



**Master's thesis in International  
Relations**

**Australia's COVIDSafe digital contact tracing app-  
a technological solution to the political problem  
of pandemic response?**

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**UNIVERSITY OF ICELAND**  
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Final thesis submitted in partial fulfilment of a MA degree in International Relations

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## Útdráttur

Í miðjum COVID-19 alheimsfaraldri hafa flestar ríkisstjórnir/ríki um allan heim verið að leita leiða til að sporna við dreifingu á vírusnum. Í apríl 2020 var gert ráð fyrir að það tæki um það bil 12-18 mánuði áður en bóluefni yrði tilbúið til dreifingar. Ein lausn var að leggja áherslu á notkun nýrrar tækni. Ríkisstjórnir hófu þróanir á snjallforritum(öppum) fyrir síma og snjalltæki til að upplýsa fólk um algengustu einkenni vírussins og til að rekja dreifingu á honum með rakningaraðferðum. Ríkisstjórn Ástralíu gaf út COVIDSafe stafrænt rakningarapp þann 26. apríl 2020 og við kynningu á COVIDSafe appinu gagnvart almenningi, var það kynnt sem lausninni til að samfélagið gæti komist aftur í samt horf og fyrir faraldurinn. Litið var á appið sem lausninni til að fletja út dreifingarkúrfuna á COVID-19 vírusnum auk þess og losa hömlur á útgöngubanninu. Í ritgerð þessari er leitast við með gagnrýnni orðræðugreiningu að kanna að hve miklu leiti, rökstuðningur ríkistjórnar Ástralíu meðfylgjandi COVIDSafe, spegli eða séu á forsendum tæknilausnamiðaðrar (technological solutionism) hugsunar. Í ritgerðinni er einnig kannað að hve miklu leiti COVIDSafe hafi raunverulega leyst það sem ætlast var til. Niðurstöður ritgerðarinnar gefa til kynna að með útgáfu og dreifingu á COVIDSafe appinu speglist tæknilausnamiðaður hugsunargangur hjá ríkisstjórn Ástralíu og að COVIDSafe appið hafi ekki leyst eða lagt mikið af mörkum við að leysa það stóra pólitíska vandamál að finna skilvirka/áhrifaríkt svar/lausn við faraldrinum.

## **Abstract**

In the midst of the global COVID-19 pandemic, most governments around the world have been scrambling to find solutions to stem the spread of the virus. In April 2020, one estimate suggested it would take about a 12-18 months before a vaccine was ready. One approach was to focus on the use of novel technologies. Governments began developing mobile apps to inform people of the most common symptoms of the virus and to track the transmission of the virus by contact tracing. The Australian Government publicly launched the COVIDSafe digital contact tracing app on the 27<sup>th</sup> of April 2020, introducing it as a solution to return society to “normal” – that is, flattening the spread of the COVID-19 virus, and releasing lockdowns. This thesis seeks to establish to what extent the Australian government’s arguments in favour of COVIDSafe reflect the assumptions of technological solutionist thinking, by conducting a critical discourse analysis. It also examines the extent to which COVIDSafe, in reality, actually has provided the solution it was meant to. The findings of the thesis suggest that the Australian government’s development and deployment of COVIDSafe did indeed reflect technological solutionist thinking, and that the COVIDSafe app has not resolved/contributed much to the overarching political problem of crafting an effective pandemic response.

## **Preface**

This 30 ECTS thesis is my final assignment towards my MA degree in International Relations from the Faculty of Political Science at the University of Iceland. The thesis was written under the supervision of Dr Page Louise Wilson. My thanks and gratitude go to Page, my family, friends and my fellow students Logan and Valentina who have been extremely patient, encouraging and providing me with useful tips, feedback, and lots of new knowledge along the way.

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## 1 Introduction

In late 2019, a new virus, closely related to the SARS coronavirus, was discovered in the city of Wuhan, China. The virus was observed to be a severe acute respiratory syndrome called coronavirus 2 (SARS-CoV2)<sup>1</sup>, which has become known as; COVID-19. This highly contagious virus has been characterized by fever and respiratory symptoms.

By December 2020 the virus had already spread to several other regions in China and travellers who had visited these regions then brought the virus to Europe and to the United States by early 2020. On the 11<sup>th</sup> of March, the World Health Organization (WHO), released a statement declaring the virus outbreak to be a pandemic. As part of many governmental toolkits to both stop the spread of the COVID-19 and as key to lifting lockdowns, COVID-19 digital contact tracing apps were considered to be one of the solutions they had been searching for. The digital contact tracing apps were also considered to be an especially important asset to the existing traditional or manual contact tracing.

According to the World Health Organization (WHO), contact tracing can be defined as “the process of identifying, accessing and managing people who have been exposed to a disease, to prevent onward transmission”, which was deemed “an essential public health tool for controlling Covid-19 and for breaking chains of transmission”<sup>2</sup>. By using contract tracing apps, it became possible to make the process either partially or totally automated. However, it does rely on users downloading and installing the software packages voluntarily on their mobile phones that they keep on them at all times. This allows for the social interactions among users to be tracked digitally on their mobile phones as users go about their lives. On the outset that a person receives a Covid-19 diagnosis, that diagnosis will then be transmitted, using a remote infrastructure, which enables the contact tracing app to further analyse and determine if the infected person has been in contact or within close proximity to other people. With this identification of possible infected or exposed citizens, the contact tracing app is able to send out warnings to those mobile phones and citizens in question. These warnings then relay the

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<sup>1</sup> Britannica, (2020). “Coronavirus“ <https://www.britannica.com/science/coronavirus-virus-group#ref1278762>

<sup>2</sup> World Health. Organization, (2020a) “Contact tracing in the context of COVID-19”. Interim Guidance 10.05.20. <https://apps.who.int/iris/handle/10665/332049>.

information and provide instructions such as to enter self-isolation for 14 days, get tested for the virus or monitor for certain symptoms<sup>3</sup>.

As it became clear that the world was facing a pandemic, the World Health Organization (WHO), issued a statement that showed forth that the aim of the surveillance, was to restrict the spread of the virus and support the risk assessment of COVID-19 by governments. This in turn would allow for social and economic activities to continue normally – or at least to be as close as possible or within the limitations set by the governments. In the same interim guidance, the WHO also listed the following objectives for the COVID-19 surveillance:

- enable rapid detection, isolation, testing and management of suspected cases
- identify and follow up contacts
- guide the implementation of control measures
- detect and contain outbreaks among vulnerable populations
- evaluate the impact of the pandemic on health-care systems and society
- monitor longer term epidemiologic trends and evolution of COVID-19 virus<sup>4</sup>

Furthermore, WHO argues that digital technologies have the possibility to enhance and support contact tracing, rapid reporting, and data management<sup>5</sup>. The usage of digital technology and tools are not a new occurrence within public health surveillance, nor are they unique in relation to the COVID-19 pandemic. They are, however, new to this scale. During the 2003 severe acute respiratory syndrome (SARS) in Hong Kong, digital technology was used to identify clusters of the disease. Later when West Africa was hit with the Ebola virus in 2014-2016, mobile phone data became an important tool in their fight against the Ebola virus. These efforts led to a much more efficient contact tracing method than what had been seen

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<sup>3</sup> Hofman A. & et al. (2020) Toward a seamless ethics of Covid-19 contact tracing apps? Ethics and Information Technology, Research gate, 27.11.20

<sup>4</sup> World Health Organization. (2020b). Surveillance strategies for COVID-19 human infection: interim guidance, 10 May 2020 (No. WHO/2019-nCoV/National\_Surveillance/2020.1). World Health Organization.

<sup>5</sup>World Health Organization. (2020c). Digital tools for COVID-19 contact tracing: annex: contact tracing in the context of COVID-19, 2 June 2020 (No. WHO/2019-nCoV/Contact\_Tracing/Tools\_Annex/2020.1). World Health Organization.)

previously, as the mobile data that was received, it was possible to use it to map the different travel patterns which thereby provided a better understanding on how the virus “travelled”<sup>6</sup>.

The combination of predicative analytics and data collection provided by digital technologies along with the development within computing capacity, brings along an amount of information that has not been seen previously. The complexity as well as the newness of digital technologies makes it challenging to examine thoroughly but at the same time the operations have the possibility to expand quite rapidly<sup>7</sup>.

Contact tracing is, by its nature, very invasive to people’s privacy, however, the type of system used for the contact tracing has the possibility to somewhat control the level of invasiveness and privacy infringement that can be experienced through contact tracing<sup>8</sup>. But like any health-care intervention, the COVID-19 digital contact tracing apps must conform with the highest standards of safety and efficiency. Yet despite this being a global pandemic, where most states, independently, are or have developed a digital contact tracing app, there are no global standards for the COVID-19 apps, leaving the design of the apps as well as all legal and privacy issues up to each national government.

The pandemic has brought to light an alarming tendency to deploy surveillance technology quite expeditiously, without questioning the long-term socio-political effects this might have. Although, the contact tracing apps can be considered as a somewhat experiment and a trial run for future pandemics, it might be in our best interest to put big question marks on the techno-solutionism and the continued reverence towards technological claims when the situations like the COVID-19 virus are much more complex than portrayed<sup>9</sup>. One should also consider whether or not the Covid-19 apps can be perceived as extreme cases of the privacy paradox, where governments highlight the benefits that can be gained through apps

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<sup>6</sup> Sekalala, S., Dagon, S., Forman, L., & Meier, B. M. (2020). Analyzing the Human Rights Impact of Increased Digital Public Health Surveillance during the COVID-19 Crisis. *Health and Human Rights*, 22(2), 7. p. 9

<sup>7</sup> Ladders, A., & Paterson, J. M. (2020). Scrutinising COVIDSafe: Frameworks for evaluating digital contact tracing technologies. *Alternative Law Journal*, 45(3), 153-161. p. 154

<sup>8</sup> Hoepman, J. H. (2020). A Critique of the Google Apple Exposure Notification (GAEN) Framework. arXiv preprint arXiv:2012.05097. p.2

<sup>9</sup> Csernaton, R. (2020). New states of emergency: normalizing techno-surveillance in the time of COVID-19. *Global Affairs*, 6(3), 301-310. p. 1-2

and consciously detract the attention from any long-term consequences and concerns that may follow the usage of such technology<sup>10</sup>.

The COVID-19 pandemic has come in the middle of a digital revolution. Recent years have seen a massive development and growth within digital technologies. Particularly when it comes to the usage of social media and smart phones, digital technologies have become imperative in relation to public health surveillance. Government's usage of digital surveillance has enabled them to simply identify and locate outbreaks as well as get involved in contact tracing as a way to stem the disease outbreaks<sup>11</sup>.

This thesis is a critical discourse analysis where the Australian COVIDSafe app is used as a case study. The aim is to gain a better understanding of the reasoning behind the Australian governments arguments for using a digital contact tracing app as a tool to fight the COVID-19 pandemic as well as how the COVIDSafe app was presented to the Australian public. Australia has from the outset of the COVID-19 pandemic underscored the importance of finding suitable and well-functioning technological solutions to combat the pandemic, and, like the majority of the world states, have landed on the solution of using digital contact tracing apps as one of their frontline defences. Thus, the purpose of this thesis is to investigate the justifications, explanations and assumptions underpinning the decision made by the Australian government to use the COVIDSafe contact tracing app, and its centralised system architecture, in response to the pandemic and the restrictions that were applied on the Australian society. This thesis will in particular reveal the extent to which technological solutionism, or other approaches to technology, played a role in this decision making.

As such, the main research question I seek to answer in this study is: Is it possible, and if so, to establish to what extent does the Australian governments argument's favour of its COVID-19 contact tracing apps reflect technological solutionism? The subsidiary research question, which will contribute answering the main research question, as well as enhancing the understanding of the research problem, is as following: Is it possible, and if so, to establish

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<sup>10</sup> Rowe, F. (2020). Contact tracing apps and values dilemmas: A privacy paradox in a neo-liberal world. *International journal of information management*. Accessible from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7324927/>

<sup>11</sup> Sekalala, S., Dagrón, S., Forman, L., & Meier, B. M. (2020). p. 9

to what extent the COVIDSafe contact tracing app has been presented to the Australian public as a solution to returning to a “normal” society?

This thesis is structured as follows. The following chapter focuses on the theoretical framework of the research, where I take a closer look at constructivism. The third chapter explains how the COVIDSafe app works, the fourth chapter shows forth the methodology for this thesis, where the research method, research design, the analysis of data and any possible limitations are presented. In the fifth chapter, I will describe relevant information about digital contact tracing apps as the solution to the pandemic, how useful and/or useless digital contact tracing apps are to the pandemic as well as other considerations concerning the use of digital contact tracing apps. The sixth chapter is dedicated to the public discourse of the COVIDSafe app using a timeline to highlight rhetorical arguments and quotes, relating to the COVIDSafe app, provided by key individuals in the Australian government within the timeframe of 14<sup>th</sup> of April and 1<sup>st</sup> of June 2020 which then continues with the discussion and analysis part of the thesis. The final chapter is the conclusion followed by the bibliography.

## 2 Theoretical framework

### 2.1 Constructivism

The theoretical framework applied to this thesis is that of constructivism. Constructivism and its origins can be traced back to the mid-1980s, however it wasn't until the end of the Cold War that it made its way into the International Relations (IR) as a response to the mainstream theories, and their failure in foreseeing the Cold War coming to an end. Core tenets, such as unequal power distribution among states which defines the balance of power and the conviction that states are self-interested actors who compete for power, are often cited as the reason for this failure, in particular since it was ordinary people, and not states or institutions, that ensured that the Cold War ended. Constructivism explains this by contending that the social world is of our making<sup>12</sup>. Adler has stated that constructivism can be placed between the rationalist approaches such as liberalism and realism, and more interpretative approaches such as critical, poststructuralist and postmodernist<sup>13</sup>. This in turn enables the constructivist approach to look at new areas when conducting empirical and theoretical investigations<sup>14</sup>. The very nature of international relations is continually being reshaped as well as shaped by actors, who often are either influential citizens or powerful leaders.

However, Flockhart<sup>15</sup> has identified four key concepts that shows forth the core of constructivism.

- A belief in the social construction of reality and the importance of social facts.
- A focus on ideational as well as material structures and the importance of norms and rules.
- A focus on the role of identity in shaping political and the importance of “logics of actions”.
- A belief in the mutual constitutiveness of agents and structure and focus on practice and action<sup>16</sup>

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<sup>12</sup> Onuf, N. (2012). *World of our making: Rules and rule in social theory and international relations*. Routledge. Preface.

<sup>13</sup> Adler, E. (1997). Seizing the middle ground: Constructivism in world politics. *European journal of international relations*, 3(3), 319-363. p. 319

<sup>14</sup> Adler, E. (1997). p. 319

<sup>15</sup> Flockhart, T. (2016). *Constructivism and Foreign Policy*. In *Foreign Policy: Theories, Actors, Cases* (pp. 79-94). Oxford University Press. p.84

<sup>16</sup> Flockhart, T. (2016). p.84

Constructivism views the world, and our knowledge of the world, as socially constructed. A view that refers to the nature of knowledge and the nature of reality, or in other words, the epistemology and ontology in research language. One of the most used and well-known examples on the social construction of reality, is Wendt's explanation on how 500 British nuclear weapons are less threatening to the United States as opposed to five North Korean nuclear weapons<sup>17</sup>. Here, Wendt explains that it is not the nuclear weapons, or the material structure, that is the challenge but rather the meaning given to the material structure. When considering the social relationship between North Korea and the United States and Britain and the United States, it is, in principle, considered to resemble each other, a resemblance that is the foundation for their interactions. However, this example shows forth that the meaning of the nuclear weapons is dependent upon the social context they are used in, without the social context, the nuclear weapons do not have a specific meaning. Furthermore, this also shows how constructivism will, by including the effects of beliefs and ideas on world politics, move beyond the material reality. For constructivism, this also entails that they are open to the prospect of change due to the reality always being under construction, or in other words, depending on the beliefs and ideas an actor holds, the meanings are not fixed and can change over time.

Constructivists claim that structure and agency, should be perceived as equally constituted<sup>18</sup>, meaning that agency can influence structures and vice versa, structures can influence agency<sup>19</sup>. Here the structures are referring to the material and the ideational elements of which the international system consists of, whereas agency is the individual and or state who have the ability to act<sup>20</sup>. This can also be applied to the above-mentioned example by Wendt, where the United States and North Korea's shared antagonistic social relation portrays the intersubjective structure, such as the shared beliefs and ideas among the states, whereas, as the actors both the United States and North Korea have the agency to reinforce or alter, the already existing, social relationship or structure of animosity between the two states. However, such reinforcements or alterations are dependent upon the ideas

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<sup>17</sup> Wendt, A. (1995). Constructing international politics. *International security*, 20(1), 71-81. p. 73

<sup>18</sup> Checkel, J. T. (1998). The constructive turn in international relations theory. *World politics*, 50(2), 324-348. p. 328

<sup>19</sup> Fierke, K.M. (2016). Constructivism. In Dunne, T, Kurki, M, and Smith, S. (Eds). *International Relations Theories: discipline and diversity*. (pp.161-178). Oxford University Press, USA, 2016. p. 165

<sup>20</sup> Fierke, K.M. (2016). p. 165

and beliefs held the two states, which in turn would change the social relationship of the two states<sup>21</sup>. When interpreting the world and the actions of others, constructivists rely upon shared knowledge about material things, and using indicators such as language, symbols, and rules as a way to give meaning to the situation in question<sup>22</sup>. Without the shared knowledge, neither material forces nor actions will have any meaning but at the same time it is the material forces and the collective meaning that will in the end organize our actions as well as account for the structure<sup>23</sup>.

This approach differs quite significantly from that of realists, who claims that the international system and its anarchic structure is what determines a states behaviour, whereas constructivist have expounded on the idea that “anarchy is what states make of it”<sup>24</sup>, meaning that the interpretation of anarchy is dependent upon what meaning the actor assign to it.

Another important feature of constructivism is the importance of social norms, which in turn have been identified as “a standard of appropriate behaviours for actors with a given identity”<sup>25</sup>. According to Wendt, “structures are often codified in formal rules and norms”<sup>26</sup> and as such it is expected that states, who adhere to a certain identity, will comply with the associated norms for that particular identity. There is also the idea that some actions and behaviours are more preferable and accepted than others, a process that is also known as the “logic of appropriateness”<sup>27</sup>.

In order to gain a better understanding of norms, Finnemore and Sikkink, have identified three different types of norms: regulative norms, constitutive norms and prescriptive norms. Where regulative norms constrain and order behaviour, the constitutive norms will establish new actors, categories or interest of action as opposed to the prescriptive norms where

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<sup>21</sup> Wendt, A. (1995). p. 73-74

<sup>22</sup> Flockhart, T. (2016). p.85

<sup>23</sup> Flockhart, T. (2016). p.85

<sup>24</sup> Wendt, A. (1992). Anarchy is what states make of it: the social construction of power politics. *International organization*, 46(2), 391-425. p. 395

<sup>25</sup> Katzenstein, P. J. *The Culture of National Security: Norms and Identity in World Politics*, 1996. p.5

<sup>26</sup>Wendt, A. (1992). p. 399

<sup>27</sup> March, J. G., & Olsen, J. P. (1998). The institutional dynamics of international political orders. *International organization*, 52(4), 943-969. p. 951-952

certain norms are prescribed, stating that from the perspective of those promoting the norms there are no bad norms<sup>28</sup>.

