

COVID-19: Crisis Management and Promethean Thinking in Digital Age

Long paper

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Abstract. In this paper we discuss the current COVID-19 crisis, digital rights, trust as part of the society and thinking ahead with the future crisis. As the pandemic has given us various examples around the world on what options we have in battling with this deadly disease and will eventually give us large amount of data on what of the various different methods seemed effective. Yet we should also focus on what is the ethical way for promoting individual rights and social cohesion before the next eventual crisis hits the globe.

Keywords: COVID-19, Coronavirus, Digitalization, Ethics, Information technology, Information security

1 Introduction

During the current COVID-19 pandemic the governments around the world have faced immense challenges in keeping their citizens safe, guaranteeing the functioning of the medical system, and keeping the economy somewhat running. In the midst of this, some erosion of basic human rights, e.g. with the freedom of movement, ownership, entrepreneurship, and work (Jones, 2020; El Nacional, 2020; Lowen, 2020; BBC, 2020a) has happened due to the technological development as development of technology often is in odds with current standing of human rights, e.g. privacy. As humankind has adapted to the new situation, also digital rights, human rights in cyberspace, such as freedom of expression, right to privacy, and right to information security have been under the radar (see e.g. Cyranoski, D., 2020; Copeland, R., 2020; Telia Company, 2020; Lyons, K., 2020; Bloomberg, 2020). For those of us living in western democracies the situation is rather new as we have been enjoying our privileged lives where there has been at least a consensus to aim towards the actualisation of these rights.

However, there has been significant pressure around the world to diminish these rights due to the increased security and safety (Brooks, Webster, Smith, et. al, 2020; CDC, 2020), to ‘flatten the curve’ (Roberts, 2020; Stevens, 2020) or stop the spreading of virus altogether (Walker, Whittaker, Watson, et. al, 2020; Dewan, 2020). The former stands for slowing the spread of the virus by means of social distancing and taking care of hygiene in order to keep the medical system from being overloaded. The latter refers to use similar yet stronger and prolonged methods of isolating people from each other to prevent people from infecting others (ECDC, 2020a; ECDC, 2020b; ECDC, 2020c). Both of these goals require sacrifices from society and individuals alike due to diminished productivity of goods and services. Diminished productivity leads to diminished income and tax revenues, thus endangering the economic system and many services, which are meaningful, important, or even essential for an individual well-being (see e.g. Holt & Burns, 2020; BBC, 2020b; BBC, 2020c). Hence the constant debate (where the debate is allowed) on the effectiveness of actions against the outbreak (see e.g. Anderson, Heesterbeek & Klinkenberg, 2020; BBC, 2020d; Cyranoski, D., 2020). That is, while good examples can be found that restrictions on free movement and working are in fact effective against the spread of the virus, the consequences of these restrictions are harmful as well.

Moreover, as the individual benefit and society’s benefit can easily be in opposition with each other, there has been debate on how to enforce the restrictions. As the crisis has hit different individuals differently, for example those able to work from home have merely changed their working routines as many of those working in restaurants and bars have been sacked or furloughed, the restrictions made by the government can easily be seen as ‘unfair’, even ‘unjust’ (News Wires, 2020; BBC, 2020e; St. Denis, 2020). Whereas some countries, e.g. Finland, being a Nordic well-fare state, has a system for guaranteeing basic level of income for the unemployed, not all countries share the ideology (STM, 2014; STM, 2020a; STM, 2020b; STM, 2020c; STM, 2020d). E.g. in U.S. the unemployment and the crisis and fixes around it have caused quite a stir, to put it mildly, amongst those fighting to feed their families (see e.g. Gearan & Wagner, 2020; BBC, 2020f; BBC, 2020g; Fung, 2020; Lewis, 2020). Therefore the motivations for many in this situation to break the rules and guidelines seems justified enough while the society as a whole wishes of course to everyone follow its rules which are – in the best case at least – made to protect and benefit the society and the individuals living in it.

