the lockdown exit. Disagreement has arisen between, on the one hand, those who opt for a centralized approach based on applications that store contact history on a central European server and, on the other hand, those who prefer a decentralized approach based on direct storage on smartphones. All over Europe, the sensitive issue of storing retrieved data is thus being raised. In this regard, the German government had announced on 26 April, 2020, that it had opted for a tracking application based on the decentralized technology of the American giants Google and Apple, to the detriment of the European option currently being developed with, in particular, the support of the European Commission and France. France has opted for a centralized application with its « StopCovid » project, which is supposed to detect the contact tracing of its users in order to slow down the chain of contamination.

Germany has, therefore, abandoned the principle of a single body that would centralize the data collected. Furthermore, the European Parliament has called on Member States to favor a decentralized solution. While France and the United Kingdom still support the so-called centralized solution and wish to keep control of the application, as does Belgium, which has warned against too much dependence on the two American giants.

In the United States, at a time when tracking was being discussed by governments to

12. Moyal, Omri Segev. « "Hamagen" Application — Fighting the Corona Virus ». Moyen, 23 March, 2020, https://medium.com/proferosec-osm/hamagen-application-fighiting-the-corona-virus-4ecf55eb4f7c.

13. Italy working on coronavirus tracing app to help lockdown exit. Reuters, 8 avril 2020. www.reuters.com, https://www.reuters.com/article/us-health-coronavirus-italy-technology-idUSKCN21Q2XE.

14. Covid-19 Multilateral initiative against spread chains, based on digital technologies Privacy by Design | Inria . https://www.inria.fr/fr/initiative-pepp-pt.

manage the lockdown exit, Apple and Google said they were joining forces to track the Coronavirus. In spite of the fierce competition that they usually engage in, the two digital giants have been working together since 10 April, 2020, on the basis of the Swiss DP-3T to make their operating systems compatible with data exchange.[15]

In Africa, the current Chairperson of the African Union, South Africa's Cyril Ramaphosa, said: « Thanks to mobile technology, an extensive tracking system will be rapidly deployed to identify people who have been in contact with confirmed cases of Coronavirus and to monitor geographical location of new cases in real time ». Tracing is one of the pillars of an effective response to Covid-19. In Morocco, police services have set up a tracing application, called « WIQAYTNA » to strengthen containment measures, track movements and enable the authorities to inquire at check-points about the movement tracking process. The application was authorized by the National Commission for the Control of Personal Data Protection (CNDP), in accordance with the principles laid down in Law Nr. 08-09, and implemented jointly by the Ministries of Health and the Interior, in collaboration with two agencies: the National Telecommunications Regulatory Agency (ANRT) and the Digital Development Agency (ADD), with the voluntary contribution of Moroccan companies having expertise in the field.

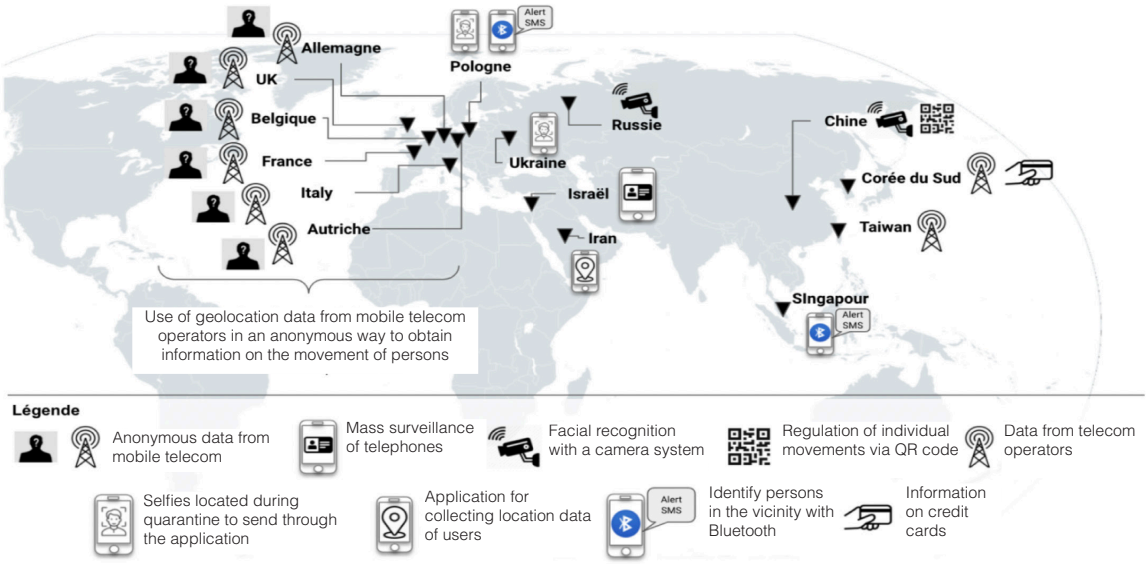
In Côte d'Ivoire, the authorities used « tracking » to follow, in real time, the movements and contacts of confirmed cases.