Although constructivists agree that norms do have a structural function, being both constitutive and constraining, the importance of the norms are dependent upon how relevant the agents consider them to be for themselves. This has also been referred to as the “structure of relevance”<sup>29</sup>. However, it is important to note that before the norms get accepted and becomes an expected behaviour, relevant state actors will have to adopt as well as internalise the new norms into their own practices<sup>30</sup>.

As already mentioned, one of the key features of constructivism is the concept of identity. Here, they claim that the agent’s understanding of self, its relationship with others and its placement in the world is what makes up the identity<sup>31</sup>. However, they also argue that states, through their socially constructed interaction with other actors, can obtain multiple identities. According to Hopf, identities are, in respect to a set of action, highly significant as it reveals certain preferences or interests<sup>32</sup>. He also argues that in order to establish a certain predictability and order within international politics and domestic society, identities are a necessity. Hopf also claimed that the “durable expectations between states require intersubjective identities that are sufficiently predictable patterns of behaviour”<sup>33</sup>.

This is, however, very much in contrast to the liberalists and realists’ claim that actors within international politics, can only hold one pre-existing identity, as the states self-interest are involved in reproducing and producing a stable and predictable world<sup>34</sup>.

When considering the COVIDSafe app, as well as other COVID-19 apps from a constructivist point of view, we gain a better understanding of how technology are incorporated into the social world as well as it shows forth the importance of technology in the social construction. To understand how technology is used, it is argued that one must first

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<sup>28</sup> Finnemore, M., & Sikkink, K. (1998). International norm dynamics and political change. *International organization*, 52(4), 887-917. p. 891

<sup>29</sup> Flockhart, T. (2016). p. 86

<sup>30</sup> Flockhart, T. (2016). p. 86

<sup>31</sup> Flockhart, T. (2016). p. 87

<sup>32</sup> Hopf, T. (1998). The promise of constructivism in international relations theory. *International security*, 23(1), 171-200. p. 175

<sup>33</sup> Hopf, T. (1998). p. 174

<sup>34</sup> Flockhart, T. (2016). p. 87

understand how technology are incorporated into the social context. Furthermore, when looking at why technology is either accepted or rejected, it must be examined in relation to the social world.

The following table shows the differences between a standard and constructivist view on science and technology as presented by Bijker<sup>35</sup>.

**Table 1:** Standard and Constructivist Images of Science and Technology by Bijker<sup>36</sup>

<b>Standard View of Science and Technology (and Society)</b>	<b>Constructivist View of Science and Technology (and Society)</b>
Clear distinctions between the political and the scientific/technical domain.	Both domains are intertwined: what is defined as a technical or as a political problem will depend on the particular context.
Difference between “real science” and “trans-science”.	All science is value-laden and may-again depending on the context-have implications: thus, there is no fundamental difference between “real -science” and “trans-science”, “mandated science” or “policy-relevant science”.
Scientific knowledge is discovered by asking methodically sound questions, which are answered unambiguously by nature.	The stabilization of scientific knowledge is a social process.
Social responsibility of scientists and technologists is a key issue.	Development of science and technology is a social process rather than a chain of individual decisions: political and ethical issues related to science therefore cannot be reduced to the question of social responsibility of scientists and technologists.
Technology develops linearly, e.g., conception-decision-operation	Technology development cannot be conceptualized as a process with separate stages, let alone a linear one.
Distinction between technology’s development and its effects.	The social construction of technology is a process that also continues into what is commonly called its “diffusion stage”: the (social, economic, ecological, cultural) effects of technology are thus part of the construction process and typically have direct vice versa implications for technology’s shaping.
Clear distinction between technology stimulation and regulation.	Stimulation and regulation may be indistinguishable goals but need not necessarily be implemented separately.
Technology determines society, not the other way around.	Social shaping of technology and technical building of society are two sides of the same coin.

<sup>35</sup> Bijker, W. E. (2001). Understanding technological culture through a constructivist view of science, technology, and society. SH Cutcliffe and C. Mitcham, eds, 19-34. p.22-23

<sup>36</sup> Bijker, W. E. (2001). p.22-23

Social needs as well as social and environmental costs can be established unambiguously.	Needs and costs of various kinds are also socially constructed – depending on the context, they are different for different relevant social groups, varying with perspective.
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As can be seen from table 1, the standard view, which still is one of the more predominantly views among students, citizens and practitioners, is the standard belief that scientific knowledge is value-free, objective, and discovered by specialists<sup>37</sup>. Technology is, within society, considered to be an autonomous force where the workings of technology is part of an intrinsic property of the technical process and its machines.

Among the standard images of technology is the assumption that scientific knowledge is the best option for solving numerous problems. In relation to political thought, this often leads to “technocracy”<sup>38</sup>- where technology is considered to be a sufficient end in itself as well as where the values of power, rationality and efficiency are regarded as independent of context. Although the standard view is aware that technology could possibly be applied to more negative circumstances, it is still maintained that it is not the technology that is to blame, but the users<sup>39</sup>.

The constructivists, on the other hand, believe that both the technological/scientific and political domain is intertwined and where the meaning and use of those specific domains are dependent upon the context it is used in. Constructivism also states that the human action is not determined by technology, but instead that human action is what determines technology.

Table 1 shows that constructivist considers the development of technology to be non-linear, which is quite opposite to the standard view on technology. According to constructivist, the development of technology is dependent upon, as well as being affected, by the economic, cultural, and social developments that are occurring at any given time. Furthermore, the development of technology is also contingent upon the demands the by the different social groups and their views and needs. However, although the technological development is dependent upon society, the same can be said about the societal development.

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<sup>37</sup> Bijker, W. E. (2001). p.21

<sup>38</sup> Bijker, W. E. (2001). p.22

<sup>39</sup> Bijker, W. E. (2001). p.22

However, when constructivist talk about “social technology”, it is usually referring to two different distinctions. It is either used to refer to it as an approach within research which focuses on societies technical alterations that occurs in both contemporary and historical studies, or it points towards the theory of how technology develops<sup>40</sup>.

## **2.2 Methodology**

### **2.2.1 Research Method**

This thesis is based on a qualitative research design. By using a qualitative research, I can gain a comprehensive understanding of the participants own perspective, attitudes, and behaviour regarding the question at hand<sup>41</sup>. Wang and Park states that a qualitative research is used when the purpose of the research is to report patterns and relations between different themes in the data by systematically analyse, summarize, and interpret data that is non-numerical, and by doing so, to be able to narrate the setting thoroughly. Qualitative research methods are often used when the research is exploratory, which in turn corresponds to the usage of exploratory research questions for this thesis. Since the research is relying on interpretation as a way to understand how the COVIDSafe app has been presented to the Australian public and whether or not they have used a technological solutionist approach concerning the COVIDSafe app, it is, according to Wang and Parker, more correct for this thesis to use a qualitative method as opposed relying on a quantified empirical information to study human behaviour <sup>42</sup>.

### **2.2.2 Research Design**

The research design for this thesis is a critical discourse analysis (CDA). According to Fairclough and Fairclough, a discourse can be described as the social use of language, it looks at how the language is used in social contexts for instance in the “construction “of social reality<sup>43</sup>. CDA focuses on how social-power abuse and inequality have been accepted, legitimated, resisted and reproduced by talk and text in a political and social context. Due to the CDA being

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<sup>40</sup> Bijker, W. (2015). Social construction of technology. International Encyclopedia of the Social & Behavioral Sciences, 2nd edition, 135-140. p.135.

<sup>41</sup> Wang, G. T., & Park, K. (2016). p.89-90

<sup>42</sup> Wang, G. T., & Park, K. (2016). Student research and report writing: From topic selection to the complete paper. John Wiley & Sons.p. 86

<sup>43</sup>Fairclough, I., & Fairclough, N. (2013). Political discourse analysis: A method for advanced students. Routledge.p.78

considered an oppositional research, the purpose of the critical research analyst is to gain further knowledge, reveal as well as challenge social equality<sup>44</sup>.

According to Van Dijk, the general properties of a critical research on discourse can be summarised like this:

- It focuses primarily on *social problems* and *political issues* rather than the mere study of discourse structures outside their social and political context.
- This critical analysis of social problems is usually *multidisciplinary*.
- Rather than merely *describe* discourse structures, it tries to *explain* them in terms of properties of social interaction and especially social structure.
- More specifically, CDA focuses on the ways discourse structures enact, confirm, legitimate, reproduce, or challenge relations of *power abuse (dominance)* in society<sup>45</sup>.

CDA is rooted in critical social science, where the discourse is perceived as a part of the concerns that the critical social science raise and where the ideas and concepts in social life are important aspects that should be presented in a systematic and detailed treatment through the usage of discourse<sup>46</sup>. There are two fundamental characteristics when it comes to critical social science, the normative and explanatory. The normative looks at the true or false practices and social belief and if they are harmful or beneficial. The normative critique will additionally “evaluate social realities against the standard of values taken as necessary to a “good society””<sup>47</sup>. The explanatory critique seeks to discover the reason social realities are the way they are, how they have been altered over time and how they are sustained. It, furthermore, searches for reasons why a given social order actually works. Another purpose of critical social sciences is to distinguish what can obstruct or facilitate such changes. Although both forms of critique rely on discourse, their approach to discourse is different, where the normative critique emphasises on the asymmetric power relations and forms of domination, searching for a manipulative discourse that is an important part of certain forms of domination. The explanatory critique will include explanations for certain types of

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<sup>44</sup>Van Dijk, T. A. (2015). Critical Discourse Analysis. In Tannen, D., Hamilton, H. E., & Schiffrin, D. (eds). The handbook of discourse analysis, 466-485. John Wiley & Sons. p. 466

<sup>45</sup>Van Dijk, T. A. (2015). p. 467

<sup>46</sup>Fairclough, I., & Fairclough, N. (2013). p. 79

<sup>47</sup>Fairclough, I., & Fairclough, N. (2013). P. 79

discourses that have an effect on social causes as well as reasons for social phenomena's that have the possibility to affect the discourse<sup>48</sup>.

### **2.2.3 Analysis of data**

For this thesis the data will be analysed by using a content analysis which correlates with the qualitative research design. The qualitative data used for the analysis will consist of both primary and secondary data. The primary data is based on the official data from the Australian government as well as other official data from organisations and ministries that are relevant to the development COVIDSafe contact tracing app in addition to press releases and speeches which will also be included in the primary data. The main focus, for the analysis of Australia's COVIDSafe app, will be on the data that was released from 14<sup>th</sup> of April to 27<sup>th</sup> of May 2020, however, relevant data that were released after 27<sup>th</sup> of May 2020 will also be included in the research material, but it is then considered more as a supplement to the main data analysis. The secondary data will consist of academic reports, peer-reviewed books, reports, articles, newspaper coverage as well as news that are connected to Covid-19 contact tracing apps and the COVIDSafe app.

In order to reduce and analyse the collected data, the thesis will apply an analytical approach using primary and secondary data Covid-19 contact tracing apps. To reduce the volume of data, one of the main focuses will be to look at the material that directly focuses on the arguments the Australian government used concerning the COVIDSafe contact tracing app, looking for patterns and themes that are fitting with an inductive approach.

### **2.2.4 Possible limitations**

The collected material will be based on documents and publications that are written in English, which should not create any language barriers that could possibly halt this research.

When conducting a research there will always be a question about ethical issues that may occur during the research process. In order for ethical standards to be met, it is important for this thesis to use data that are published by official and well recognised sources like from the Australian government and peer reviewed research. Furthermore, it is important to be very conscious how these sources are used in order to avoid plagiarism and to present the results and data as they are received without personally influencing the outcome of the data. I do not

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<sup>48</sup> Fairclough, I., & Fairclough, N. (2013). p. 79

have any connection to any of the authors of the Covid-19 contact tracing apps policies nor, at least to my knowledge, any connection to any other authors or persons for my other data sources.

### 3 Understanding how COVIDSafe works

The reasoning and justification for using digital contact tracing apps has for the most part been based on it being cost and time effective, which is quite the opposite of traditional or manual contact tracing. Another reason has been the reach and volume digital contact tracing has for processing capacity. By using the digital contact tracing apps, the health authorities are not dependent upon the memory of the person who has been infected to help identify strangers who could have been exposed to the virus. It would be possible to identify a much higher number of potential infected individuals by calculating proximity of phones and determine how and who they have intersected with. Table 2 shows a comparison of the different contact tracing approaches:

**Table 2** Comparison of contact tracing approaches by Riemer et al<sup>49</sup>

Approach	Example	Benefits	Drawbacks
<b>Manual Contact Tracing</b>	Common practice at prior pandemics, such as MERS, SARS1, or HIV	Well understood, effective, accepted, and institutionalised	Error-prone, time-intensive, labour-intensive, privacy-invasive, does not scale in rapid outbreaks.
<b>Surveillance Tracing</b>	South Korea’s “Virtuous Surveillance”	Effective, top-down, comprehensive, no population acceptance needed.	Not suitable for individualistic societies, highly privacy invasive, risk of surveillance state.
<b>Proximity Tracing (centralised)</b>	Australia’s COVIDSafe and Singapore’s TraceTogether apps	Effective (if widely used), public sector, controlled, integrated with manual tracing.	Privacy concerns towards governments, no automatic rollout possible.
<b>Proximity Tracing (decentralised)</b>	Apple-Google’s Exposure Notification	Effective (if widely used), global, not privacy invasive, infrastructure already in place, direct OS access, automatic rollout possible.	Private sector controlled, privacy concerns towards corporations, lack of public control and no integration with manual tracing.

<sup>49</sup> Riemer, K., Ciriello, R., Peter, S., & Schlagwein, D. (2020). Digital contact-tracing adoption in the COVID-19 pandemic: IT governance for collective action at the societal level. *European Journal of Information Systems*, 29(6), 731-745. p.733

At the same time, it is important to notice that there are several pitfalls when using apps as part of contact tracing, like false negatives where the number of infected are underrepresented as opposed to a false positive, where the number of infections that are being reported, are overrepresented. There is also the possibility where individuals are reported to have been exposed to infection despite the chance of transmission being slim to nothing due to, for instance, being separated by walls or other physical barriers, a feature that digital contact tracing apps is not equipped or sophisticated enough, at this time, to tackle<sup>50</sup>.

### **3.1 Different contact tracing apps**

The smartphones, with their already installed location tracking, either via GPS and WiFi, or the built in Bluetooth interface, allows for proximity detection and communication with other smartphones that are close by. The majority of the COVID-19 contact tracing apps that have been developed are centred around the proximity tracing, which relies on the strength of the Bluetooth signals to determine whether two, or more, smartphones have been close enough for their users to have been exposed to the virus<sup>51</sup>.

#### **3.1.1 Mobile Operator Contact Tracing**

The mobile operator can establish the location of the mobile phone by using the mobile operator's infrastructure. The advantage of using this type of contact tracing, is that it is non-intrusive and can, where the legal framework is in order, be set up without any user intervention. However, due to the lack of accuracy along with the privacy concerns of mapping an individual's location trail along with trails of those who have been exposed to the virus, makes this a rather unsuitable choice for contact tracing method<sup>52</sup>.

#### **3.1.2 Location-based Contact Tracing**

By using the device's capabilities, smartphones can self-locate, either by using WiFi or GPS. Although GPS provides a very precise location, it works best and for the most part outdoors. However, due to the majority of the virus exposure happens indoors, it is possible to use the

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<sup>50</sup> Soltani, A., Calo, R., & Bergstrom, C. (2020).

<sup>51</sup> Crocker, A., Opsahl, K., & Cyphers, B. (2020). The challenge of proximity apps for COVID-19 contact tracing. Electronic Frontier Foundation.

<sup>52</sup> Legendre, F., Humbert, M., Mermoud, A., & Lenders, V. (2020). p.6

device-side cell tower multilateration and crowd-sourced WiFi localisation to determine the accuracy of the proximity between individuals<sup>53</sup>.

### **3.1.3 Proximity-based Contact Tracing**

A location-based contact tracing dependent upon an absolute geographical location, Bluetooth transmits small range signals which are then picked up, by another mobile phone.<sup>54</sup> Using the Bluetooth option means that a person's absolute location does not have to be revealed as well as it provides a much more accurate location proximity, particularly indoors. However, as with the location-based contact tracing, the proximity-based contact tracing also requires the user to install an app on their smartphone.

## **3.2 System Architecture**

The two most common system architecture of the COVID-19 apps is the centralised and the decentralised architecture. The centralised models will use specific COVID-19 apps, sending random identifiers and the accumulated data to a centralised system. All of the data that is collected through the centralised models are stored on local servers, where only authorised healthcare personnel have the possibility to access the stored data. The centralised system automatically identifies the interacted phones by decrypting the identifiers<sup>55</sup>. The COVID-19 apps that uses the decentralised model, will store the collected data on the user's mobile device. However, if a user is diagnosed as positive for the COVID-19 virus, the data will be uploaded to a centralised system with the permission from the user<sup>56</sup>.

## **3.3 The Australian COVIDSafe digital contact tracing app**

The COVIDSafe roll out commenced in April 2020, at a time when there were still quite a lot of uncertainty on how widespread the COVID-19 transmission was, not only in Australia but the world as a whole<sup>57</sup>. Australia was one of the first states in the world to launch a COVID-19 digital contact tracing app, which is based on Singapore's TraceTogether app. However, there were quite a few differences between the two apps, particularly concerning the design of the

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<sup>53</sup> Legendre, F., Humbert, M., Mermoud, A., & Lenders, V. (2020). p.6

<sup>54</sup> Legendre, F., Humbert, M., Mermoud, A., & Lenders, V. (2020). p.6

<sup>55</sup> Azad, M. A., Arshad, J., Akmal, S. M. A., Riaz, F., Abdullah, S., Imran, M., & Ahmad, F. (2020). A First Look at Privacy Analysis of COVID-19 Contact Tracing Mobile Applications. IEEE Internet of Things Journal. p. 5

<sup>56</sup> Azad, M. A., Arshad, J., Akmal, S. M. A., Riaz, F., Abdullah, S., Imran, M., & Ahmad, F. (2020). p. 5

<sup>57</sup> Burdon, M., & Wang, B. (2021). Implementing COVIDSafe: The Role of Trustworthiness and Information Privacy Law. Law, Technology and Humans, 3(1), 35-50. p. 37

app as well as the intended usage of the data. The COVIDSafe required more registration data than the TraceTogether such as name, age, mobile number and post code, whereas the only identity data TraceTogether stored was the users mobile phone number, identification details and a random anonymised User ID<sup>58</sup>. Furthermore, where TraceTogether would generate a separate identifier which would be exchanged with other users, the COVIDSafe app, on the other hand, exchanged encrypted personal information<sup>59</sup>. Additionally, where the TraceTogether had determined that the data could be used legally by enforcement agencies, in cases that were pressing and clear as well as relating to seven defined categories of serious criminal offence, the Australian government had prohibited the use and access of the collected data by law enforcement through the COVIDSafe Act<sup>60</sup>.

The COVIDSafe app was launched on the 26<sup>th</sup> of April 2020<sup>61</sup> and although the COVIDSafe app is based on the TraceTogether app, the development of the COVIDSafe app has been led by the Digital Transformation Agency and the Federal Government, which in turn is overseen by the Attorney's General Department<sup>62</sup>.