Digitalisation has given us tools to monitor each other in the ways unimaginable before. As nearly everyone nowadays carries at least one mobile device with them, they leave a digital trace of their movements. Moreover, the social media gives us possibilities to monitor and guide the discussions and alter the public opinion. Facial recognition software (BBC, 2020h; Brewster, 2020; Reevel, P., 2020), the use of data mining (Lewis, Conn & Pegg, 2020; Chapman, 2020) and AI (Wakefield, 2020; Shead, 2020) thus using personal and private data, and tracing monetary traffic, to mention a few techniques, combined with the governments’ monopoly for violence, gives those in power a good tool to control the individual and masses alike. Usually these powers are kept in check with some sort of constitutional legislation (see e.g. Pol., V, 1301a17-1301b35; Tushnet, Fleiner-Gerster, & Saunders, 2013) but due to the nature of the

crisis, many countries have declared a state of emergency thus granting the government more power than the constitution allows in normal times (see e.g. FEMA, 2020; Finnish Government, 2020; Government of South Australia, 2020; Aljazeera, 2020; Legislation.gov.uk, 2020; Scaglioni & Fiore, 2020).

In this paper we examine and discuss these digital restrictions, limitations, and violations of human rights, both introduced and suggested, from a social philosophy and IT-ethics perspective (see e.g. Heimo, 2018, pp. 1–5).

To emphasise, this paper is not meant to be a critique towards any government or organizations, nor their handling of the corona crisis 2020, but merely be a thought-provoking publication to serve as a guideline to improve the handling and reception of the crises to come. The authors do not claim a proficiency in epidemiology nor do they claim to have proven solutions on how to handle to crises at hand. The aim of the paper however is to urge the governments, organisations, and citizens around the world to take actions to a more promethean viewpoint do to the fact that it is obvious this is not the last crises we will have to face, in local nor in global level.

2 Digital methods in countering the COVID-19 crisis

Tracking applications installed on smartphones for tracing exposure and infected people has been one approach that sparked significant discussion on privacy of users. There are multiple approaches so far on how to implement such an application. Proximity of two devices can be measured using location information provided by GPS or Bluetooth tokens that are automatically exchanged in proximity between devices. GPS has issues with working indoors, however, and Bluetooth exposes devices to various attacks and also makes it possible to track individual devices, should someone wish to do so. Mobile operator data on devices in the same cell area can be used as well, but it is not accurate enough for purposes of close contact tracing for COVID-19 transmission, as its accuracy varies between hundreds of meters to kilometers (Mateos & Fisher, 2006). Nevertheless, it can be used to identify people that have been in certain geographic areas of interest or those who have travelled from elsewhere to the area. Next, we will briefly discuss some initiatives around the world for contact tracing using smartphones.

The Pan-European Privacy-Preserving Proximity Tracing (PEPP-PT) initiative (Portvier, 2020) aims to provide a framework for tracing proximity contacts with smartphones while simultaneously complying with the strict data privacy regulations of the EU. The initiative currently considers both centralized and decentralized approaches for storing contact information between devices. Contact tracing is done over Bluetooth and proximity information is encrypted on the device itself. In case of potential exposure, users are requested but not required to share their contact history with relevant authorities. MIT is working on Private Automated Contact Tracing (PACT) (PACT, 2020) that aims to trace contacts with Bluetooth token exchange. PACT promises to keep private information hidden from authorities, healthcare providers, mobile operators and other users.

In Singapore, “TraceTogether” (Government of Singapore, 2020) is the official application for contact tracking. It uses Bluetooth connections between smartphones to exchange tokens, signifying that two devices have been in close contact. The tokens are stored centrally on government servers. It has been criticized for being vulnerable to attacks from other users, the government and malicious third parties. (Asghar, H., Farokhi, F., Kaafar, D. et. al, 2020.)

In Finland, a mobile application for contact tracing is under development by private companies, but with the full sanction of and official funding from government. (Manner, M., Nieminen, T. & Teittinen, P., 2020; Uusitalo, K., 2020.) Finland also has an online symptom radar (Helsingin Sanomat & Futurice, 2020.), which is a service where people can describe their symptoms using a questionnaire and then the service visualize how people are reporting various symptoms around the country.

Iceland has their own application, Rakning C-19 (The Directorate of Health and The Department of Civil Protection and Emergency Management of Iceland, 2020). It stores contact information locally on the device and can only transmit any information after user approval for assistance from the national COVID tracking team. If the user approves data sharing, all contacts are shared for 14 days with the tracing team.

China has several different applications for tracing potential contacts. (AFP-JIJI, 2020.) Some rely on GPS location tracking while others use a host of other collectible information, for example passing checkpoints, being tested for the virus, using public transportation, and so on.

