Digital Contact Tracing: Ethicality and Reinforced Surveillance

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The rapid spread of the novel coronavirus has left governments and scientists frantic to drastically flatten the curve of the pandemic. Many researchers have developed an automated version of the traditional contact tracing; one that uses Bluetooth and GPS technologies to map the spread of the virus. Though, this digital contact tracing may be problematic in regard to data privacy, ethicality, and surveillance. This paper takes a view at those focal points and explains why governments need to create an infrastructure prior to implementing these methodologies.

Additional Key Words and Phrases: contact tracing, coronavirus, surveillance, ethical concerns

1 INTRODUCTION

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), or commonly known as the novel coronavirus, has created an international outbreak with death tolls soaring well beyond 1.5 million [13], demanding researchers and scientists to develop techniques to slow the spread of the virus. Among these methodologies involving government co-operation, is contact tracing: "a well established part of the management of infectious disease outbreaks, which aims to interrupt chains of infection transmission (eg, through quarantining contacts), and has formed part of the response to the COVID-19 pandemic in many countries" [3]. Contact tracing operates by accurately modeling an individual's interactions with other 'contacts' and tracking individuals considered probable to be at risk of the virus. To decrease chances of transmission, individuals who may be at risk are asked to take a certain set of precautions (i.e., quarantine). The benefits of contact tracing have been seen in South Korea, who implemented a meticulous contact tracing program and drastically reduced the spread of the virus [17][12].

However, the rapid spread of the SARS-CoV-2 virus has raised questions of how to increase the *speed*, *accuracy*, and *implementation* of contact tracing. Scholars have now been advocating for governments to utilize an automated digital contact tracing [16]. The application of Bluetooth and other unique technologies to increase speeds and the privatization of data have been the focal point of digital contact tracing, which can be seen with Apple and Google's Privacy-Preserving Contact Tracing [1] or MIT's Private Automated Contact Tracing (PACT) [11]. With 40% of Americans not willing to contribute to manual contact tracing [14], far more would not consider digital contact tracing. Although these applications boast the privacy of data, many questions have been poised on the ethicality of these applications. I want to discuss these claims of ethicality and how digital contact tracing reinforces the surveillance of civilians.

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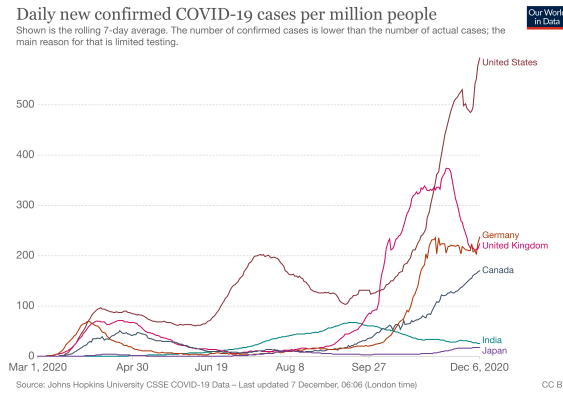
Fig. 1. Country-oriented coronavirus deaths, December 6 [13]

2 ETHICAL CONCERNS AND REINFORCED SURVEILLANCE

There has been a lot of discussion for whether governments should be implementing digital contact tracing as in South Korea. Supporters of digital contact tracing cite South Korea as a successful implementation of digital contact tracing. Yet, they fail to understand that law had a huge part to play in South Korea's endeavor, not to mention public support [6]. They claim that the benefits are extraordinary and would benefit governments in short-circuiting the virus's high numbers. But there are larger questions: would it be mandatory? Will it work if people opt out? Where is the data stored? Who has access to it? What happens with the data once the pandemic is over? Who is excluded from digital contact tracing? What happens for people who do not have mobile devices? There are a plethora of questions that need to be answered, thus why even Apple and Google explaining that their technology cannot be used by governments [9].

2.1 The Problem: It's Keeping Track of Us

Although many of the questions posed above can be simply answered with discussion and thought, the questions regarding data privacy. The era of digitalization is here, and digital contact tracing is the epitome of *datafication*: "the process by which subjects, objects, and practices are transformed into digital data." [21] Digital contact tracing renders the actions of individuals as "machine-readable, quantifiable data for the purpose of aggregation and analysis." [21] These ethical concerns remain unanswered: what data is tracked, where is the data stored, and where does it go? GPS and Bluetooth based apps are intrusive by tracking all movements (i.e., visiting the doctor's office or local supermarket) [8]. The storage of data at a "central server, which is managed by your state or national health authority" [4], though, prompts another question.

The *biggest* concern is that of constant surveillance. Histories of anti-Blackness and the deaths of Breonna Taylor, George Floyd, and so many important others highlight that the United States has been an imperial monster. Apps designed 'with privacy in mind' is how they are broadcasted, but these programs openly admit that, "as required by law," data can be used by agencies like ICE and the law enforcement [23]. With no infrastructure in place to prevent this, it is bound to occur. In fact, it already has – Minnesota Police has used contact tracing technology to *track* protestors [15]. Introducing methods of mass surveillance that analyze every action is inherently problematic and is a governmental framework that should be rejected. This is what I see as digital contact tracing's largest problem. But, despite all this,

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I'm still rather optimistic: if there was to be a transition to an automated contact tracing, it would necessitate a cautious transition with laws and strict rules, to avoid events such as Facebook's data-selling scandal.

2.2 The Problem: Reach

One of the only, but *extremely* crucial, requirements for automated contact tracing is a mobile device that is compatible with the technology utilized in these apps. Without it, nothing will work, which already begs the question of how digital contact tracing works with other people around who do not have mobile devices. Many people may not carry their phones on them when running small errands in which they may be in contact with others, and automated contact tracing is not able to recognize that. Almost 2 billion mobile device *users* [2] [22] do not have the adequate technology to participate in contact tracing, which reinforces a generic hierarchy of the higher class and the lower class (higher class having access to the best technology and the lower class not). Refugees have to change their SIM cards often for safety and would "thwart contact-tracing apps." [22] [10] In conjunction with large portions of homeless populations and underprivileged communities [22] [18] [19] [7], automated contact tracing would serve as a threat. By analyzing numbers that don't accurately represent the population, the system would generate false negatives: "where the app fails to warn users even though they were in fact exposed." [22]. False positives, where the app wrongly determines a person to be quarantined or sent to the hospital risks income inequality for low-wage workers [22] [20] and deportation for undocumented immigrants [22] [5]. If these trends continue, a contact-tracing app would not be able to help in reducing the spread of the virus *and* would strengthen inequalities.

3 CONCLUSION

The COVID-19 pandemic has imposed a difficult question on policymakers, governments, and researchers. Most are stuck with a conundrum on the question of public safety and health concerns. But by doing so, they misunderstand the drastic effects methodologies like digital contact tracing can have on different communities through continued surveillance and lack of resources, raising questions of ethicality. Through a discussion of these crucial points, governments may be able to devise a solution that doesn't spark discomfort, but rather public support.

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