The COVIDSafe app was proposed to be a part of the three requirements Australia had set as part of the alleviation of the lockdown laws, where the focus has been on expanding the contact tracing capabilities so that future outbreaks are contained and to provide a broader testing regime, making it easier for the health authorities to identify individuals that are infected with the virus as well as being more accessible for the public to become tested for the virus<sup>63</sup>. Furthermore, according to the Australian Government's COVIDSafe page, there are four reasons why Australia needs COVIDSafe<sup>64</sup>.

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<sup>58</sup>TraceTogether.(2020). TraceTogether Privacy Safeguards.

<https://www.tracetogogether.gov.sg/common/privacystatement/index.html>. Accessed 20.12.20

<sup>59</sup> Burdon, M., & Wang, B. (2021). p. 37

<sup>60</sup> Greenleaf, G., & Kemp, K. (2020). Australia's 'COVIDSafe App': An Experiment in Surveillance, Trust and Law. *Trust and Law* (April 30, 2020). p. 8

<sup>61</sup> Australian Government (2020a) Background to COVIDSafe. <https://covidsafe.gov.au/background.html> Accessed 10.01.21

<sup>62</sup> Nabben, K. (2020). Trustless Approaches to Digital Infrastructure in the Crisis of COVID-19: Australia's Newest COVID App, Home-Grown Surveillance Technologies and What to Do About It. *Home-Grown Surveillance Technologies and What to Do About it* (April 14, 2020).

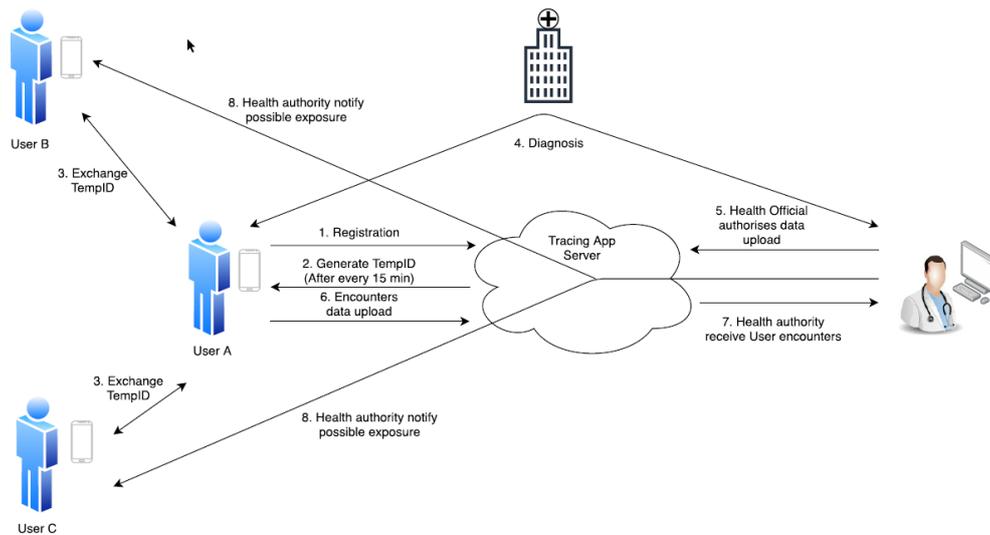
<sup>63</sup> Nabben, K. (2020).

<sup>64</sup> Australian Government Health Department (2020). COVIDSafe: New app to slow the spread of coronavirus. <https://www.health.gov.au/news/covidsafe-new-app-to-slow-the-spread-of-coronavirus>. Accessed 20.11.20

- COVIDSafe helps state and territory health officials to quickly contact people who may have been exposed to COVID-19.
- As restriction are lifted the app helps give us the confidence to know that the virus is not spreading silently in the community.
- COVIDSafe supports the current manual process of finding people who have been in close contact with someone with COVID-19
- The more Australians connected to COVIDSafe, the quicker we can find the virus and prevent the spread

### **3.4 The COVIDSafe system architecture**

As already mentioned in this thesis, the COVIDSafe app is an app that uses a partially centralised architecture, where the aggregated data is stored on centralised servers controlled by the Australian government. In order for a centralised COVID-19 app to work, the user must pre-register with a central server. Once the registration is completed, the user will receive a privacy-preserving Temporary ID, which is generated by the server, for each device. To further ensure privacy, a secret key is used to encrypt the Temporary ID and sent to the device. Only the central server authorities have any knowledge about the secret key. Through Bluetooth encountered messages, the Temporary ID is then exchanged between devices who are close by. If a user is confirmed infected with COVID-19, the user can upload the stored encounter messages to the central server, however, it is important to notice that this is done voluntarily by the user. After the data has been uploaded to the central server, the server will map the Temporary ID that have been exchanged and match them to the individual that have been exposed to the virus.



**Figure 1:** Contac tracing apps that use the centralised architecture by Ahmed et al<sup>65</sup>.

The diagnostics data, which is stored on the mobile device, is sent on a regular basis to the data store<sup>66</sup>. When the data store receives the user data, an automated system will revise the collected data and compare it to the stored data. The compared data will establish whether a notification should be sent out to use in case of a positive diagnosis<sup>67</sup>. The only ones who have access to the data are authorised health personnel.

### 3.5 How COVIDSafe works

The COVIDSafe app operates in the background of the phone throughout the day, however for it to work, the Bluetooth must be turned on and kept running. Unique identifiers of those the user have been in proximity with and are securely logged in the user's device. As previously described, Bluetooth, will exchange a digital handshake with another COVIDSafe user, and log the information about the strength of the Bluetooth signal, the proximity of the other user, time, date as well as the phone model of the other user. However, the data will only be collected if the users have been within 1.5 metres for a period of 15 minutes or more for a digital handshake to be exchanged. The information is then encrypted and stored on the device<sup>68</sup>.

<sup>65</sup> Ahmed, N et al. (2020). p. 134579

<sup>66</sup> Australian Government (2020a)

<sup>67</sup> Australian Government (2020a)

<sup>68</sup> Australian Government (2020a)

The COVIDSafe is a voluntary app, that can be downloaded from both Apple Store and Google Play. When registering to use the app, the user must give up their name or if they so choose, a pseudonym, their age range, mobile number and postcode, however, it does not record the user's location.

The aggregated data is stored on the device for 21 days, which will allow for the 14-day incubation period of the coronavirus in addition to the estimated time it takes to be tested and diagnosed with the virus. The 21-day window is continuously rolling, which ensures that only the digital handshakes that have been exchanged over 21 days are stored on the device, any data that is older than 21 days are deleted.

The encrypted data is non accessible, even for the user itself, however, in the case of a user being tested positive, the user will be asked to upload the collected data to the National COVIDSafe Data Store<sup>69</sup>, however, a user who have tested positive with COVID-19, do have the opportunity to choose not to share their COVIDSafe information. Although a user refuses to share the collected data that is store on the user's device, the infected person will have to go through the same procedures as manual contact tracing, where the person must try to identify all those who have come in contact with the infected individual<sup>70</sup>. Furthermore, the National COVIDSafe Data Storage system is geo-locked, which means that the data or information cannot be taken out of Australia<sup>71</sup>.

A user can request to delete the information that is stored at the National COVIDSafe Data Store, a process that will take about three working days and can be requested either through a SMS or providing a Data Store officer a list of mobile number(s) to be deleted. It is also stated that all COVIDSafe data will be deleted when the pandemic has been declared ended by the Minister of Health<sup>72</sup>.

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<sup>69</sup> Australian Government (2020b) National COVIDSafe Data Store Administrator. <https://covidsafe.gov.au/data-store.html#request-to-delete-info>. Accessed 10.01.21

<sup>70</sup> Australian Government (2020a)

<sup>71</sup> Australian Government (2020a)

<sup>72</sup> Australian Government (2020b)

## **3.6 Other considerations regarding the COVIDSafe app**

### **3.6.1 Security risks when using centralised architecture**

When using the centralised architecture, the server that is used, is viewed as reliable. The server manages the security keys that is used when a TempID is either encrypted or decrypted. In addition to this, the server stores the user's personal identifiable information (PII), however, with the centralised server there is the possibility of data being extracted in case of a security breach on the sever. As such, it is important to ensure that server application is run in a secure domain, where, in order to gain access to the control mechanisms, needs appropriate authentication. Information that is exchanged between the health officials and the server as well as between the server and the user smartphone, must be secure and authorised<sup>73</sup>.

It is important to notice that it is possible for malicious users, within the centralised architecture, to take advantage of un-authenticated BLE contact information. This is done by taking the information that is exchanged between devices, where upon they will begin spreading incorrect contact information by replaying or relaying. If this were to happen, it would most likely increase the number of false positives, when conducting the contact tracing, sending out false alerts to those who are believed to have been exposed to the virus<sup>74</sup>.

However, according to the information given by the Australian Government on their COVIDSafe page, there are no risks for false positive when using COVIDSafe due to territory or state authorities will, before they upload the digital handshakes, have confirmed that the person in question in fact has tested positive for COVID-19<sup>75</sup>.

When it comes to privacy and security, the Australian Government have released a Privacy Impact Assessment, which has been made in compliance with the Privacy Act 1988 and the Australian Privacy Principles, where the COVIDSafe is being detailed<sup>76</sup>.

### **3.6.2 Transparency**

Concerns have been raised about the lack of transparency when it comes to the COVID-19 apps. In states like Ethiopia and Ecuador as well as China and Russia there have been raised some red flags, regarding transparency, as the public are prevented from assessing how much

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<sup>73</sup> Ahmed, N et al. (2020). p. 134585

<sup>74</sup> Ahmed, N et al. (2020). p. 134585

<sup>75</sup> Australian Government (2020a)

<sup>76</sup> Australian Government (2020a).

personal information are collected and where the limit for this amassing of personal data is. Nor does the citizens have any control over what the data is used for, how long it will be retained or what will happen to the data once the COVID-19 pandemic is declared over. For many states the solution has been to include a sunset provision in their policy. The Sunset Law or the sunset provision is a “legal provision that provides an automatic termination of a government program law or agency on a certain date unless the legislature affirmatively acts to renew it”<sup>77</sup>. However, although states have included the sunset provision into their policies, the majority of them have not specified what criteria needs to be fulfilled in order to declare the pandemic as over, making the sunset provision more or less just a “show” for the public.

Although data aggregation, in theory, is considered as a less of a threat towards privacy, transparency is crucial<sup>78</sup>. The companies that do aggregate data through the COVID-19 apps should provide the public information on how they have reached the conclusions they are presenting based on the data, how it is used to impart public health interventions and what risks and limitations the analysis is faced with<sup>79</sup>. However, even though data aggregation is considered, by most governments, to not be too intrusive to people’s privacy, the COVID-19 apps and its use as a part of governmental surveillance, do highlight how very few safeguards are in place to ensure that consumer privacy remain just that-private<sup>80</sup>.

According to Greenleaf and Kemp, one of the transparency deficiencies related to the COVIDSafe app, has been the lack of published research that could show forth that the COVIDSafe app in fact would be effective, nor were there any indications from the Australian government that any such research would be set into motion<sup>81</sup>.

The Australian government was also criticised for not having released the source code off the app before the COVIDSafe app was launched. By releasing the source code prior to the launch, it would have allowed security experts and programming experts the opportunity to search for vulnerabilities and the chance to scrutinise the app, possibly averting some of the challenges and obstacles the COVIDSafe app faced after it was released to the public, such as

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<sup>77</sup> Latham, S. R. (2020, April 8). Sunset law. Encyclopedia Britannica. <https://www.britannica.com/topic/sunset-law>. Accessed 10.04.21

<sup>78</sup> Human Rights Watch (2020) [Website]. Mobile Location Data and Covid-19: Q&A. 13.05.20. <https://www.hrw.org/news/2020/05/13/mobile-location-data-and-covid-19-qa>. Accessed 20.01.21

<sup>79</sup> Human Rights Watch (2020)

<sup>80</sup> Soltani, A., Calo, R., & Bergstrom, C. (2020).

<sup>81</sup> Greenleaf, G., & Kemp, K. (2020). p. 4

drainage of batteries and interference with other apps<sup>82</sup>. The source code was not released until the 8<sup>th</sup> of May 2020, however, that did not include the release of the server code, which usually accompanies the source code. The lack of server code meant that the experts could not examine how the stored data was encrypted, which raised a lot of criticism<sup>83</sup>.

### **3.6.3 Privacy concerns – Contact Tracing**

When it comes to privacy the goal is to maintain and preserve privacy, but at the same time as public wellbeing is secured, which creates quite a lot of tension. By using contact tracing, well established rights to individual privacy are threatened. When using a centralised approach, the user IDs are encrypted and stored on centralised databases. Although the centralised data storage can enable the governments to work more efficiently, there is concerns that this approach could lead to function creep (see chapter 4.4.3 for more information). Privacy advocates seem to prefer the decentralised approach, where the user's data is stored on the smartphone, but this approach makes it more difficult for the researchers and epidemiologists to access and retrieve the aggregated data<sup>84</sup>. Privacy concerns have also been raised regarding the Apple/Google's own solution since it reduces the monitoring and analysis of the public health. Furthermore, this approach presents greater opportunities for Apple and Google to conduct data mining as well as strengthening their position in providing technological solutions for public health<sup>85</sup>.

According to the European Convention on Human Rights, the International Covenant on Civil and Political Rights (ICCPR) and the UN's Siracusa Principle<sup>86</sup> a contact tracing app should follow four different principles in order for to be ethical.

- It must be necessary
- Proportional
- Scientifically valid

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<sup>82</sup> Farrell, P. (2020). Experts raise concerns about security of coronavirus tracing app COVIDSafe. ABC News, 14 May 2020. <https://www.abc.net.au/news/2020-05-14/experts-concerned-about-coronavirus-tracing-covidsafe-security/12245122>. Accessed 15.05.21

<sup>83</sup> Farrell, P. (2020).

<sup>84</sup> Lidders, A., & Paterson, J. M. (2020). p.156-157

<sup>85</sup> Lidders, A., & Paterson, J. M. (2020). p. 157

<sup>86</sup> Morley, J., Cows, J., Taddeo, M., & Floridi, L. (2020). Ethical guidelines for COVID-19 tracing apps. p.31

- Time bound

The Siracusa Principles have become essential, when looking and gaining more knowledge about the human rights exemption when it comes to “health and human rights”. As well as a more critical comprehension of how global health governance is aligned with human rights law and the International Health Regulations<sup>87</sup>.

However, in practice, there will most likely be trade-offs that are dependent upon a state’s attitudes, laws, values, and norms. What might be appropriate and acceptable for Denmark might not apply to Japan. This also includes changes that will occur as the pandemic changes in both scale and spread, what has been accepted today might not be ethically justifiable tomorrow<sup>88</sup>.

To alleviate some of the privacy concerns regarding the COVIDSafe app, Maddocks, an Australian law firm, were commissioned by the Australian government to conduct a Privacy Impact Assessment (PIA)<sup>89</sup> of the COVIDSafe application. The purpose was to establish whether or not the COVIDSafe and its proposed operation, had been developed, by the federal, State and Territory agencies, in compliance with the Privacy Act 1988<sup>90</sup>, in particular regarding the Australian Privacy Principles (APPs)<sup>91</sup>

The PIA identified the following areas which they considered needed further work:

- “the desirability of there being further communication to the public, with clarity about the function and purpose of the App, how the App will work, what personal information will be collected by the App, and how that information will be used”
- “the need for further assurance that personal information collected through the App will only be used for contact tracing”
- “the minimisation of risks associated with loss of control over the personal information collected through the App once the information is disclosed to State and Territory Public Health Officials and Contact Tracers”

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<sup>87</sup> Sekalala, S., Dagron, S., Forman, L., & Meier, B. M. (2020). p. 11

<sup>88</sup> Morley, J., Cows, J., Taddeo, M., & Floridi, L. (2020). p. 31

<sup>89</sup> Maddocks (2020) Privacy Impact Assessment (PIA) Report, 24 April 2020. <https://www.health.gov.au/sites/default/files/documents/2020/04/covidsafe-application-privacy-impact-assessment-covidsafe-application-privacy-impact-assessment.pdf>. Accessed first time 30.11.20

<sup>90</sup> Greenleaf, G., & Kemp, K. (2020). p. 5

<sup>91</sup> Maddocks PIA (2020). p. 4

- “the need to ensure maximum application of the “data minimisation principle”, so that the minimum amount of personal information required is collected”
- “the need to ensure that consent is voluntary, and provided so that Users of the App properly understand how their personal information will be handled”
- “the need to ensure that appropriate consent is obtained from parents/guardians for Users who are children under the age of 16”
- “the need for assurance around potential security risks”
- “further clarity about retention of personal information collected through the App after the end of the COVID-19 pandemic” and
- “the desirability of further clarity about data governance arrangements, including in ICT and other contracts or other arrangements, between entities involved in the implementation and operation of the App”<sup>92</sup>

The Australian government received serious criticism regarding the PIA due to it was only made public at the same time as the COVIDSafe app was launched, and by doing so curtailed a public debate or consideration on the above-mentioned findings<sup>93</sup>. However, some of these issues have been addressed as the Australian government have made updates on the COVIDSafe app. Others were eased somewhat on the 15<sup>th</sup> of May 2020, when the Privacy Amendment (Public Health Contact Information) Act 2020 (Cth) (the Privacy Amendment Act) were accepted by the Australian government. Its purpose was to amend the Australian Privacy Act 1988 (Cth), where it, among others, clearly stated that the usage of the collected data by the COVIDSafe app for any purpose other than contact tracing was considered an offence<sup>94</sup>.

### **3.6.4 Trust**

Trust is a major key when it comes the workings of contact tracing. Establishing trust is paramount for contact tracing to be effective, this was clearly seen during the 1980s when

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<sup>92</sup> Maddocks PIA (2020) p. 4-5

<sup>93</sup> Greenleaf, G., & Kemp, K. (2020). p 5

<sup>94</sup> Abrahams N, Cwalina C, Evans M, Flockhart F, Gamvros A, Lennon J. (2020) Contact tracing apps in Australia. Norton Rose Fulbright. Dec 01 2020. <https://www.nortonrosefulbright.com/-/media/files/nrf/nrfweb/contact-tracing/australia-contact-tracing.pdf?revision=9f35a88a-4124-4c48-b38f-68e86a187050&la=en-au>. Accessed 15.02.21

there was a mobilisation of contact tracing in regard to HIV/AIDS in the United States<sup>95</sup>. Trust is not something an app can establish, which most likely will affect how well the digital contact tracing works. It is important to ensure that there are not presented any false expectation to the public as this will affect the trustworthiness of technologies and policies. As such, simplistic “solutionism”, where it is believed that technology holds, are the key managing a pandemic, most definitely should be avoided<sup>96</sup>.

Although the public are concerned about the privacy implications they could be faced with, the consequences stretch beyond the people’s privacy, including both civil liberties and governmentality. In democratic countries, where digital contact tracing has been launched without receiving any feedback from the public, it could very well lead to a distrust of the technological solutions that are being offered, particularly if the pervasive surveillance logic is incompatible with democratic ideals<sup>97</sup>. In order to get a democratic input regarding digital contact tracing, governments should include lay publics<sup>98</sup> such as non-governmental organisations, civil society representees and advocacy groups. The publics input could further strengthen the governance of the digital contact tracing by including forums, surveys, and notice-and-comment periods.

However, the trust factor also creates a pragmatic dilemma particularly since the efficacy of the contact tracing apps have not been fully established, yet at the same time, in order for digital proximity tracing to succeed it is dependent upon the public’s adherence and uptake of the app<sup>99</sup>. With a continued scepticism of the digital contact tracing apps efficacy, the problem could in the end become a self-fulfilling prophecy, further emphasising the importance of including the public dilemma into the ethical policies regarding the COVID-19 apps.