These examples paint a picture on different approaches globally to help tracing potential contagions. Some countries use centralized systems or approaches that would not perhaps be acceptable in other countries, while others take the privacy of citizens more seriously. Whatever methods are used depend on the society, its (legal) norms and what is considered as appropriate intrusion to people’s privacy. A discussion about these actions and suitable methods to save human lives should be conducted.

3 Trust, forced trust and society

There are several options for countering pandemics. Some of these, e.g. promoting good hand hygienic seems rather non-threatening to human rights whereas demanding exact location information about every citizen seems rather harsh activity. Yet there might be situations where the movement of people is mandatory for the survival of the population and therefore there must be some discussion to be had – but when this is truly the case?

In optimal situation citizens trust their decision-makers to do what is best for the people. The people love prediction, routines and that they can trust each other to honour the deals. Trust to continuity and predictability brings meaning and construct to the life replacing constant threat evaluation and mitigation (Cetnerowski, 2012; Harisalo & Miettinen, 2010, p. 24; Törrönen, 2015; Ward, Mamerow, and Meyer, 2014). During the crisis however the situation becomes unpredictable and a therefore strange phenomenon, for example toilet paper hoarding, happens.

Societies are based on trust because they are complex and layered social networks. First individuals trust each other and when they have enough trustworthy people around

them, they will trust even the individuals they do not know. That is how democratic society is worked from bottom to top and also that is the reason society works. Trust is something which is earned. Society cannot and will not run if individuals do not trust each other to play with same rulebook. It will stop working if too many individuals do how they please whether it is legal or recommended or not. The overall trust between people, as well as trust between the government and the people can increase and decrease, and we all can affect to which one it is by giving example. (Cetnerowski, 2012; Harisalo & Miettinen, 2010, pp. 24–25, 41, 44, 119, 174–175; Törrönen, 2015; Ward, Mamerow, and Meyer, 2014)

As trust starts to wear out and uncertainty, unpredictability, and uncontrollability begin to increase, life is no longer in the hands of people to the same extent as before. People can no longer trust others to speak the truth, take care of their responsibilities, and take responsibility for the things entrusted to them. Problem begin to arise in institutional arrangements, and social grievances, unpredictability of behaviour, and indifference to the life and property of fellow human beings increase. The actions of political decision-makers and authorities become suspect. However people love to trust. They accept the decisions even when they dislike them if they feel decisions are made justice. (Harisalo & Miettinen, 2010, pp. 24-25.)

The trust can also be made visible by the oppressive and intrusive actions of the government, e.g. certain types of surveillance. If the mistrust is shown and the citizens do not trust the governments' rationale for the surveillance, the citizens may start acting to prevent the said surveillance by e.g. leaving their cell phones to home when leaving the house. This, while may seem a good and refreshing act against the omnipresent and pervasive digitalization can and will have by-products, e.g. of people not being able to call help when they need it. And yet, people are still able to choose to leave their mobile devices home if they want to, so it should not be the government's task to promote any involuntary tracing of people, at least not with ramifications. Moreover, if it is a possibility to avoid governmental consequences, e.g. be charged with a felony, by leaving one's mobile phone to home, will it become mandatory? Not likely. Still, it is good to remember that a person is not their cell phone and yet the tracking of the mobile devices seem to be a good idea for some.

Samuel Bentham, the brother of famous Jeremy Bentham, introduced the idea of the Panopticon in late 18th century. (Bentham, 1843.) The idea of the panopticon was to build a prison where the inmates could always be unobtrusively followed from a central tower. The inmates would not be aware when, if at all, the guards were monitoring their activities and thus while they had to assume that they were always monitored thus altering their way of behaviour. Foucault (Foucault, 1975) modified the concept to include the whole society where the subjects of the panopticon are not criminals but citizens. If this kind of systems would be implemented, they would not only have a profound effect to alter the behaviour of the citizens', but moreover to break the trust between the citizens and the government and replace it with control.

The panopticon has been used to describe various surveillance scenarios, for example mass Internet surveillance (Hakkala, 2017). One aspect of Internet surveillance is that you do not know whether you are the target of surveillance or not, as it usually happens on metadata level, gathered from various Internet service

providers' networks via lawful interception. You can assume that all your actions are monitored, even when it is not the case. Additionally, metadata is not very anonymous. Mere location data is very identifying (Song, Qu, Blumm, & Barabási, 2010) and just by observing telephone and message metadata it is possible to make very accurate assessments on the contents of communications (Mayer, Mutchler, & Mitchell, 2016).