At a time when states are struggling to control the spread of Covid-19, various surveillance technologies are being mobilized by many countries[16]. Digital tracing seems to be an unavoidable tool.

15. « Apple and Google partner on COVID-19 contact tracing technology ». Apple Newsroom , April 10, 2020 https://www.apple.com/newsroom/2020/04/apple-and-google-partner-on-covid-19-contact-tracing-technology/.

16. Cf. Countries using smartphones data to track the spread of the Coronavirus: Insider, Business https://www.businessinsider.fr/voici-comment-ces-11-pays-utilisent-les-donnees-des-smartphones-pour-suivre-la-propagation-du-coronavirus-184143#le-royaume-uni-ne-surveille-pas-encore-les-deplacements-mais-lenvisage

Summary of the main data approaches to combat the Covid-19 pandemic



Source : https://www.quantmetry.com/covid -19-rgpd-europe-intelligence-artificielle/

Conclusion

In response to the crisis, a new digital era is taking shape. Today, surveillance technologies are at the heart of expectations and attention. Large companies are investing massively in this field. At a time when the authorities are struggling to enforce containment measures, the use of new technologies appears to be very useful in slowing the spread of the virus, drawing inspiration from countries such as South Korea, China or Israel, which are presented as models for the exploitation of digital technologies as a weapon against Covid-19. These technologies make it possible to strengthen the lockdown but also the lockdown exit which should be carried out in a gradual and controlled manner.

All of these surveillance technologies are primarily data oriented. Due to technological disparities, data collection is prohibited in the EU in accordance with the General Data Protection Regulation (GDPR). This regulation, which entered into force in May 2018, provides a framework for the deployment of data processing devices and authorizes the processing of geolocation data via electronic means of communication, provided that either the data collected are kept anonymous, or the explicit consent of people subject to the collection is secured beforehand. Recently, the President of the European Data Protection Council (EDPC), Andrea Jelinek, stated that data protection rules do not hinder the measures taken to fight the pandemic.

However, in the African Union's case, these practices are neither prohibited nor strongly regulated by law. Moreover, the convention, adopted in 2014, on cybersecurity and the protection of personal data has not yet entered into force. Despite the initiatives taken by some regional blocs to make the text of the convention a priority for member states. In this regard, in 2008, the East African Community (EAC) developed a framework for e-legislation. In 2010, the Supplementary Act A/SA.1/01/10 on Personal Data Protection was adopted in the Economic Community of West African States (ECOWAS). In 2013, a model law on data protection was adopted by the South African Development Community (SADC). However, the convention has only been signed by 14 countries and ratified by 4 countries.

Indeed, although surveillance technologies may turn out to be an effective ally in defeating the Covid-19 pandemic, it should not be forgotten that their use may raise serious human rights concerns. These technologies at the disposal of states represent a threat to rights and freedoms. Some fear that in the long term, the installation of such applications in the context of the Covid-19 could become systematic.

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