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<sup>95</sup> Landau, S. (2021). [Website]. Contact-Tracing Apps: What’s Needed to Be an Effective Public Health Tool?. 19.01.21. <https://www.lawfareblog.com/contact-tracing-apps-whats-needed-be-effective-public-health-tool>. Accessed 03.02.21

<sup>96</sup> Ranisch, R., Nijsingh, N., Ballantyne, A., van Bergen, A., Buyx, A., Friedrich, O., ... & Wild, V. (2020). Digital contact tracing and exposure notification: ethical guidance for trustworthy pandemic management. *Ethics and information technology*, 1-10. p.7

<sup>97</sup> Brown, D & Toh, A. (2021). Technology is Enabling Surveillance, Inequality During the Pandemic. *Human Rights Watch*. 04.03.21. <https://www.hrw.org/news/2021/03/04/technology-enabling-surveillance-inequality-during-pandemic>. Accessed 15.04.20. p. 1

<sup>98</sup> Blasimme, A., & Vayena, E. (2020). What's next for COVID-19 apps? Governance and oversight. *Science*, 370(6518), 760-762. p. 761

<sup>99</sup> Ranisch, R., Nijsingh, N., Ballantyne, A., van Bergen, A., Buyx, A., Friedrich, O., ... & Wild, V. (2020). p.7

In regard to the COVIDSafe app, the lack of transparency and the many privacy concerns concerning the COVIDSafe app, as mentioned above, has been quoted as some of the reasons for the COVIDSafe app trust deficiency. Furthermore, the lack of trust has also been ascribed to former incidences where the Australian government has breached public trust in relation to privacy, such as Medicare numbers have ended up on the dark web for sale<sup>100</sup> and the Australian government accidentally publishing a spreadsheet with personal details concerning 10.000 asylum seekers online<sup>101</sup>

#### **4 The role of contact tracing apps with respect to COVID-19**

There has been an increase in the usage of e-government solutions as a response to global and national crisis, providing the public with digital services. Specific mobile apps, online communications and social networks have become a matter of course in all stages of crisis, pre-crisis, crisis, and post-crisis, for most governments<sup>102</sup>. In an attempt to control and steer public behaviour, the majority of the governmental focus during the crisis stage, is on providing the public with information, pushing communication processes by using mobile apps and social networks, whereas during the post-crisis stage, specific and complex technological, social and health processes are part of the governmental response<sup>103</sup>.

It's been argued that in cases of public health problems, governments tend to promote and instil the urgency of compliance with the citizens, stressing the life-threatening risks that can occur in particular during the crisis stage<sup>104</sup>. This kind of governmental communication have also been referred to as fear appeals. Health crisis communication literature<sup>105</sup> argues that the usage of fear appeals has the potential to reduce and contain an infectious disease outbreak, as the fear appeal will work as a motivating factor in altering the citizens behaviour as well as minimizing any social media panic.

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<sup>100</sup> Karp, P. (2019) Australians' medicare details illegally sold on darknet-two years after breach exposed. The Guardian 15. May 2019. <https://www.theguardian.com/australia-news/2019/may/16/australians-medicare-details-illegally-sold-on-darknet-two-years-after-breach-exposed>. Accessed 15.03.21

<sup>101</sup> Belot, H. (2017). Immigration Department's asylum seekers data breach costs taxpayers nearly \$1m in legal fees. ABC News 13.July 2017. [https://www.abc.net.au/news/2017-07-13/asylum-seeker-data-breach-costs-\\$1-million-in-legal-fees/8705326](https://www.abc.net.au/news/2017-07-13/asylum-seeker-data-breach-costs-$1-million-in-legal-fees/8705326). Accessed 15.03.21

<sup>102</sup> Rowe, F., Ngwenyama, O., & Richet, J. L. (2020). Contact-tracing apps and alienation in the age of COVID-19. *European Journal of Information Systems*, 29(5), 545-562. p. 546

<sup>103</sup> Rowe, F., Ngwenyama, O., & Richet, J. L. (2020). p. 546

<sup>104</sup> Rowe, F., Ngwenyama, O., & Richet, J. L. (2020). p. 546

<sup>105</sup> Rowe, F., Ngwenyama, O., & Richet, J. L. (2020). p. 546

In addition to this, governments are also relying on a recursive communication process<sup>106</sup> (e.g., contact tracing) to inform the public about governmental actions., but for governments to take actions, they first need to aggregate data. This is achieved by informing infected individuals through efficient contact tracing and to coordinate, in cooperation with the local health authorities, what is the correct actions and then to carry them out.

Since contact tracing is such a systematic method, it has become part of a disease surveillance strategy, where the main object is to predict, observe and minimise. The contact tracing process can include data retrieval from multiple sources such as routine clinical examination or airport records. The collected data is then used to identify individuals that have been exposed to the virus by an infected person by mapping their movements and then subsequently the movements of those contacts.

Epidemiologists have for quite a long time been quite enthusiastic in their response to the contact tracing apps, especially due to their efficiency, claiming the smartphone apps to be the “silver bullet” when it comes to disease contact tracing<sup>107</sup>. However, the adoption of the digital contact tracing apps has encountered quite a few challenges, including users’ privacy concerns as well as interoperability between mobile devices.<sup>108</sup> As such, there is a need to establish a trade-off between social and behavioural factors, achievable technical performance of new technology and false-positive rates.

It’s been argued that the COVID-19 apps are more like a “technology theatre”, which instead of actually solving the problem, provides the governments with more of a political cover by creating a spectacle in order to make people feel safer<sup>109</sup>. As such, the contact tracing apps have been proclaimed to be the “breakout technology theatre hit” of the response towards COVID-19. Technology theatre is most noticeable, when it is being strengthened through digital and broadcast platforms, which is achieved through expert debates, where the intention is to give the public an impression of an ongoing public debate when there in fact is done very little to engage the public. By diverting public focus towards technology. as opposed

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<sup>106</sup> Rowe, F., Ngwenyama, O., & Richet, J. L. (2020). p. 546

<sup>107</sup> Rowe, F., Ngwenyama, O., & Richet, J. L. (2020). p. 546

<sup>108</sup> Shubina, V., Ometov, A., Basiri, A., & Lohan, E. (2021). Effectiveness modelling of digital contact-tracing solutions for tackling the COVID-19 pandemic. *Journal of Navigation*, 1-34. doi:10.1017/S0373463321000175. p.1

<sup>109</sup> McDonald, S. (2020).

to focusing on multidimensional solutions, which possibly could solve complex policy issues - the technology theatre is at its peak<sup>110</sup>.

Since the first COVID-19 contact tracing apps were released during the spring of 2020 and onwards, the debate concerning the apps have been quite lively. The discussion has ranged from what type of system architecture were used to storage of data, to the usage of a technological solutionist approach, concerns regarding data privacy, ethical and legal concerns and the efficiency of the apps and so on. In the following part of this thesis, I will take a closer look at how contact tracing apps have been considered to be the solution to the COVID-19 pandemic, whether or not contact tracing apps are a useful or useless tool as well as other considerations regarding the usage of contact tracing apps in the fight against COVID-19.

#### **4.1 Contact Tracing Apps- the solution to the pandemic?**

In today's world, technology appears to have become the answer for all day-to-day problems that is encountered along the way. By comparing this to times gone by, when digital equipment was not as developed as today, it shows that there are some very big contrasts between now and then. Before society would have partly relied on mental agility and human resource fullness to solve the same problems which today society has become dependent upon technology to solve. Today's society seems to be highly fixated on the notion that whatever difficulty it might come across, technology will have a solution for it, an idea that in recent years have become known as solutionism.

Although, the majority of the world's population will not dispute the fact that technology can at times offer some practical and social advances, there are increased concerns that society is becoming to wrapped up in the idea that technology holds the answer for any and all problems. A long with this belief comes the expectation and a somewhat frenzy to continuously being able to develop newer, better, and faster technology as long as society has the right codes, robots and programs, firmly stating that society belief that technology is something akin to the Oracle from Delphi, -as if to say it can solve and predict anything.

Perhaps one of the most profound example of a technological solutionist approach, in regard to the COVID- 19, can be found when a number of public health information

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<sup>110</sup> McDonald, S. (2020).

specialist<sup>111</sup> during the first wave of the pandemic, stated that the only infection prevention approach, besides isolation and quarantine, to the pandemic once the spread of the virus was out of control, was through the usage of contact tracing apps<sup>112</sup>. For the higher-income states, the idea that a digital contact tracing app had the possibility to solve the pandemic, was much too attractive and to a certain degree impossible to ignore, resulting in an almost instant universal policy take-up. Already existing tracking technologies, such as Bluetooth and GPS, were repurposed as a response to the pandemic, creating new opportunities for vendors, as the pandemic enabled them to make their products even more visible on the world markets.

Another example on how states have been encouraged to look towards a technological solutionist approach at the beginning of the pandemic, can be found in a news statement provided by the United Nations (UN) and their Department of Economic and Social Affairs<sup>113</sup>, where they stated:

“Governments need to make full use of digital technologies to confront the COVID-19 pandemic...”

and

“The pandemic is compelling governments and societies to turn toward digital technologies to respond to the crisis...”

and finally ending the news statement with:

“Policymakers should seize the COVID-19 crisis as an opportunity to establish tailor-made digital government tools, strategies and collaborations for the future.” The crisis has demonstrated that it is impossible for societies to ignore technological advancements as they are continuing to change business models and people’s everyday lives. Governments should embrace these policy- and techno-logical developments and harvest the digital opportunities that can support the long-term sustainable development of their countries”<sup>114</sup>.

These kind of technological solutionist arguments, which promote technology as a solution for everything, from pandemic response through to sustainable development, show

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<sup>111</sup> Ferretti, L., Wymant, C., Kendall, M., Zhao, L., Nurtay, A., Abeler-Dörner, L., ... & Fraser, C. (2020). Quantifying SARS-CoV-2 transmission suggests epidemic control with digital contact tracing. *Science*, 368(6491).

<sup>112</sup> Ferretti, L., Wymant, C., Kendall, M., Zhao, L., Nurtay, A., Abeler-Dörner, L., ... & Fraser, C. (2020). p. 1

<sup>113</sup> United Nations, Department of Economics and Social Affairs (2020). Digital technologies critical in facing COVID-19 pandemic. 15 April 2020. <https://www.un.org/development/desa/en/news/policy/digital-technologies-critical-in-facing-covid-19-pandemic.html>. Accessed 15.04.21

<sup>114</sup> United Nations, Department of Economics and Social Affairs (2020). (Webpage)

that technological solutionist thinking is not limited to those acting within the science and technology sector but is also present within international organizations as well.

Furthermore, the “approval” and encouragement from respected scientists and well-known organizations regarding technology and its importance, makes it politically easier for states to embrace a technological solutionist approach when seeking to resolve their political, social, and economic issues. However, other scientists, critical of technological solutionism, have stated the following:

“Solutionist approaches lead to inadequate specifications and irrelevant data collection due to partial understanding and recognition of the problem (especially transmission paths of COVID-19)”<sup>115</sup>.

Here the critics are arguing that as there are still too many unknown factors that have not been taken into consideration, using a technological solutionist approach, might not be the most optimal choice or road to go especially regarding the fight against the COVID-19 pandemic.

Evgeny Morozov, who is a writer and researcher on the impact technology has on society and politics, is considered to be one of the biggest critics of technological solutionism. He was one of the first to introduce the term “technological solutionism” when he published his book *“To Save Everything, Click Here, Technological Solutionism, and the Urge to Fix Problems that Don’t Exist”* in 2013. Morozov proclaims that technological solutionism can be described as an ideology where social circumstances are portrayed as problems that, although they are discrete, they can be enhanced or optimised by using a suitable technological intervention<sup>116</sup>. According to Morozov smart technology as well as our social life has been inserted into all aspect of our life, from the monotonous everyday acts to more interesting and exciting happenings. One of the challenges that “solutionists” are faced with is that they seem to define problems in a very comprehensive and singular way, however, the problem the “solutionist” is then faced with, is how they define the problem and not so much the presented solution for that particular problem. In Morozov’s opinion, instead of waiting to get the full picture of the problem, technological solutionists will base their solutions on assumptions that

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<sup>115</sup> Rowe, F., Ngwenyama, O., & Richet, J. L. (2020). p. 545

<sup>116</sup> Gardner, J., & Warren, N. (2019). Learning from deep brain stimulation: the fallacy of techno-solutionism and the need for ‘regimes of care’. *Medicine, Health Care and Philosophy*, 22(3), 363-374. p. 364-365

were obtained as the problem was presented. This view underscores Morozov's claim on how the composition of a problem is just as significant as the presented solution<sup>117</sup>.

Furthermore, solutionist seems to struggle with the fact that for the most part there are no quick fixes for the problems that are presented in front of them, and at times there is also misconception of what really is a problem. It also seems that many solutionists do not want to deal with the complexity of the problems they supposedly represent, whether this is in everyday life or within politics. Instead, they are more concerned with the efficiency of the solutions they are presented with<sup>118</sup>.

Morozov claims that although the proposed solutions are likely to work, that by the time solutionists have reached a solution for the problem, the solutionist have made so many twists and turns that in the end, the problem has become completely unrecognisable. Making it difficult to distinguish what was the original problem and what "new" problem the solution actually resonates with<sup>119</sup>.

Morozov also points toward the paradox that the space for interpretation decreases significantly or disappears completely-, as the technologies becomes smarter or "more intelligent". He uses the example of the introduction of smarter technologies in the kitchen to illustrate on how technology is affecting our way of living. With the new and smart appliances, people no longer rely on cookbooks when making food, today people are surrounded by appliances that are fitted with sophisticated sensors that comprehend what is happening in the kitchen and try to guide us in the "right" direction. As a result, people might get foods that are, perhaps, a bit tastier and more refined, but at the same time people have somehow lost the joy of cooking<sup>120</sup>. However, this does not mean that solutionism should be rejected, instead, if technology was used with some imagination minus the demands for perfection and efficiency, the whole cooking experience could open a new and more challenging avenue, where people are able to conduct experiments that have the chance of improving both their cooking knowledge and cooking skills.<sup>121</sup>.

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<sup>117</sup> Morozov, E. (2013). To save everything, click here: The folly of technological solutionism. Public Affairs. p. 6

<sup>118</sup> Morozov, E. (2013). p. 6

<sup>119</sup> Morozov, E. (2013). p.8

<sup>120</sup> Morozov, E. (2013). p. 11

<sup>121</sup> Morozov, E. (2013). p. 13

Researchers, Gardner and Warren, suggests that, based on Morozov's theories, technological solutionism is underpinned by four principal ideas<sup>122</sup>:

- The presumption that the current state of affairs is deficient, and that change therefore needed to, for instance, create greater economic wealth.
- The idea that social phenomena can be bracketed as discrete interventions with intelligible problematics.
- That technologies themselves can be bracketed as discrete interventions with predictable (and desirable) effects.
- Assumes the advantageous consequences of a technological intervention will be easily apparent to involved stakeholders.

Technological solutionism has even been described as quite optimistic, however, this might also affect the different ways of thinking, problem solving and organising in society, where for instance, surveillance is considered to be part of the technological "solution"<sup>123</sup>.

Issues related to technological solutionism, like the pitfalls and pathologies, is not a completely new subject. Over the years, the challenges related to technological solutionism, has been addressed, even before it got its designation. Today you will find the most fervent technological solutionists in Silicon Valley, where they rely on "the Internet" as a source for what areas of people's lives might need a fix and thereby provide the solutions for the actual problems as well as the imaginary ones<sup>124</sup>.

For many OECD states, the notion of a "technological fix"<sup>125</sup> has become rather omnipresent, particularly when it comes to rhetoric concerning Silicon Valley and its campaign for digital hubs and digital technologies. The digital revolution has brought about the opportunity to connect multiple platforms in an attempt to simplify and optimise people's daily tasks, making it possible to establish a "on demand economy". This further supports the

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<sup>122</sup> Gardner, J., & Warren, N. (2019). p. 365

<sup>123</sup> Denick L. and Hintz, A. (2017). Civil Society in an Age of Surveillance: Beyond Techno-Legal Solutionism? - Civil Society Futures. Civil Society Futures 27 April 2017. <https://civilsocietyfutures.org/civil-society-in-an-age-of-surveillance-beyond-techno-legal-solutionism/>. Accessed 19.02.21

<sup>124</sup> Morozov, E. (2013). p. 14

<sup>125</sup> Gardner, J., & Warren, N. (2019). p. 365

technological solutionist approach within the OECD states as it aligns with their current industrial strategies and their validation of the innovations used in these strategies<sup>126</sup>.

As such the faith in technology can be considered to be a defining feature of western medical practice which has become heavily technology mediated. New innovations in healthcare are often regarded as the same as the introduction of newly developed technologies, from communication to high-cost surgical robots.<sup>127</sup>

Another area within the medical science is an increase in the socio-technical infrastructure. By relating this to the COVID-19 pandemic, on if these technological solutions have been the introduction of the digital contact-tracing apps. Milan claims that the purpose of these digital contact tracing apps is not just to contain the spread of the virus but to also serve as an economic and social buffer, and as such being able to restrain some of the influence the COVID-19 virus has on society. She further states that the contact tracing apps seems to somehow conceal a disadvantage that are not as apparent to the app users in general, the fact that most creators and policymakers have a targeted population in mind when they began developing the contact tracing app, namely those who are digital literate as well as owners of smart phones<sup>128</sup>.

What more is that these two factors are clearly pointing towards already known deficiencies within the approaches that rely on technological solutionism. These deficiencies have become even more apparent as the decision making, concerning the contact tracing apps, have picked up pace and at times escalated to a point where decision have had to be fast tracked as a response to the emergency of the pandemic. However, this has also led to an increased dependency on problem being solved by using a digital solution as part of their problem-solving infrastructure. Although one of the main purposes with the contact tracing apps were to trace the population and thereby slow down the distribution of the virus, it also worked a deflector from the apparent systemic failure by design the infrastructure in such a way that it has “overtaken governance”. Even though neither of these two factors are directly connected, they do incorporate the will to “construct a standard human”<sup>129</sup> due to not taking

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<sup>126</sup> Gardner, J., & Warren, N. (2019). p. 365

<sup>127</sup> Gardner, J., & Warren, N. (2019). p. 365

<sup>128</sup> Milan, S. (2020). Techno-solutionism and the standard human in the making of the COVID-19 pandemic. *Big Data & Society*, 7(2), 2053951720966781. p.2-3.

<sup>129</sup> Milan, S. (2020). p. 3

into consideration the limitations and the lack of inclusiveness for all levels of society. By putting the whole population into one mould, and thereby stating that one mould fits all, they are effectively excluding a larger part of society, which in turn fits with the criticism made by Morozov, where he claims that solutionist takes a very singular approach towards a problem without having established what the full picture of the problem is, and thereby presenting the public a solution that are based on their assumptions.

According to some researchers, society has entered the fourth industrial revolution or the digital revolution.<sup>130</sup> It has been described as having the possibility to provide us with unprecedented access to knowledge, processing powers and connecting billions of people through mobile devices. Schwab has maintained that the digital revolution is unlike anything people have experienced before, it is transforming the humankind and how people relate to each other, how people work and live. However, it is not just everyday life that is changing, this is also affecting institutions, governments, healthcare, transportation and our education system, something that has become very evident during the COVID-19 pandemic. Schwab continues by stating that due to these profound changes, “there has never been a time of greater promise or peril” in human history<sup>131</sup>. Further claiming that decision makers have become to emersed in traditional nondisruptive and linear thinking, mostly focusing on the nearest future, not fully grasping how the innovation and disruptive forces are affecting the future<sup>132</sup>.