One aspect of surveillance is that it has a tendency to expand when new tools and techniques are taken into use, perhaps for another purpose originally, but if sufficient surveillance potential is identified, it may be very difficult to decommission temporarily set up systems after their original use window has passed.

Forced trust (Hakkala, Heimo, Hyrynsalmi, & Kimppa, 2018) (see also Heimo, 2018, pp. 43–46) describes a situation where users of an information system, device or service have practically no options but to use a system that has been given to them from above, either from government or employer, regardless of any security, privacy or other concerns they may have. Additionally, by not using the system or service the users are significantly at a disadvantage compared to others who use the provided systems.

The asymmetry between government and citizens is highlighted in the tracking applications for COVID-19 taken into use all around the world. While many applications take privacy seriously and at least attempt to protect personally sensitive data, in some societies there are no options. In China, a contact tracking application will give you a green/yellow/red code based on your location, contact and activity history. Depending on the colour, you may or may not use public transport, travel outside your hometown, or whatever restrictions the authorities have enforced at the time. It can be argued that this is a practical method for managing a pandemic, but the options for those who do not trust the authorities are very few. One factor that seems to come up often is that the Chinese have a different attitude and outlook regarding surveillance and government involvement in their lives – and this may be well and true.

The adoption of tracking technologies such as those discussed in this paper can be justified in the case of a global pandemic that threatens the lives of millions of people. The real problems manifest only when the pandemic is over and societies return to normal pre-pandemic life. All the systems and tracking capabilities that have been built during times of crisis are still there, and the temptation to continue using them for other purposes may be too strong to resist.

The government can also act with private sector to violate the digital rights of the people. For example at least Facebook (Mosseri, A., 2017), Google (Dash, S., 2020) and Twitter (BBC, 2020i; Helm, Graham-Harrison & McKie, 2020) have taken action to remove “fake news” around the corona virus. However, as some of these social media postings have been made by top politicians of their respective countries, e.g. the president of Brazil (Wong, 2020) or the officials of U.S., there can be some pondering around is this censorship political. As Heimo & Kimppa (2020) argue, the censorship by the private companies is still censorship while it is done in a public forum. ¹

¹ As this paper was about to be submitted, Twitter and POTUS got into a heated argument with each other as the former had included a fact-checking message to a post made by latter. As the information is still quite new and rather unclear, the occasion is not included in this paper.

4 Freedom of speech and coercion

Yet, the ‘official knowledge’ has been changing during the crisis thus making the censorship even more alerting. As it seems to be the current understanding, the pandemic could have been a lot less severe, if a late Chinese ophthalmologist, M.D. Li Wenliang had not be censored (see e.g. Helm, Graham-Harrison & McKie, 2020; Kuo, 2020). The understanding of the virus and the disease has been evolving – as is proper in science – and therefore the governmental guidelines in different countries have been altered to best match the current situation and knowledge. However, if the current governmental knowledge is also being kept as a truth against which the information possibly being censored is being compared, there is a problem – a problem which leads to this pandemic in the first place!

It is altogether understandable that there is a requirement for giving ‘proper’ information and there is a lot of harm coming to happen if we let ourselves be led with false information. Yet again the fact-checking should concentrate on verifiable facts and not be opinion journalism which it has been criticized about (see e.g. Riddell, 2020; Robertson, 2020). Moreover, the limitation of social media to be a tool to allow only ‘government produced truth’ can be seen more threatening. In the handling of the crisis it is important to understand that the government – as in M.D. Li Wenliang’s case shows and various governmental statements and the statements by WHO confirm – can be wrong from time to time (STT-AFP, 2020; Frei, 2020). Or as this statement from WHO representative illustrates:

[...] but outside China currently we have around 440 cases and so we cannot say it's a pandemic even if we have those few clusters of cases in each of its these countries the contact are traceable. We know the chain of transmission and the authorities are reporting regularly the cases, but things are under control and [...]