## **4.2 Contact Tracing as a useful tool in fighting the pandemic**

Debates on the usefulness of the COVID-19 apps were quickly triggered when the first reports about the uptake of the app and how many cases the apps had been able to identify were released to the public. The debates reached a new level of intensity when the UK abandoned their contact tracing app project in favour of the Google/Apple model, which happened only a few days after the Norwegian government announced that they were shutting down their app as their necessity and proportionality analysis had failed. In addition to this, reports concerning that the Australian COVIDSafe app was only working on 25% of phones<sup>133</sup>,

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<sup>130</sup> Schwab, K. (2017). The fourth industrial revolution. Currency. p. 2

<sup>131</sup> Schwab, K. (2017). p. 2

<sup>132</sup> Schwab, K. (2017). p. 2-3

<sup>133</sup> McDonald, S. (2020). Technology theatre. Centre for International Governance Innovation, 13. <https://www.cigionline.org/articles/technology-theatre/>. Accessed 15.02.21

underscored even further the diversity in opinions regarding the usefulness of the contact tracing apps in the fight against COVID-19.

The efficiency of contact tracing is dependent upon a country's capability to conduct testing without any delays and how well informed the medical personnel as well as the public are on what can be done to avoid transmission of the virus and what symptoms to look out for. There are several advantages that digital contact tracing apps can provide which traditional contact tracing cannot. Traditional contact tracing relies on snowballing interviews in order to identify persons who have been exposed to a virus, whereas the digital contact tracing can identify the possibly infected individuals at a much faster pace. It is estimated<sup>134</sup> that by using a contact tracing app, the average time that is used to identify those who have been exposed to the virus is three days faster than traditional contact tracing. These are key advantages, along with the contact tracing apps being more cost effective, when dealing with an epidemic that will have severe consequences and develops at a very high rate, such as social and economic crisis as well as high death tolls<sup>135</sup>.

According to Rowe<sup>136</sup>, there are several critical conditions that need to be met in order for the contact tracing apps to be effective, where the top three conditions are:

- Correct information qualifying individuals as infected and contagious requires that population be tested and that tests are not error-prone
- High likelihood that when a contagious person meets or crosses another person an infected person both parties have a smartphone.
- A very high proportion of smartphone users download the app.

Rowe also claims that it is highly unlikely that all of these conditions will be met. The first condition requires a very high testing capacity, which most states struggled to accommodate in the beginning of the pandemic. The second condition is only achievable if most of the population have smartphones which they always carry on them throughout the day. However, this condition work under the presumption that every members of the public own a smartphone and that the smartphone is "new" enough to handle the contact tracing apps.

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<sup>134</sup> Rowe, F. (2020). Contact tracing apps and values dilemmas: A privacy paradox in a neo-liberal world. *International Journal of Information Management*, 55, 102178. p. 1

<sup>135</sup> Rowe, F. (2020). p 1.

<sup>136</sup> Rowe, F. (2020). p 2.

The third and final condition can only be achieved if a large enough number of the population agrees to download the app, that although this makes them more vulnerable and exposed to security breaches as well as privacy issues<sup>137</sup>. Furthermore, to strengthen the possibility of an accepted and successful digital contact tracing app, the app should include a voluntary opt in vs opt out enrolment, something that might be hard to achieve, if the contact tracing apps are made mandatory, as it would raise a lot of resistance amongst the public, at least amongst most democratic states<sup>138</sup>.

There seemed to be a rather optimistic expectation that the uptake of the COVID-19 apps would reach high levels, however, some problems have not been validated, such as a very large proportion of the world population, which is considered the more vulnerable ones, does not have the smart phones or other mobile devices that are requested for the usage of COVID-19 apps<sup>139</sup>. COVID-19 app developers have indicated that for the phone-based contact tracing system to be considered effective more that 60% of the public would have to download and use the app. With such a high percentage of the population needing to use the app in order for it to have any effect, it seems like the apps will run in to quite a lot of problems, for instance only 17% of Singaporeans had downloaded the voluntary TraceTogether in the first month and 60% coverage of the public equals to approximately 80% of all smartphone owners in the UK<sup>140</sup>. If by chance, governments at a later point decides to make the digital contact tracing apps mandatory for their citizens, this will most likely lead to legal challenges as well as a big resistance in the democratic countries as the public might perceive this as a signal of an authoritarian regime<sup>141</sup>. On the other hand, with a voluntary based contact tracing app, the user would need to give their consent for every step of the contact tracing process which in turn will affect the effectiveness of contact tracing.

If the usage of the contact tracing apps is voluntary, as they are in most Western states, one could state that, from a purely utilitarian perspective, the contact tracing apps are

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<sup>137</sup> Rowe, F. (2020). p 2.

<sup>138</sup> Dubov, A., & Shoptawb, S. (2020). The value and ethics of using technology to contain the COVID-19 epidemic. *The American Journal of Bioethics*, 20(7), W7-W11. p.W9

<sup>139</sup> Lucivero, F., Hallowell, N., Johnson, S., Prainsack, B., Samuel, G., & Sharon, T. (2020). Covid-19 and Contact Tracing Apps: Ethical challenges for a social experiment on a global scale. *Journal of bioethical inquiry*, 17(4), 835-839. p.838

<sup>140</sup> Kitchin, R. (2020). p. 368

<sup>141</sup> Rowe, F., Ngwenyama, O., & Richet, J. L. (2020). p. 545

beneficial if they save the life of only one person<sup>142</sup>, but at the same time any political and ethical concerns in regard to health and privacy are still unsolved. The most ethical approach when it comes to data sharing and contact tracing, is for it to be consent-based. The privacy risks are considerable minimised when users voluntarily consented to sharing the data. However, there are certain obstacles that needs to be taken into consideration when consent procedures are implemented. The barriers include, amongst other, language barriers, readability absence of choice and a lack of understanding.

Furthermore, it's been argued that, by transferring the responsibility from the governments onto representatives and citizens, particularly regarding coming to terms with the value dilemmas of freedom of health and movement and privacy in order to put an end to lockdown, it is often a mark on how neo-liberal regimes operates<sup>143</sup>. At the same time there are those who argue that the public should not be put in the position where they have to choose between their health or their privacy, as they should be able to have the use of both<sup>144</sup>.

### **4.3 Contact Tracing Apps- a useless tool for fighting the pandemic?**

Regardless of the massive publicity the contact tracing apps have received, think tanks like the Ada Lovelace Institute<sup>145</sup> and Brookings<sup>146</sup> have highlighted the lack of evidence concerning the effectiveness of the apps.

Computer scientists and AI experts have argued that contact tracing app will not have a particularly significant effect on the spread of the COVID-19 virus, instead the public might be given a false sense of security due to the apps. Carly Kind, who is the director for the AI research centre at the Ada Lovelace Institute, argues that technology should never be perceived as a silver bullet, particularly in relation to COVID-19, however, part of the existing problem is the fact that technology is most often portrayed as the silver bullet<sup>147</sup>.

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<sup>142</sup> Rowe, F., Ngwenyama, O., & Richet, J. L. (2020). p. 545

<sup>143</sup> Rowe, F., Ngwenyama, O., & Richet, J. L. (2020). p. 545

<sup>144</sup> Rowe, F., Ngwenyama, O., & Richet, J. L. (2020). p. 545

<sup>145</sup> Ada Lovelace Institute. (2020). Exit through the App Store? <https://www.adalovelaceinstitute.org/evidence-review/covid-19-rapid-evidence-review-exit-through-the-app-store/>. Accessed 29.12.20

<sup>146</sup> Soltani, A., Calo, R., & Bergstrom, C. (2020). Contact-tracing apps are not a solution to the COVID-19 crisis. The Brookings Institution, April.27. 2020.

<sup>147</sup> Deckler, J. (2020). Coronavirus: Actually, we don't have an app for that. The Politico 24.04.2020. <https://www.politico.com/news/2020/04/24/coronavirus-contact-tracing-apps-206302>. Accessed 30.01.21

All across Europe, researchers have gone out with warnings, stating that the apps alone will not ensure that states can resume public life, this will not be achievable until the majority of the public have been vaccinated<sup>148</sup>. Furthermore, although using the apps might help to some degree, there is a prominent misconception that apps are a catch-all solution that will lead to a lifting of the enforced restrictions<sup>149</sup>.

At the Umeå University in Sweden, two dozen AI researchers assembled a computer model, which enabled them to test and simulate what effect policy measures had on curbing the spread of COVID-19. The results contradicted the claims of the effectiveness of the contact tracing apps, and instead showed that the contact tracing apps were significantly less effective than expected<sup>150</sup>. In addition to this, the simulation indicated that in order for the contact tracing apps to be effective, they would have to be paired with approximately 100.000 daily tests, a much higher number than what was announced to begin with. If the daily test numbers were not achieved, it would result in the people who had been exposed to the virus being sent back to self-isolation<sup>151</sup>.

In the existing literature concerning the framework of the COVID-19 contact tracing apps, there seem to be a unanimous agreement on certain aspects that needs to be addressed, areas such as the need for consent, privacy, how long the data will be stored and if there is an expiration date for the app, reliability and efficacy, transparency, explainability and accountability<sup>152</sup>. In some cases, there is a clear breach of the data minimization principle: that only data relevant and necessary to perform a task are generated and these are only used for the purpose for which they were produced<sup>153</sup>. This is most apparent where non-governmental enterprises are concerned, like location marketing firms and adtech.

However, at the same time there were also raised questions about whether or not the release of the contact tracing apps, on a national plan, were purely meant to combat COVID-19 or if the contact tracing apps were released in an attempt to create a “city built from the

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<sup>148</sup> Deckler, J. (2020).

<sup>149</sup> Deckler, J. (2020).

<sup>150</sup> ASSOCC- Agent-based Social Simulation of the Coronavirus Crisis. <https://simassocc.org/scenario-effect-of-tracktrace-apps/>. Accessed 15.05.21

<sup>151</sup> Deckler, J. (2020).

<sup>152</sup> Soltani, A., Calo, R., & Bergstrom, C. (2020).

<sup>153</sup> Kitchin, R. (2020). p. 369

internet up”<sup>154</sup>. This pertains in particular to public conversations concerning major policy initiatives which often centre around technological components in order to dodge difficult questions regarding equity and power.

In some of the debates about the contact tracing apps, it’s been claimed that the excitement for the apps, does not relate so much to the possible usefulness of the apps, but more about the attractiveness of the idea that life can go back to normal, without the threat of quarantine hanging over the public, due to a clever technical fix<sup>155</sup>.

Nevertheless, no technology has received so much praise as the COVID-19 contact tracing apps, and a lot of that praise has been based on the experiences South Korea and Taiwan had made, which suggested the apps might be effective. However, at the same time AI experts have gone out and warned against the perception that one single technology can be the solution as it in fact already was part of a strategy and policy that includes temperature-taking and widespread testing<sup>156</sup>.

From a more technical perspective, experts have advised that the underlying technology, which is used to analyse Bluetooth signals, often comes up with errors such as “false positive”. This occurs due to Bluetooth signals not being able to distinguish whether or not there have been a wall between the person who is infected and the one who has been reported as exposed to the virus. The challenge with “false positive” becomes apparent as the numbers increases, as it could possibly lead to the public becoming more and more indifferent when receiving exposure alerts from the health officials.

Another technical concern focuses on the possibility of re-identification. When the COVID-19 apps were presented, it was stressed that all information that were collected about the user would be anonymized, by removing any identifying information. The protection guards that are set up, are similar to those protecting medical and school records<sup>157</sup>. However, the

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<sup>154</sup> The Economist (2018). The world’s first neighbourhood built “from the internet up”. 5 May 2018. <https://www.economist.com/business/2018/05/03/the-worlds-first-neighbourhood-built-from-the-internet-up>. Accessed 15.02.21

<sup>155</sup> Griffin, R. (2020). Contact tracing apps are a dangerous distraction. The Paris Globalist. 21 May 2020. <https://www.parisglobalist.org/contact-tracing-apps-are-a-dangerous-distraction/>. Accessed 01.05.21

<sup>156</sup> Deckler, J. (2020).

<sup>157</sup> Harrison. S (2020) [Website]. When is anonymous not really anonymous. The Markup. 24.03.20. <https://themarkup.org/ask-the-markup/2020/03/24/when-is-anonymous-not-really-anonymous>. Accessed 15.01.21

concerns about the possibility of being re-identified is not so farfetched as one would think. The anonymisation of the datasets are not enough to ensure privacy. Over the past decade research has shown that large data sets can, without too much work, be re-identified, opening up the black box of sensitive private information.

The research done in 1996 by MIT student Latanya Sweeney, is a clear example on how the re-identification process works. She discovered that the collected data was not so private as had been portrayed. She was able, for only 20\$, to buy voter registration records that contained the voter’s name, data of birth, sex, and postal code. By matching up the voter’s records and health records she was able to identify one of the voters, William Weld who was the governor of Massachusetts at the time, to the patient records, proving that the anonymous data is not so anonymous. The image below shows the model she used for her re-identification and shows how Sweeney was able to use the share attributes to link together the data she had.

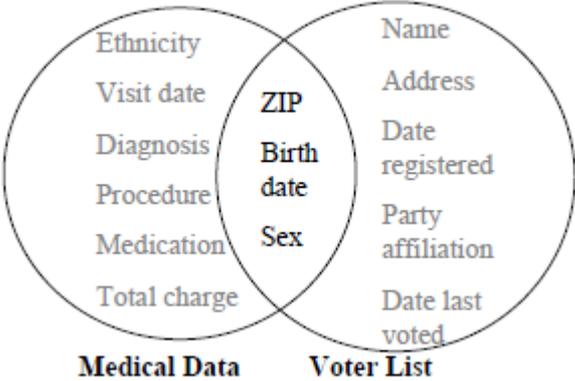


Figure 2: Linking to re-identify data by Sweeney<sup>158</sup>

One could compare the de-anonymization to a puzzle, whereby linking together the different datasets like puzzle pieces until you have the full picture.

In South Korea, the re-identification process of COVID-19 infected people has been rather easy, particularly those who got infected in the beginning of the pandemic. The same can be said for people in Singapore, however, they took it a step further than South Korea, when they

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<sup>158</sup> Sweeney, L. (2002). k-anonymity: A model for protecting privacy. International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems, 10(05), 557-570. p.560

published personal details such as gender, relationship status and workplace on the website of the Health Ministry<sup>159</sup>.

However, as has already been stated, the success of the contact tracing apps is dependent upon a high uptake by the public, which has proven to be somewhat difficult for most governments to achieve. In the UK, it's been reported<sup>160</sup> that the majority of the public supports the contact tracing app, however, in Germany, the public have been more reluctant and sceptical to the usage of contact tracing apps.

#### **4.4 Other considerations concerning the use of contact tracing apps for fighting the pandemic**

##### **4.4.1 Effect on social life**

Contact tracing has to a certain degree been designed to both monitor people's movements but also to alter how people live their lives, move around in society, what areas can be accessed and by who, as well as how people interact with each other. However, the surveillance technologies do have another purpose which discipline and how to apply this on the public. This is visible through the governments advise on how the need to practice social distancing and what the consequences you might be faced with if the advises are being disregarded or broken purposely. By adding technological surveillance to the more traditional containment methods in addition to public shaming, it is expected that people will comply with the orders without any questioning. As such, it is possible to change the governmental logic of surveillance by using the automated nature, algorithms and technocratic, and turn this into a state of control and capture<sup>161</sup>. Being under such a steady influence of data-driven systems seems to try to avoid (self) discipline and move more towards steering the people in the direction they want to move towards, further enforcing the biopolitical power and deepening it.

The COVID-19 pandemic has affected many areas of society, especially social groups that finds themselves in vulnerable situations, people living in poverty, people with disabilities, elderly people, indigenous people, and youth. Minority groups are in particular exposed to the risk of being mistreated. During a COVID-19 outbreak in South Korea, the South Korean LGBTQ

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<sup>159</sup> Kitchin, R. (2020). p. 369

<sup>160</sup> Deckler, J. (2020).

<sup>161</sup> Kitchin, R. (2020). p. 370

community were left completely open to homophobic abuse as a direct result of contact tracing. Other minority groups have also been affected by the COVID-19, and in some places where there is a history of discrimination, people are reluctant to seek health care or ask for assistance<sup>162</sup>.

One of the challenges governments have had to deal with is the likelihood of increased inequality, discrimination, exclusion as well as high numbers of unemployment, both within the short and longer term. Evidence shows that the economic and health impact that is a result of the virus have a more severe impact on poor people<sup>163</sup>. People who are homeless are more exposed to becoming infected due to not having a safe place to shelter, for those who do not have running water, displaced persons, refugees and migrants are even more exposed to the social impacts that the virus have brought about, since they have limited movement, increased xenophobia and lack of employment<sup>164</sup>.

In the ongoing discussions about the COVID-19 apps, questions have been raised concerning the possibility for the accumulated data being used for other purposes, for instance cases regarding criminal prosecution or immigration enforcement<sup>165</sup>, however, most states have solved this particular challenge by putting amendments into their policies, clearly stating that the collected data cannot be used to any other purpose than contact tracing and will not be shared with, for instance law enforcement<sup>166</sup>.

#### **4.4.2 Normalization of technological surveillance**

The pandemic has become an opportunity for governments to roll out and normalise surveillance technology on a large scale. Quite a few researchers have firmly stated that they think it is highly unlikely that after such an extensive implementation of surveillance technology, that it will be rolled-back post-crisis<sup>167</sup>.

China and South Korea might give us the clearest indication on what can be expected with a normalisation of technological surveillance. Even though China seemingly have been

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<sup>162</sup> Sekalala, S., Dagon, S., Forman, L., & Meier, B. M. (2020). p.11

<sup>163</sup> United Nations. (2020). Everyone included: Social impact of COVID-19

<sup>164</sup> United Nations. (2020).

<sup>165</sup> Gillmor, D. K. (2020). Principles for technology-assisted contact-tracing. ACLU white paper.

<sup>166</sup> Kleinman, Z. (2020). Covid contact-tracing app not sharing data with police. BBC News. 19 October 2020. <https://www.bbc.com/news/technology-54599320>. Accessed 24.03.21

<sup>167</sup> Kitchin, R. (2020). p. 371

successful in their implementation of technological solutions to help combat the spreading of the COVID-19, it has also raised quite a few red flags. Being able to mobilise technology as such a rapid rate, suggests that China were well on their way to implement Big Brother style surveillance equipment through their use of widespread smart city tech and social credit scoring which includes automatic number plate registration and -facial recognition cameras. As China have moved towards a cashless society, smartphones have become a more or less a virtual wallet, enabling the Chinese government to register and trace the digital transactions. Furthermore, in 2019 it became mandatory to provide a facial recognition scan when getting a SIM card and thereby linking the phone and the person through a direct biometric link<sup>168</sup>. As for South Korea, they have introduced several new public apps, like Corona 100<sup>169</sup>, and algorithmic solutions, in order to inform the public in addition to trace contact patterns in a smarter way. However, South Korea's positive results when it comes to containing the spread of the virus, must also be viewed in relation to their experience with previous pandemics, where they experienced first-hand the benefits aggressive mass testing.

Often, when dealing with an everyday institutional and discursive normalisation of data collection, it will lead to a widespread resignation to status quo, which in part is the result of perceived lack of alternatives or due to a sense of pragmatism. This is also referred to as surveillance realism<sup>170</sup>, where the possibilities for finding another way to structure and organize society are being diminished due to the normalisation of the surveillance limits.

#### **4.4.3 Function Creep**

“Asking questions about the process of surveillance creep and possible latent goals should be a central part of any public policy discussion of surveillance before it is introduced. Beyond determining if a proposed tactic is morally and legally acceptable, works relative to alternatives and can be completely applied, it is appropriate to ask, once the foot is in the door, here might it lead” -G.T. Marx<sup>171</sup>

When talking about function creep, it usually refers to changes in and perhaps in particular, additions to the usage of technology or system that goes beyond the purpose of what was intended originally. Function creep is especially a risk when personal data is involved, as it

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<sup>168</sup> Kitchin, R. (2020). p. 371

<sup>169</sup> Csernaton, R. (2020). p. 4

<sup>170</sup> Denick, L. and Hintz, A. (2017).

<sup>171</sup> Marx, G. T. (1988). Undercover: police surveillance in America. Univ of California Press p. 387.

often can lead to invasion of privacy<sup>172</sup>. However, when this purpose is transferred to other function that leads to an invasion of privacy as well as an intensifying and increasement of surveillance, it surpasses the ethically, legally, and socially accepted conditions of the original intention of the data<sup>173</sup>.

The term function creep is often used when surveillance technologies or the usage for technological surveillance holds other purported primary goals. As such, function creep might be the most common term that is used, however, there are multiple denominations used to describe an almost exact or the exact phenomenon, where surveillance creep is just one of them. Function creep can be differentiated from innovation due to the qualitative changes that occurs and affects the functionality. The concerns that are raised do not just concentrate on the actual change, but because the alteration has not been discussed or accepted sufficiently<sup>174</sup>.

Marx claimed that as the tactics for the usage of surveillance develops, as well as their span of legitimate and illegitimate use, will most likely escalate. Further stating that if the intention to use the technologies for something other than the original plan, there is always a way to do so. The possibility of being exposed to a nearly unnoticeable surveillance creep are always present<sup>175</sup>.

Looking at surveillance technologies in a more political context, there seem to be an inclination towards expanding on new goals, subjects, forms, and agents. It seems like once the appetite for surveillance has been stirred, it becomes unquenchable. Although the “tool” has been designated for a specific function it is quickly used for other purposes as soon as those with the technology grasp the potential of the surveillance creep<sup>176</sup>. According to Williams and Johnson, the usage of function creep shows forth how a governments intention to use the technological intervention into social life, for the most part will be increased intentionally and gradually over time<sup>177</sup>.

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<sup>172</sup> Collins Dictionary [website]. Function Creep

<sup>173</sup> Dahl, J. Y., & Sætnan, A. R. (2009). p. 84-85

<sup>174</sup> Koops, B. J. (2021). The concept of function creep. *Law, Innovation and Technology*, 13(1), 29-56. p. 53

<sup>175</sup> Marx, G. T. (1988).p. 2

<sup>176</sup> Marx, G. T. (2005). Seeing hazily (but not darkly) through the lens: some recent empirical studies of surveillance technologies. *Law & Social Inquiry*, 30(2), 339-399. p. 386

<sup>177</sup> Williams, R., & Johnson, P. (2008). *Genetic policing: The uses of DNA in police investigations*. Willan publishing. London. p.82

However, it is important to notice that function creep does not just occur through one specific mechanism but multiple. Often technologies are introduced in a time of crisis, like the COVID-19 pandemic, for then to be transferred to a less urgent usage. Another important factor that should be mentioned is that not all function creeps are intentional or conspiratorial, some occurs regardless of the original intentions, for instance if the moral terrain has shifted after the initial process was set in motion. So, when the technology is installed and ready for use, most institutions will perceive it as a waste not to use the investment to its fullest potential within the limitations that have been set<sup>178</sup>.

When looking at the COVID-19 digital contact tracing apps, there has been voiced serious concerns regarding surveillance creep in connection to the apps. It is feared that the Indian COVID-19 app, might be repurposed and used to discriminate and monitor specific groups among the Indian population. Another good example on how the creep control was not rolled back, is what happened in the US after 9/11, when the government sanctioned the right to collect data with the Patriot Act and initiated a project called “The Project on Government Oversight”<sup>179</sup>, to be used as a counterterrorism tool. It gave the government unlimited surveillance power, with no or limited oversight. Although it was initially presented to have a sunset provision<sup>180</sup> that stated it would have an end date in December 2005, it has continually been renewed, with the latest renewal in 2020.

This shows that the fears regarding the surveillance technology used during the pandemic, might not be removed after the pandemic, but instead it will become a normalized as a part of governing and monitoring societies, working as a gateway for all the new technology to work as a tool to enforce a new type of spatial and social sorting. If that is the case, there will probably lead to a change in how thing is being governed, making it easier for using a governance that has a more authoritarian form, where the usage of technology will be key to achieve this<sup>181</sup>.

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<sup>178</sup> Dahl, J. Y., & Sætnan, A. R. (2009). p. 88

<sup>179</sup> Laperruque.J. (2019) [Website]. The History and Future of Mass Metadata Surveillance. 11.06.19. POGO. <https://www.pogo.org/analysis/2019/06/the-history-and-future-of-mass-metadata-surveillance/>. Accessed 04.04.21

<sup>180</sup> Sunset Law: a legal provision that provides an automatic termination of a government program law or agency on a certain date unless the legislature affirmatively acts to renew it.

<sup>181</sup> Kitchin, R. (2020). p. 371

## 5 COVIDSafe- the public discourse

### 5.1 The COVIDSafe app timeline: 14<sup>th</sup> of April – 27<sup>th</sup> of May 2020

The following timeline has been created with the purpose of establishing whether or not the discourse of the Australian government contains any clear indications of the usage of technological solutionism in their rhetoric concerning the COVIDSafe app when it was presented to the Australian public. Furthermore, a timeline makes it easier to pinpoint more accurately when or if the rhetoric of the Australian government alters, either becoming more intensified or if it is toned down. The timeline focuses of the period 14<sup>th</sup> of April to 27<sup>th</sup> of May 2020 as this time frame covers the governmental discourse of the COVIDSafe app from its first mention in the media, the time leading up to the launch of the app, the roll out of the app and the first few weeks after it was launched.

**Table 3** Timeline for the COVIDSafe app: 14<sup>th</sup> of April – 27<sup>th</sup> of May 2020

Date	Statement/quotes	Source
14 April 2020	<p>The first reports about the upcoming COVIDSafe app.</p> <p>The ABC News were one of the first news media to write about the hi-tech solution the Australian Government would release to the public. Stating in their article that: “The Federal Government believes restrictions on the community could be eased in the months ahead if there's more testing, greater surveillance of those infected by the coronavirus and much faster tracing of those they've had contact with”<sup>182</sup>.</p> <p>This is also the first reference to the need for at least 40% of the Australian population to download the app in order for it to be of any significance<sup>183</sup>.</p>	<p>ABC News: “Coronavirus lockdowns could end in months if Australians are willing to have their movements monitored”</p>
15 April 2020	<p><b>Prime Minister, Scott Morrison (PM)</b> confirms that an app is in the making.</p> <p><b>PARKER:</b> “Do you think people would be willing to do that? Do you think people would be willing to download an app that sends their movement information to the government?”</p> <p><b>PM:</b> “Well, it would only be in an instance where someone had coronavirus. You wouldn't be mandatorily required to sign up to these apps. That's not how Australia works. But I don't know, you tell me? If people believed and understood that if we could trace people's contacts quicker and tracked down the coronavirus faster and save people's lives, which meant we could open our economy up more. Well, it's a bit like buying war bonds during the war. I mean, there are things that we might not ordinarily do. But in these circumstances, to keep people safe, to save lives and to save people's livelihoods and get them back to work. If that tool is going to help people do that, then this may be one of the, one of</p>	<p>Interview with Gareth Parker, 6PR. Transcript- Prime Minister E&amp;OE</p>

<sup>182</sup> Probyn, A. (2020). Coronavirus lockdowns could end in months if Australians are willing to have their movements monitored. ABC News 14 April 2020. <https://www.abc.net.au/news/2020-04-14/coronavirus-app-government-wants-australians-to-download/12148210>. Accessed 30.12.20

<sup>183</sup> Probyn, A. (2020).

	<p>the sacrifices we need to make, we're working on the privacy issues very hard".</p> <p><b>PARKER:</b> "Yeah, reports are that as many as 40 percent of the population might need to download it for it to work. Is that right or not?"</p> <p><b>PM:</b> "Yes, it is. You'd need at least that. And it's an important tool that other countries have successfully been able to use. And we've based it on what, well we've basically taken with their support, out of Singapore, where it's already in operation. And when I spoke with the Singaporean prime minister some weeks ago, he agreed, and we spoke about it. And he's given us support by giving us access to the coding for how this can be done. So that's important and we thank them for that. There are different apps being done by other companies. But what would be essential here is that the only people who would get the information and the only information they would get, is people that someone who had contracted coronavirus had come in contact during the potential infection period for a period of 15 minutes or more. And what would happen then is the health authorities who would be the only ones who'd have access to that data, would contact those people just like they do now. When they ask someone who has coronavirus, well, who were you with during that period of time? Well, they're seeking that information now anyway. This would just enable us to get it more quickly and not be relying on people's memories, which at the end of the day would mean we'd save more lives and save more livelihoods and protect people from the virus".</p> <p><b>PARKER:</b> "Sort of just a more efficient version of contact tracing?"</p> <p><b>PM:</b> "It is"<sup>184</sup>.</p>	
16 April 2020	<p>National Cabinet recognises the importance of self-isolating and registering on the COVID-19 app.</p> <p>The National Cabinet agrees on advice to seven precedent conditions for further relaxations. Advice nr 5 contains the COVIDSafe app. Stating the following: "Advanced technology for contact tracing – the role of a mobile phone application should be wholly explored, as it could be a valuable tool in contact tracing if numbers increase and the application is widely taken up. This would act to complement and augment our current public health contact tracing strategies and enable scale-back strategies"<sup>185</sup>.</p>	Update on coronavirus measures. Media statement.
26 April 2020 12:38 PM	<p><b>Prime Minister, Scott Morrison (PM) and Macca</b></p> <p><b>Macca:</b> "I know the contact app is something that you're pretty keen about. And what's your hope with that?"</p> <p><b>PM:</b> "Well, it's another tool that we need so we can get back to normal as much as we possibly can", "That means if there is an outbreak, when you're going back to more normal activity, you can get onto it quickly. And then you've got to be able to lock it down and that's why you need what's called tracing when someone gets the coronavirus. What normally happens, if you would just indulge me for a second, if someone gets the coronavirus, the health agency in the state gets in touch with that person and they say, I need to know who you were in contact with over these periods when you were infectious and that could be prior to them getting symptoms. And that person has got to go back and think about all the people they may have been in contact with. Now, in many cases they might not have even known</p>	Transcript of Interview with Macca, Australia All Over

<sup>184</sup> Prime Minister of Australia. (2020a). Interview with Gareth Parker, 6PR. 15 April 2020. <https://www.pm.gov.au/media/interview-gareth-parker-6pr>. Accessed 15.02.21

<sup>185</sup> Prime Minister of Australia. (2020b). Update on coronavirus measures. Media Statement. 16 April 2020. <https://www.pm.gov.au/media/update-coronavirus-measures-160420>. Accessed 15.02.21

	<p>those people. They just might have been at the supermarket or they might have been out...”</p> <p><b>Macca:</b> “The coffee shop”.</p> <p><b>PM:</b> “The shop or wherever. Now, what the contact tracing app does, all it does is, is in that period for which you would have been potentially passing it on to others, it has what's called a Bluetooth handshake. So, it doesn't know where you've been, where you might have been visiting or what shops you're at or what towns you're in or anything like that. It doesn't know any of that. All it knows is the other phones that you came in contact with, and that information only gets downloaded when someone gets the coronavirus and then that person who has it enables it to be downloaded to that health officer. So, what it's doing is it's helping the health officer do their job rather than relying on all of our memories. And the quicker they do their job, then the faster they can get in contact with people who may have been exposed to it, who then have that information, and then they can go straight into isolation, stay away from elderly relatives or others and that's how it saves lives. So, it's just about helping these health officers do their job. No other government agency can get in touch, can't use this information. No one in the Commonwealth Government at all. And in state authorities, only the health officer can use it. Not the police, not the welfare people, nowhere else. Just the health officer. It's a tool for them.”<sup>186</sup></p>	
<p>26 April 2020 3:13 PM</p>	<p><b>Prime Minister, Scott Morrison (PM)</b> The official launch of the COVIDSafe app.</p> <p><b>PM:</b> “The app is an important public health initiative that will help keep you, your family, and your community safe from further spread of coronavirus through early notification of possible exposure.”.</p> <p><b>PM:</b> “The Chief Medical Officer’s advice is we need the COVIDSafe app as part of the plan to save lives and save livelihoods. The more people who download this important public health app, the safer they and their family will be, the safer their community will be and the sooner we can safely lift restrictions and get back to business and do the things we love.”</p> <p><b>Minister of Health, Greg Hunt:</b> “thanked Australians for their actions during the pandemic, and said the app is part of the three key requirements for easing restrictions: Test, Trace and Respond.”</p> <p>“We thank Australians for their help in adhering to the difficult but life-saving social distancing measures,” Minister Hunt said.</p> <p>“We are now calling on all Australians to download the COVIDSafe app to help protect you, your family and your community from further spread of COVID-19. This will be necessary if we are to start easing some of the difficult social distancing restrictions we have had to put in place” Minister Hunt said.</p> <p>“It will be one of the critical tools we will use to help protect the health of the community by quickly alerting people who may be at risk of having contact with COVID-19. If you’d been exposed, you’d want to know, wouldn’t you?”.</p> <p><b>Minister for Government, Service Stuart Robert:</b> states the purpose of the app, and the reason it was developed, is to stop the spread of the COVID-19.</p>	<p>Transcript -media release with PM, Minister for Health, Minister for Government Services and Chief Medical Officer.</p> <p>“COVIDSafe: New app to slow the spread of coronavirus”.</p>

<sup>186</sup> Prime Minister of Australia (2020c). Interview with Macca, Australia All Over. Transcript. 26 April 2020. <https://www.pm.gov.au/media/interview-macca-australia-all-over>. Accessed 15.02.21

	<p><b>Australian Chief medical Officer Brendan Murphy:</b> “the app is a major tool in streamlining the process of identifying contacts” that have been exposed to the virus.</p> <p><b>Minister Greg Hunt:</b> when Australia no longer needs the app, it will be deleted. “No virus, no app”<sup>187</sup>.</p>	
27 April 2020	<p><b>Minister for Resource and Water, The Hon Keith Pitt MP:</b></p> <p>“Downloading the COVIDSafe app will get lives and livelihoods back to normal sooner.</p> <p>“The app not only helps keep you, your family, and the community safe, but the more people who download it the sooner we can start safely lifting restrictions and get back to business and out in the community”.</p> <p>“It is an important public health initiative to help limit the further spread of coronavirus through early notification of possible exposure”<sup>188</sup></p>	Transcript- Official web page for Keith Pitt MP. “COVIDSafe app”
28 April 2020	<p><b>Minister for Education, The Hon Dan Tehan</b></p> <p>“The more people who download this important public health app, the safer they and their family will be, the safer the community will be and the sooner we can safely lift restrictions and get back to business and do the things we love.”</p> <p>“Minister for Health, Greg Hunt said the app is part of the three key requirements for easing restrictions: Test, Trace and Respond” and “The app will be one of the critical tools we will use to help protect the health of the community by quickly alerting people who may be at risk of having contact with COVID-19,” Minister Hunt said<sup>189</sup>.</p>	Official website for Dan Tehan MP (currently the Minister for Trade, Tourism, and Investment, but at the time in question was the Minister for Education). “COVID-19 app slows the spread”
28 April 2020	<p><b>Minister for Trade, Tourism and Investment, Minister for Finance, Senator the Hon Simon Birmingham:</b></p> <p><b>Lisa Millar:</b> “Yes, you've encouraged Australians to start planning holidays at home, but the reality is that it could be a long time before any Australians are seriously spending money or moving around the country?”</p> <p><b>Simon Birmingham:</b> “Indeed. We have to wait and see and abide firmly by the health advice. That is working for Australia, it is suppressing new cases of COVID-19. And that's why we encourage Australians to continue to download the COVIDSafe app, to do their bit by social distancing, and to follow all of the regulations”<sup>190</sup>.</p>	Transcript- Interview on ABC News Breakfast with Michael Rowland and Lisa Millar
29 April 2020	<p><b>Prime Minister, Scott Morrison (PM)</b></p> <p><b>PM:</b> reports 2.8 million downloads of the app.</p> <p><b>PM:</b> “This is an important protection for a COVID safe Australia. I would liken it to the fact that if you want to go outside when the sun is shining, you have got to put sunscreen on. This is the same thing. Australians want to return to community sport. If you want to return to a more liberated economy and society, it is important that we get increased numbers of downloads when it comes to the COVIDSafe app. This is the ticket to ensuring that we can have eased restrictions and Australians can go back</p>	Transcript, Press Conference Australian Parliament House ACT.

<sup>187</sup> Prime Minister of Australia. (2020d).