– **Dr. Briand, Director of Pandemic and Epidemic Diseases at the World Health Organisation in television interview 12th of February 2020. (Frei, 2020.)**

It is understandable that the task of Dr. Briand had to handle, even without the global political connotations, was, if not impossible, at least extremely hard, and they had to work with the knowledge at hand. Please notice that the idea of this paper is not meant to criticize the work of WHO, but to show that even with their vast knowledge, connections, and wisdom they can be wrong. Hence, to enforce censorship based on their statements, or statements of any other, can lead a truth to be censored. As happened with Dr. Li’s case in China. Therefore, when we ask for fact-checking, we must ask first: who is giving the facts and who is evaluating them? And is it proper to censor differing opinions, and if, when and why? Should we print warning labels on top of 90 % of claims in the social media “this cannot be verified”, just to be sure?

Don't we trust anymore that people are capable to media literacy and critical attitude when using the social media?

The same also applies to all other digital surveillance. Should we erode privacy away just to be sure? Not likely. The problem with coercion in societal level is described in Harisalo & Miettinen's 2010 book:

"The road to coercion is often insidiously paved with the concentration of political power, national programs, and the restriction of political competition. Every democratic system is also prone to these practices. With the exception of large-scale disasters and wars, coercion does not serve the changing needs of the people as well as is commonly assumed. Coercion usually creates countermeasures aimed at correcting the imbalance of power and demanding compensation for unwanted experiences where necessary. These situations are usually difficult to deal with and often lead to an uncontrollable outcome. They have a long impact in the community. Recourse to coercion should be avoided for as long as possible, as its consequences are often unforeseen." (Harisalo & Miettinen, 2010, s. 175.)

5 Conclusions

Therefore, it seems that there are a multitude of methods to be used in the digital world to counter the crisis such as COVID-19 pandemic. However, as with their physical world subsidies – if we wish to think dually with these intertwined entities – they share a number of problems with basic human rights. Different governments around the world have tried or planned a number of these methods with varying success rates and varying levels of rights' violations, but the discussion should slowly be turned to the future: what shall we do next time?

As the pandemic can turn to worse, or a new pandemic or different kind of crisis might be around the next corner, we should be ready not only with medical-, meal-, and military-wise but also be vigilant to understand the vast possibilities and the deep pitfalls the technology brings us. Whereas tracing human behaviour in abstract level to improve understanding of the spreading of the disease can be helpful and does not

² Translation, original in Finnish: ”Tie kohti pakkovaltaa on usein salakavalasti päällystetty poliittisen vallan keskityksellä, kansallisilla ohjelmilla ja poliittisen kilpailun rajoittamisella. Jokainen demokraattinen järjestelmä on myös altis näille käytännöille. Suuren mittaluokan katastrofeja ja sotia lukuun ottamatta pakko ei palvele ihmisten muuttuvia tarpeita niin hyvin kuin on tapana yleisesti olettaa. Pakko synnyttää yleensä vastavoimia, joiden tavoitteena on korjata vallan epätasapainoa ja vaatia tarvittaessa hyvitystä ei-toivotuista kokemuksista. Nämä tilanteet ovat yleensä vaikeita käsitellä ja johtavat usein hallitsemattomaan lopputulokseen. Ne vaikuttavat pitkään yhteisössä. Pakkoon turvautumista olisi hyvä välttää mahdollisimman pitkään, koska sen seuraukset ovat usein ennakoimattomia.”

endanger the privacy of an individual if anonymised correctly, tracing individual cell-phone locations and possibly prosecute them with “social distancing violations” is somewhat harsher tools for the government to have. A voluntary mobile software is not a violation of rights but a mandatory one is – especially due to the pervasiveness of these programs if they are granted an absolute control over the phone, but also due the fact that the government should not mandate what programs should be run in people’s computers in the first place.

Yet there might be situations where even that could be essential, but the justifications of these kinds of methods should be thought before the crisis, not during it. Everything is easier to justify when acting with limited knowledge and people’s lives are in danger and therefore it is easy to over-react and give the government more power than it needs.

Therefore, we need a set of definite set of rules over crisis situations which dictate when and with what reasons the government can limit the rights of the people both with clarifying the existing legislation and writing new, clear and in-detail legislation, to serve in the times of need, especially but not limited to digital rights. Sort of ‘crisis constitution’ as the society must be kept as predictable as possible even during the crisis – and thinking ahead, generating guidelines, rules etc. which are publicly available generates that trust. To emphasize, if censorship or fact-correction of ever-changing facts or political opinions is ever needed in the cases like this, we should be aware of the triggers mandating them, prior the crises. Most of all, the guidelines should include clear instructions on when these powers over people’s digital rights end and how to be sure that the surveillance society does not become “a new normal”.

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