<sup>188</sup> Pitt, K. (2020). COVIDSafe app. <https://keithpitt.com.au/news/covidsafe-app-2/>. Accessed 02.05.21

<sup>189</sup>Tehan, D. (2020) COVID-19 app slows the spread. Official website for Dan Tehan MP. 28 April 2020. <https://dantehan.com.au/2020/04/28/covid-19-app-slows-the-spread/>. Accessed 01.06.21

<sup>190</sup>Birmingham, S. (2020). Interview on ABC News Breakfast with Michael Rowland and Lisa. Transcript 28 April 2020. <https://www.trademinister.gov.au/minister/simon-birmingham/transcript/interview-abc-news-breakfast-michael-rowland-and-lisa>. Accessed 02.05.21

	<p>to the lifestyle and the many things that they previously were able to do, and this is important”.</p> <p><b>PM:</b> “So we would encourage all Australians, if you want to see us return to the more eased restrictions that I know you’re looking forward to and that I’m looking forward to, then it is important that you download the COVIDSafe app. That is your ticket, that is Australia’s ticket to a COVIDSafe Australia where we can go about the things that we love doing once again”</p> <p>“underscores again why it is so important that we get Australia back to a position where it can be COVIDSafe across the country, which means we can release the pressure, we can release some of the stress that is on families and individuals across the country from isolation and ensure they can get back to work, get back to school, get back to normal, get back to sport and if you want to see that happen, I want to see that happen, download the COVIDSafe app, please”.</p> <p><b>PM replies to question from journalist:</b> “and as I said, downloading the app is like putting on sunscreen to go out into the sun. It gives us protection as a nation. It protects you, it protects your family, it protects your loved ones, it protects our health workers, and it protects your job, and the jobs of many others, because it enables us to move forward and to get the economy back on the track, we want it to be on”.</p> <p><b>PM closing word:</b> “And don’t forget, download the app. Download the app, put your sunscreen on equivalent. Download that app. And the sooner we can get Australia back to where we want it to be, we will achieve that together”<sup>191</sup>.</p>	
1 May 2020 10:17 AM	<p><b>Prime Minister, Scott Morrison (PM) and Jones</b></p> <p><b>Jones:</b> “the purpose about the app is to be able to identify those who have been exposed”.</p> <p><b>Reply from PM:</b> “Yeah, and it’s like a slip slop and slap on the app, Alan. That’s just what we’ve got to do it because it’s like going out in the sun. You’ve got to put your sunscreen on. And when we go back out into the economy, we need that protection because that tells us who’s been in contact. And we can track people down quickly, isolate them so they don’t spread it to more, when that’s happening. We can open up our economy more”<sup>192</sup></p>	Transcript- Interview with Alan Jones 2BG
1 May 2020 3:30 PM	<p><b>Prime Minister, Scott Morrison (PM)</b></p> <p><b>PM:</b> “National Cabinet encourages Australians to download the app and thanks the 3.5 million Australians that have already downloaded it”<sup>193</sup>.</p>	Transcript Media Statement- Update on coronavirus measures
1 May 2020 5:58 PM	<p><b>Prime Minister, Scott Morrison (PM)</b></p> <p><b>PM:</b> “: Yeah, well, how good are Australians for putting us in this position that has enabled us to do it. They’ve been doing exactly what we’ve been asking them to do, and we’ve really been keen for them to get on and do that, which is great. But there’s still a bit of work to do between now and next Friday. And the Premiers and I’ll be working hard on that over the seven days ahead. But the key thing we’re looking for now, the only real</p>	Transcript- Interview with Ben Fordham 2GB

<sup>191</sup> Prime Minister of Australia. (2020e). Press Conference-Australian Parliament House. ACT. Transcript 29 Apr 2020. <https://www.pm.gov.au/media/press-conference-australian-parliament-house-act-290420>. Accessed 29.12.20

<sup>192</sup> Prime Minister of Australia. (2020f). Interview with Alan Jones 2GB. 01. May. 2020. <https://www.pm.gov.au/media/interview-alan-jones-2gb-010520>. Accessed 29.12.20

<sup>193</sup> Prime Minister of Australia. (2020g). Update on Coronavirus measures. Media Statement 1 May 2020, 3:30PM. <https://www.pm.gov.au/media/update-coronavirus-measures-1may20>. Accessed 29.12.20

	<p>thing that is standing in our way to restarting that process to ease those restrictions, is that COVIDSafe app”</p> <p><b>PM:</b> “So the more people that have downloaded the app, the safer everybody is. It's like putting on sunscreen when you go out into the blazing sun. You can't go out in the blazing sun unless you've got that protection in place. And we don't want SPF 1, we want SPF 50”.</p> <p><b>PM:</b> “Businesses have been incredibly innovative and adaptive, and they've had to do that under a lot of pressure. And so, you know, I honestly can't wait until we can get a situation where we can help them open their doors again, but we've got to do it safely. That's why COVIDSafe, the app, slip, slop, slap the app as I said this morning, it's very important”<sup>194</sup>.</p>	
<p>1 May 2020 6:13 PM</p>	<p><b>Prime Minister, Scott Morrison (PM)</b></p> <p><b>PM:</b> “But of those that remain outstanding, there is one that Australians can do something about, and that is downloading the COVIDSafe app. This is a critical issue for National Cabinet when it comes to making decisions next Friday about how restrictions can be eased”.</p> <p><b>PM:</b> “There are currently over 3 and a half million downloads and registrations of the COVIDSafe app and there needs to be millions more. This is incredibly important. As I explained it the other day, it's like not putting on sunscreen, to go out into the blazing sun. The coronavirus is still out there. Our numbers may be low, but it's still out there. And if we allow Australian's back out into a more open economy, a more open environment without the protection of the COVIDSafe app, which enables us to know who has been in contact, how we can isolate those groups, how we can constrain and constrict that virus from getting to other people. We need that tool so we can open up the economy. And that's why it's so important. So if you haven't downloaded the app yet, download it. If you know someone who hasn't downloaded the app yet and you have, encourage them to do so, because if you're doing that, then that is enabling the National Cabinet to be able to ease these restrictions next Friday. It's about putting the health protections in place so we can ensure that the coronavirus does not get a run on it again”</p> <p><b>PM:</b> “Kate Langbroek, I thought put it pretty well last night when she said we've got to be like the emblems on our Coat of Arms, the kangaroo and the emu. They only go forward, and we only want to go forward when it comes to this. So it's pretty important that we get people downloading that app over the course of the next week. So, it's over to you Australia, as we go through this next 7 days and we will consider that when we come together in a week from now”.</p> <p><b>PM:</b> Reply to question from journalist regarding the app not being mandatory: “Patrons of takeaway cafes or restaurants or pubs operating in the takeaway mode, I'm sure will be encouraging their patrons to download the COVIDSafe app, because if you download the COVIDSafe app, then more businesses will be open, and that's it, so it's done on the basis of encouragement in the national public health interest. And, but I've got to say, in the national economic interests, the protections are there. They're in place. They've been reviewed. And you've seen all of that. And so it is our path back for people to download the COVIDSafe app”.</p> <p><b>PM:</b> “Well, first of all, no we haven't put a target number on. It just needs to be higher, and it has to be as high as it possibly can be. And the higher the number it is, the greater protection there is, the higher the number of</p>	<p>Transcript- Press Conference Australian Parliament House, ACT.</p>

<sup>194</sup> Prime Minister of Australia. (2020h). Interview with Ben Fordham 2GB. 01. May. 2020. <https://www.pm.gov.au/media/interview-ben-fordham-2gb-3>. Accessed 20.01.21

	<p>people who have downloaded COVIDsafe app, then the safer you are, being in the community, particularly if we are to move towards easing those restrictions.”</p> <p><b>Brendan Murphy:</b> “As the Prime Minister has said, we need the app uptake to be higher before we can say that that final piece in the jigsaw puzzle of contact tracing is there”.</p> <p><b>PM:</b> “So the one that still remains uncertain is the degree to which we can get the COVIDSafe app throughout the community in a way that would give us confidence - that when we open up the economy, then when people go out into the economy, that if anyone is a risk, that those who have come in contact with them can be very quickly identified and we can keep it under control”<sup>195</sup>.</p>	
1 May 2020	<p><b>Minister for Employment, Skills, Small and Family Business Senator the Hon Michaelia Cash:</b></p> <p><b>ANNELISE NIELSEN:</b> “Will bosses ever be able to require employees to download the COVIDSafe app?”</p> <p><b>MINISTER CASH:</b> “So, a big shout out there, the COVIDSafe app. Big shout out to the over three million Australians, who have to date, downloaded the app. This is one way of ensuring that we’re that step closer to restarting Australia and a big shout out to all of the small and family businesses who are out there, promoting the downloading of the app. They know they want to get back to business sooner rather than later and the way to do that is to ensure that we can control the spread of the virus and that is what the COVIDSafe app entitles us to do. In terms of will it be mandatory, the Prime Minister has made it clear — no. It is a voluntary app; but if you want to go back to your pub, if you want to go and get that massage; if you want to go and undertake your Pilates lesson; if you want to sit down in a restaurant with your family — I would really encourage you, if you haven't already, download COVIDSafe. It really is a great weapon that we have to stop the spread of the virus and to get us back to normal sooner rather than later. Or should I say actually, it's now the new normal, it's living with the virus, but in that safe environment”.</p> <p><b>“ANNELISE NIELSEN:</b> “But there is the right of any employer to require things of their employees that aren’t necessarily the law. So will there be anything stopping employers requiring their employees to download the app?”</p> <p><b>MINISTER CASH:</b> “Well at this point in time, the Prime Minister has made it clear that it is voluntary. What individual employers ultimately do would need to be conducted in accordance with the law. I haven't heard anybody say to me to date, that they are going to make it mandatory. But I have had so many small businesses, industry associations contact me to say we are out there actively encouraging people to download the app. To date, and it was only released, what? A few days ago, 26 April, in excess of 3 million Australians, which is absolutely fantastic. But we obviously want to see that number increase. And ask yourself that question, as so many are every day — do I want to go to the pub again? Do I want to have that meal, sitting down in a restaurant? Do I want to go to my cafe and sit down and have my coffee? You will be able to do that, but a lot of it is going to be — do we</p>	Transcript- AM Agenda Sky News live with Annelise Nielsen

<sup>195</sup> Prime Minister of Australia. (2020i). Press Conference-Australian Parliament House. ACT. Transcript 1 May 2020 at 6.13 PM. <https://www.pm.gov.au/media/press-conference-australian-parliament-house-act-1may20>. Accessed 29.12.20

	have the necessary response required, in terms of stopping the spread of the virus? And that's all about the COVIDSafe app" <sup>196</sup> .	
4 May 2020	<p><b>Chief Medical Officer, Brendan Murphy:</b></p> <p>"In terms of the app, what we've always said is that the more people that download the app, the more confidence the National Cabinet will have about that one aspect of our preparedness that we're still a little bit anxious about - the capacity to really get on top of contacts as quickly as possible. So, there is no magic number. The more we have signed up of those 16 million, the more confidence I'll be able to give National Cabinet that they can make a decision. But the more confidence they have, the more bold they might be"<sup>197</sup>.</p>	Transcript- Press conference – Chief Medical Officer's press conference about COVID-19 on 3 May 2020 which was released on the 4 <sup>th</sup> of May.
5 May 2020	<p><b>Treasurer of the Commonwealth of Australia, The Hon Josh Frydenberg MP:</b></p> <p>"It's about having the confidence that as we enable more economic activity to take place, we can effectively manage any health risks that arise. It is also why every Australian that wants to get back to work and every business owner that wants to open their doors again should download the COVIDSafe app".</p> <p>"We must get people back into jobs and back into work".</p> <p>"For every extra week the current restrictions remain in place, Treasury estimates that we will see close to a \$4 billion reduction in economic activity from a combination of reduced workforce participation, productivity, and consumption"<sup>198</sup>.</p>	Transcript- Address to the National Press Club – "COVID-19: Australia's Path to Recovery and Reform"
5 May 2020 5:52 PM	<p><b>The Hon. Christian Porter, Attorney General and Minister for Industrial Relations:</b> "Obviously, the COVIDSafe app is a very important part of the health and safety work to reanimate the Australian economy".</p> <p><b>PM:</b> "an update on the COVIDSafe app, it will pass 5 million today, we're actually not far away from that just as we speak of a targeted population of some 16 million, that puts us almost at a third of that".</p> <p>"The first job of the COVIDSafe app is to keep you safe and that is its best reason why I would encourage people to continue to do that. Of course, the more people we get, then the better protection we all have as we go back to work or as the National Cabinet considers further restrictions, there have already been quite a number of restrictions eased and I particularly welcome the changes that were announced by the Queensland Premier in relation to schools".</p> <p>"But there is, I think, no doubt a big benefit once we're back in that situation where people hopefully by the end of term school holidays, if they're able to go and have a holiday on the Gold Coast or in South Australia and wherever it happens to be out of one's home state, well, let's hope that</p>	Transcript- Press conference Australian Parliament House, ACT.

<sup>196</sup> Minister's Media Centre, Department of Education, Skills and Employment. (2020a). AM Agenda Sky News live with Annelise Nielsen. Transcript 1 May 2020. <https://ministers.dese.gov.au/cash/am-agenda-sky-news-live-annelise-nielsen>. Accessed 10.05.21

<sup>197</sup> Australian Government, Department of Health. (2020). Chief Medical Officer's press conference about COVID-19 on 3 May 2020. Press Conference 3 May 2020. <https://www.health.gov.au/news/chief-medical-officers-press-conference-about-covid-19-on-3-may-2020>. Accessed 15.05.21

<sup>198</sup> Frydenberg, J. (2020). Address to the National Press Club. COVID19: Australia's Path to Recovery and Reform. <https://ministers.treasury.gov.au/ministers/josh-frydenberg-2018/speeches/address-national-press-club>. Accessed 10.05.21

	that's possible, because that will be great for those places in terms of the tourism impact" <sup>199</sup> .	
6 May 2020	<p><b>Prime Minister, Scott Morrison (PM)</b></p> <p><b>PM:</b> "And that's that's the biggest defence and downloading the COVIDSafe app and all of these sorts of things. That's what really gives you the protection. But I'd just ask the public to continue to be patient. I know that there are, I mean, we can draw a line, and I have no doubt you'll be able to find inconsistencies. I don't mean you personally, but generally people will find, they'll go, well why is that ok and why is that not? They fair questions, but I can assure you as much consistency is being achieved as is possible and the states, I'm sure will seek to move forward in the best way they can and try to avoid that. But you can't avoid it completely"<sup>200</sup>.</p>	Transcript- Interview with Ray Hadley 2GB
6 May 2020	<p><b>Prime Minister, Scott Morrison (PM)</b></p> <p><b>PM:</b>"The COVIDsafe app, of course, up and running and there's over 5 million Australians who have downloaded that. And that keeps individuals safe. I mean, people often say, well, why should I do this? Well, the number one reason is it keeps you safe. It lets you know when you've been in contact with someone who may have Coronavirus, and then that means you can take decisions both for you to get treatment and as well as keeping your family safe. So, the COVIDsafe app helps you and your family first and foremost. And the more people who do it, the more that we can track down. When we're going back to more normal arrangements, we can fight against the virus and protect it".</p> <p>"I know I'm focusing a lot on the app, but it is really important - in the same way we were able to be so effective when people came from overseas, and they went into the hotel for 14 days. That meant we ensured that anyone who potentially had the virus was isolated. Now, when the virus is in the community, you just can't do that. So, you need to know who's been exposed to it and isolate them. Now, the only way we can do that really quickly is if we get enough people on the COVIDsafe app. So that's what it's for. It's only for one job, just one job. That's it"<sup>201</sup>.</p>	Transcript- interview with Samantha Maiden News.com.au
6 May 2020	<p><b>Minister for Communication, Urban Infrastructure, Cities and the Arts, Paul Fletcher MP:</b></p> <p>"The Government has developed its contact tracing app, 'COVIDSafe', which is being used to stop the spread of COVID-19. It compliments other government initiatives in its overall response to the coronavirus. The app quickly identifies people who may be at risk of having had contact with the virus. It also allows health authorities to reach individuals and close contacts in the event that you or a contact contracts the virus, to aid in managing the spread. Health authorities already conduct manual contact tracing. This app will support these authorities in continuing to monitor the outbreak of COVID-19"<sup>202</sup></p>	Official webpage for Paul Fletcher MP. "The COVIDSafe App"

<sup>199</sup> Prime Minister of Australia (2020j). Media Release. 5 May 2020 at 5.52 pm.

<https://www.pm.gov.au/media/press-conference-australian-parliament-house-act-05may20>. Accessed 29.12.20

<sup>200</sup> Prime Minister of Australia (2020k). Interview with Ray Hadley 2 GB. 6 May 2020.

<https://www.pm.gov.au/media/interview-ray-hadley-2gb-060520>. Accessed 29.12.20

<sup>201</sup> Prime Minister of Australia (2020l). Interview with Samantha Maiden News.com.au. 6 May 2020.

<https://www.pm.gov.au/media/interview-samantha-maiden-newscomau>. Accessed 29.12.20

<sup>202</sup> Fletcher, P. (2020). The COVIDSafe App. 6 May 2020. <https://www.paulfletcher.com.au/faq/the-covidsafe-app>. Accessed 14.05.21

7 May 2020	<p><b>The Hon Dan Tehan MP- Minister for Education:</b></p> <p>Calls for Australians to download the COVIDSafe app to enable reopening of schools and universities.</p> <p>“This will increase their safety at work and improve the safety of our community”.</p> <p>“National Cabinet has agreed that take-up of the app will help drive the easing of lockdown restrictions”.</p> <p>“Downloading the app is completely voluntary. I have downloaded and registered on the COVIDSafe app, and I call on every Australian to do the same”<sup>203</sup>.</p>	Transcript-Media Release- Download the COVIDSafe app for our education’s sake.
8 May 2020	<p><b>Prime Minister, Scott Morrison (PM)</b></p> <p><b>PM:</b> “the National Cabinet is very clear: continued suppression of COVID-19 is about collective action. Success depends on maintaining our new community norms – physical distancing, good hygiene practices and downloading the COVIDSafe app to keep us all safe while we are out and about”<sup>204</sup>.</p>	Transcript- Media Statement - Update on coronavirus measures.
8 May 2020 4:27 PM	<p><b>Prime Minister, Scott Morrison (PM)</b></p> <p><b>PM:</b> “Downloading the COVIDSafe app, which is now over 5.3 million, is the best way to help us do this job, to keep you and your family safe. And I would say that especially now, because for some time now, Australians have been kept at home and they know who they've been seeing each and every day now for some time. But that's going to change in the weeks ahead. You'll be seeing more people; you'll be connecting with more people. So, the COVIDSafe app will be even more important to protect you and your family and your safety and for those in your community, those you work with, those you come in contact with. So, I would encourage you to continue to download the COVIDSafe app. For industry and businesses, it's all about getting your COVID safe plans in place for your workplaces and your premises, and Safe Work Australia has been doing some excellent work there and I referred to that earlier this week with Nev Power and the Minister for Industrial Relations, Christian Porter”<sup>205</sup>.</p>	Transcript- Press Conference Australian Parliament House
11 May 2020 2:27 PM	No mention of the COVIDSafe app by the PM.	Transcript- Press Conference Australian Parliament House, ACT
12 May 2020	<p><b>Shadow Assistant Minister for Cyber Security, Tim Watts:</b></p> <p>“We need to understand the apps limitations so that the government can continue to improve it and the public can adapt its behaviour to take it into account”.</p> <p>“The first thing that it’s important for everyone to understand is that the COVIDSafe app’s objective is to protects the community, not the individual”.</p>	Transcript- Tim Watts MP, Speech: COVIDSafe Contact Tracing App

<sup>203</sup> Ministers’ media centre, Department for Education, Skills and Employment. (2020). Download the COVIDSafe app for our education’s sake. Media release 7 May 2020.

<https://ministers.dese.gov.au/tehan/download-covidsafe-app-our-educations-sake>. Accessed 15.05.21

<sup>204</sup> Prime Minister of Australia (2020m). Update on coronavirus measures. Media Statement 8 May 2020. <https://www.pm.gov.au/media/update-coronavirus-measures-08may20>. Accessed 29.12.20

<sup>205</sup> Prime Minister of Australia (2020n). Press Conference Australian House. Transcript 8 May 2020.

<https://www.pm.gov.au/media/press-conference-australian-parliament-house-08may20>. Accessed 29.12.20

	<p>“The contact tracing enabled by the COVIDSafe app is designed to stop the spread of COVID throughout the community, making us all collectively safer”.</p> <p>“But the public must understand that installing this app will not provide any form of individual protection to you. It’s not a preventative”.</p> <p>“It is misleading to describe this app as being like sunscreen”.</p> <p>“That might be effective as a sales job to drive downloads, but it is misleading as to the COVIDSafe app’s individual health benefits”.</p> <p>“Unfortunately, there is an emerging misconception amongst some in the community that the app provides some form of personal protection or warning if they are near infected people”.</p> <p>“It doesn’t – and it’s important that people who have installed the app do not behave as if it does”.</p> <p>“If people think installing the app is a licence to engage in risky behaviour, it will undermine the work of the public health officials its designed to assist”.</p> <p>“Even if you have installed the app, you still need to carefully follow the medical advice of the health experts in your state on social distancing”.</p> <p>“The second challenge to the effectiveness of the app that needs to be confronted is its performance limitations”.</p> <p>“The COVIDSafe App is not a silver bullet for contact tracing”<sup>206</sup>.</p>	
12 May 2020	<p><b>Prime Minister, Scott Morrison (PM)</b></p> <p><b>PM:</b> “And so that's why the COVIDSafe app is so important, because that is part of the protection that Australians have as we venture back out. We can open back up, not because the virus is defeated, we can open up, because of the tremendous work is being done in our health system to build up the ICU’s, to get the ventilators in place, to build up our testing regime, to get the COVIDSafe app so we can industrialize the tracing of cases and isolate those who will contract the virus as the economy opens up again”<sup>207</sup>.</p>	Transcript-Press Conference: Remarks, Coalition joint party room Australian Parliament House, ACT.
13 May 2020 12:37 PM	<p><b>Minister for Foreign Affairs and Minister for Women, Marise Payne:</b></p> <p>“I acknowledge, the desire in relation to the app is to have as many people be like you and me—to download the app to assist in the process, particularly around contact tracing—and the ambition is for this to be as many Australians as possible. But the approach to easing of restrictions, as you will have seen through the national cabinet process, is based on the health advice that’s received through the AHPPC, where it’s possible for Australia and Australians to do. And the states and territories—your state, my state; quite different in their approaches—are using that as the premise, not based on the number of people who have downloaded the app”<sup>208</sup></p>	Fragment transcript of the Committee hearing on the Privacy Amendment Hearing (Public Health Contact Information) Bill 2020

<sup>206</sup> Watts, T. (2020). SPEECH: COVIDSafe Contact Tracing App. Transcript 12 May 2020.

[https://medium.com/@TimWatts\\_MP/covidsafe-contact-tracing-app-c88413908b17](https://medium.com/@TimWatts_MP/covidsafe-contact-tracing-app-c88413908b17). Accessed 10.05.21

<sup>207</sup> Prime Minister of Australia (2020o). Press Conference Remarks, Coalition joint party room Australian Parliament House, ACT. 12 May 2020. <https://www.pm.gov.au/media/remarks-coalition-joint-party-room-australian-parliament-house-act>. Accessed 30.12.20

<sup>208</sup> Parliament of Australia (2020) BILLS, Privacy Amendment (Public health Contact information) Bill 2020, In Committee. Fragment transcript 13 May 2020 at 12.37.

<https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;db=CHAMBER;id=chamber%2Fhansards%2Fd1b94f32-61e9-47e8-ab31-cc37f40b5093%2F0058;query=Id%3A%22chamber%2Fhansards%2Fd1b94f32-61e9-47e8-ab31-cc37f40b5093%2F0012%22>. Accessed 02.06.21

14 May 2020	No mention of the COVIDSafe App by the PM in any of the press releases coming from the PM's office.	Transcript- Press Conference Australian Parliament House, ACT.
15 May 2020	<b>Prime Minister, Scott Morrison (PM)</b> PM: "National Cabinet again encouraged Australians to download the COVIDSafe app to ensure that we can protect Australians and continue to ease baseline restrictions" "More than 5.7 million Australians have already downloaded the COVIDSafe app. This is an enormous achievement, but more is needed" <sup>209</sup> .	Transcript- Media Statement- Update on coronavirus measures
15 May 2020	<b>Prime Minister, Scott Morrison (PM)</b> The App is not mentioned throughout the conference until one of the last questions to the PM from the journalists regarding the upsurge of conspiracy theories, misinformation and anti-vaxxer material that was circulating on the internet. PM: "But the simple question is, sorry, the simple answer is this is to get the official information then there is an Australian government COVIDSafe app which enables you to get all of that information" <sup>210</sup> .	Transcript- Press Conference Australian Parliament House, ACT
15 May 2020	<b>Minister for Employment, Skills, Small and Family Business Senator the Hon Michaelia Cash:</b> "The key to maintaining the easing of restrictions is the COVID safe workplaces and having downloaded that COVIDSafe app. Now more than ever, 5.7 million Australians, they've downloaded the COVIDSafe app. Thank you, thank you, thank you. But after today and the excitement that the easing of restrictions has generated, it is more important than ever that we work together to ensure that if there are outbreaks, tracked, traced, an appropriate response put in place as quickly as possible" <sup>211</sup>	Transcript- Minister Cash interview with Annelise Nielson on Sky News
25 May 2020	<b>Minister for National Disability Insurance Scheme, The Hon Stuart Robert MP and Minister for Government Services Greg Hunt:</b> "The COVIDSafe app is already proving to be a valuable tool. In Victoria, a person who had not been identified through the normal processes, was notified as being a close contact by the app. That person is now in quarantine, protecting the community from a further potential spread of the virus". "Minister for Health Greg Hunt said the COVIDSafe app is playing a significant role in Australia's world-leading health response to the coronavirus pandemic, with several countries having expressed interest in learning from its positive impacts in Australia". "Australia continues to be a world leader in testing, tracing, and containing the coronavirus and I would encourage all Australians to contribute to that effort and download the COVIDSafe app today," Minister Hunt said" "Minister for Government Services Stuart Robert said the uptake of the COVIDSafe app and its use by state health officials, demonstrates the app	Transcript- World-leading COVIDSafe app working and delivering. A joint media release with The Hon Stuart Robert MP, Minister for the National Disability Insurance Scheme and Minister for Government Services, and Minister Greg Hunt about the COVIDSafe app.

<sup>209</sup> Prime Minister of Australia (2020p). Update on coronavirus measures. Media Statement 15 May 2020. <https://www.pm.gov.au/media/update-coronavirus-measures-15may20>. Accessed 30.12.20

<sup>210</sup> Prime Minister of Australia. (2020q). Press Conference-Australian Parliament House. ACT. 15 May 2020. <https://www.pm.gov.au/media/press-conference-australian-parliament-house-act-17>. Accessed 30.12.20

<sup>211</sup> Minister's Media Centre, Department of Education, Skills and Employment. (2020b). Minister Cash Interview with Annelise Nielson on Sky News. Transcript 15 May 2020. <https://ministers.dese.gov.au/cash/minister-cash-interview-annelise-nielson-sky-news>. Accessed 15.05.21

	<p>is doing its job as part of Australia’s health response to the coronavirus pandemic”.</p> <p>“The COVIDSafe app was downloaded faster than any other Australian Government app and has consistently remained the top free app in the Australian app stores. Millions of Australians are doing their bit as part of our health response,” Minister Robert said”.</p> <p>“As restrictions ease, it’s important all Australians stay COVIDSafe. It’s critically important Australians know how to protect themselves and others”.</p> <p>“Practical steps include”:</p> <p>“Washing your hands”.</p> <p>“Physical distancing”</p> <p>“Using the COVIDSafe app”.</p> <p>“Do the three and stay COVID free”<sup>212</sup>.</p>	
26 May 2020	<p><b>Prime Minister, Scott Morrison (PM)</b></p> <p><b>PM:</b> “We built a health detective workforce to track and trace every case, now supported by the more than 6 million Australians who have downloaded the COVIDSafe App”</p> <p>“This decisive response has helped Australia to suppress the virus and avoid the scale of devastation, infection, and death seen in many other countries around the world”<sup>213</sup>.</p>	Transcript- Address, National Press Club
26 May 2020	No mention of the COVIDSafe app by the PM	Transcript- Q&A National Press Club
27 May 2020	No mention of the COVIDSafe app by the PM	Transcript- interview on TODAY
27 May 2020	No mention of the COVIDSafe app by the PM	Transcript- Interview with Sabra Lane ABC AM
27 May 2020	No mention of the COVIDSafe app by the PM	Transcript- Interview on Sunrise

## 5.2 What does the COVIDSafe app timeline show forth?

When contemplating the presented timeline, there are several issues that begs a closer consideration and discussion. To begin with, it is rather striking that throughout the timeline, the COVIDSafe app is very rarely referred to as a contact tracing app, which is somewhat confounding considering the purpose of the app first and foremost, is contact tracing.

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<sup>212</sup> Hunt, Greg. (2020) World-leading COVIDSafe app working and delivering. A joint media release with The Hon Stuart Robert MP, Minister for the National Disability Insurance Scheme and Minister for Government Services, about the COVIDSafe app. Ministers, Department of Health 25 May 2020.

<https://www.health.gov.au/ministers/the-hon-greg-hunt-mp/media/world-leading-covidsafe-app-working-and-delivering>. Accessed 15.05.21

<sup>213</sup> Prime Minister of Australia. (2020). Address, National Press Club. Media Statement 26 May 2020.

<https://www.pm.gov.au/media/address-national-press-club-260520>. Accessed 30.12.20

Although, Morrison explains the purpose of the app and how it works on the 15<sup>th</sup> of April when he confirms the upcoming app in his interview with Gareth Parker<sup>214</sup>, the COVIDSafe app is rarely related to contact tracing in the different statements provided by the multiple ministers. Instead, the COVIDSafe app is presented more as a kind of Kinder Egg, a sort of 3 in 1 kind of deal, where multiple other features, such as the safety, security, individual health benefits as well as livelihoods can be achieved by downloading the COVIDSafe app, which seemingly take precedence over the contact tracing itself. Although there are several references to saving the “livelihoods”, there are no further explanations on what is included in this denomination. Does this include all the existing livelihoods in Australia, or is it referring to certain livelihoods that might struggle more than others due to the pandemic, such as work related to tourism, airlines, or retail?

Although the PM explained that the purpose of the COVIDSafe app was to provide a digital contact tracing and further elaborating on how it would work, what is interesting to see is that already from the get-go the PM is connecting the COVIDSafe app as a key feature for society to return to “normal” as well as referring to the COVIDSafe app as a safety and security feature that will be pivotal for society to lift restrictions and getting back to “living”. This can be seen in the above-mentioned interview with Parker, when Morrison claims:

“But in these circumstances, to keep people safe, to save lives and to save people's livelihoods and get them back to work. If that tool is going to help people do that, then this may be one of the, one of the sacrifices we need to make, we're working on the privacy issues very hard”<sup>215</sup>.

The National Cabinet, on the other hand, put forth a more tempered statement on the 16<sup>th</sup> of April, where they acknowledged technology as an important tool, however, they are not as blatant in their arguments as the PM was a day earlier. Instead, they are far more careful with their arguments, claiming the app “could be a useful tool to enable scale-back”<sup>216</sup>.

When Australia began to rollout the COVIDSafe app on the 26<sup>th</sup> of April 2020, Morrison presented the COVIDSafe app as essential and the key to unlocking restrictions and opening the country as well as essential to the plan of saving lives and livelihoods. Based on Morrison's proclamations, it is quite clear that the COVIDSafe app was an important rhetorical

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<sup>214</sup> Prime Minister of Australia. (2020a)

<sup>215</sup> Prime Minister of Australia. (2020a).

<sup>216</sup> Prime Minister of Australia. (2020b).

centrepiece in his policy initiative. This is particularly visible in the Prime Minister’s media release from the 26th of April 2020:

“The Chief Medical Officer’s advice is we need the COVIDSafe as part of the plan to save lives and saves livelihoods. The more people who download this important public health app, the safer they and their family will be, the safer their community will be and the sooner we can safely lift restrictions and get back to business and do the things we love<sup>217</sup>.”

Similar statements were made by, amongst others, by Minister for Resources and Water, The Hon Keith Pitt on the 27th of April:

“Downloading the COVIDSafe app will get lives and livelihoods back to normal sooner “.

and

“The app not only helps keep you, your family and the community safe, but the more people who download it the sooner we can start safely lifting restrictions and get back to business and out in the community “<sup>218</sup>.

and by Minister for Employment, Skills, Small and Family Business Senator the Hon Michaelia Cash on the 1<sup>st</sup> of May, where she states:

“This is one way of ensuring that we’re that step closer to restarting Australia and a big shout out to all of the small and family businesses who are out there, promoting the downloading of the app. They know they want to get back to business sooner rather than later and the way to do that is to ensure that we can control the spread of the virus and that is what the COVIDSafe app entitles us to do “

and

“It is a voluntary app; but if you want to go back to your pub, if you want to go and get that massage; if you want to go and undertake your Pilates lesson; if you want to sit down in a restaurant with your family — I would really encourage you, if you haven’t already, download COVIDSafe “<sup>219</sup>.

as well as:

“And ask yourself that question, as so many are every day — do I want to go to the pub again? Do I want to have that meal, sitting down in a restaurant? Do I want to go to my cafe and sit down and have my coffee? You will be able to do that, but a lot of it is going to be — do we have the necessary response required, in terms of stopping the spread of the virus? And that’s all about the COVIDSafe app”<sup>220</sup>.

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<sup>217</sup> Prime Minister of Australia (2020d).

<sup>218</sup> Pitt, K. (2020).

<sup>219</sup> Minister’s Media Centre, Department of Education, Skills and Employment. (2020c).

<sup>220</sup> Minister’s Media Centre, Department of Education, Skills and Employment. (2020c).

Statements like this is very much a red thread throughout the timeline where there is put a big emphasis on topics that are very much relatable to the public, which in turn might push them towards downloading the COVIDSafe app.

### **5.2.1 Misinformation about the COVIDSafe app**

The timeline also brings to light misinformation presented by the government to the public, some of the information quite misleading. The statement, made by Morrison, which probably got the most attention in the Australian Media, was the comparison of the COVIDSafe app and sunscreen. The first time Morrison used this metaphor was on the 29<sup>th</sup> of April when he said the following:

“This is an important protection for a COVID safe Australia. I would liken it to the fact that if you want to go outside when the sun is shining, you have got to put sunscreen on. This is the same thing “

as well as:

“and as I said, downloading the app is like putting on sunscreen to go out into the sun. It gives us protection as a nation. It protects you, it protects your family, it protects your loved ones, it protects our health workers, and it protects your job, and the jobs of many others, because it enables us to move forward and to get the economy back on the track, we want it to be on”<sup>221</sup>.

Morrison reiterated the sunscreen comparison on a number of occasions, such as with his interview with Ben Fordham<sup>222</sup> where Morrison took the sunscreen comparison one step further when he claimed that “we don’t want SPF1, we want SPF 50”. Statements as this does not encourage the public to have good faith in the government, instead the government comes across as rather unprofessional. It is clearly misleading information and can create a false sense of security for the users of the COVIDSafe app. The question is whether this is a deliberate action made by Morrison and the government or if they just didn’t know any better and if that is the case, why was this not addressed immediately? The same can be said about the many statements about the COVIDSafe app being a safety and security feature. In the privacy and security part of the COVIDSafe app policy, it is stated that “using the COVIDSafe is entirely voluntary, but it will help save lives”<sup>223</sup>. Although the COVIDSafe is voluntary, the

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<sup>221</sup> Prime Minister of Australia. (2020e)

<sup>222</sup> Prime Minister of Australia. (2020h).

<sup>223</sup> Australian Government (2020a)

question is on what basis they can firmly state that it will save lives? At the time the COVIDSafe was launched, there was no hard evidence that substantiated the claim that using a digital contact tracing app would save lives<sup>224</sup>, however there was the assumption that the apps would play an important role in how the virus was contained and through that containment the public would be safer. By using such a statement, the Australian government is deliberately misleading the public, as they cannot substantiate their claim through scientific proof that digital contact tracing in fact works, but instead relies on estimations and calculations of what the possible outcome that could be achieved if the correct circumstances are met.

As a result of Morrison's statement, a heated debate was kicked off, where topics such as privacy implications were at the top of the debate. As a result of the debate, Barnaby Joyce, one of Morrison's own high-profile member of his Coalition government, pronounced that he would not download and use the app<sup>225</sup>.

### **5.2.2 Focus on the number of downloads**

The timeline also shows that at the time the COVIDSafe app was first launched, the governmental focus was very much on the number of downloads, clearly measuring the success on the number of downloads. This is particularly evident during the press conference that was held on the 1<sup>st</sup> of May 2020, where Morrison was questioned about the number of downloads and the importance of the downloads, where his response was:

“the higher the number it is, the greater protection there is, the higher the number of people who have downloaded COVIDsafe app, then the safer you are, being in the community, particularly if we are to move towards easing those restrictions”<sup>226</sup>.

However, in the following statement made by Morrison on the 1<sup>st</sup> of May, it seems as if Morrison is attempting to initiate a snowball effect, by asking the public to encourage each other to download the app, further underlining that the lift of restrictions is dependent upon the public convincing each other to download the app.

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<sup>224</sup> Nature (2020). Show evidence that apps for COVID-19 contact-tracing are secure and effective. (2020). Nature, 580(7805), 563. <https://doi.org/10.1038/d41586-020-01264-1>

<sup>225</sup> Hunter, F. and Koziol, M. (2020). MPs refuse to download official COVID-19 app demand privacy guarantees. The Sydney Morning Herald 19 April 2020. <https://www.smh.com.au/politics/federal/mps-refuse-to-download-official-covid-19-app-and-demand-privacy-guarantees-20200418-p5411k.html>. Accessed 10.01.21

<sup>226</sup> Prime Minister of Australia. (2020i).

“So, if you haven't downloaded the app yet, download it. If you know someone who hasn't downloaded the app yet and you have, encourage them to do so, because if you're doing that, then that is enabling the National Cabinet to be able to ease these restrictions next Friday”<sup>227</sup>.

Furthermore, the timeline shows that there is a certain anticipation connected to the National Cabinet meeting on the 8<sup>th</sup> of May, when the coronavirus situations will be discussed. This is in particular clear in one of Morrison's statements on the 1<sup>st</sup> of May, where he says the following:

“But of those that remain outstanding, there is one that Australians can do something about, and that is downloading the COVIDSafe app. This is a critical issue for National Cabinet when it comes to making decisions next Friday about how restrictions can be eased”<sup>228</sup>.

That the number of downloads was very important for the government, is further reiterated by Medical Officer, Brendan Murphy when he made the following statement on the 4<sup>th</sup> of May:

“In terms of the app, what we've always said is that the more people that download the app, the more confidence the National Cabinet will have about that one aspect of our preparedness that we're still a little bit anxious about - the capacity to really get on top of contacts as quickly as possible. So, there is no magic number. The more we have signed up of those 16 million, the more confidence I'll be able to give National Cabinet that they can make a decision. But the more confidence they have, the more bold they might be”<sup>229</sup>.

What Murphy is indicating is that unless the number of downloads increases or are at an acceptable level when the National Cabinet is meeting to discuss lifting the restrictions, public will most likely see only minor restrictions being lifted.

The timeline also shows forth that the COVIDSafe is based on a voluntary uptake by the Australian population, however, while speaking on *Triple M*, on the 17<sup>th</sup> of April 2020, Morrison even went as far as claiming that downloading the app was a matter of national service.

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<sup>227</sup> Prime Minister of Australia. (2020i).

<sup>228</sup> Prime Minister of Australia. (2020). Press Conference-Australian Parliament House. ACT. Transcript 1 May 2020 at 6.13 PM.

<sup>229</sup> Australian Government, Department of Health. (2020).

I'll be calling on Australians to do it as a matter of national service. In the same way people used to buy war bonds, back in the war times. You know, to come together to support the effort...<sup>230</sup>

Although, during the interview, Morrison underlines that the COVIDSafe app is voluntary and consent based, by giving such a statement he is clearly attempting to use symbolic pressure, on the Australian population, by using such patriotic terms<sup>231</sup>.

With so much focus and governmental pressure on downloading the COVIDSafe app, one could argue that it had possibility of creating serious chasm amongst the public, particularly those who had lower income for public shaming of those who have not downloaded the app. Furthermore, Morrison's also implied that a person, who has downloaded the COVIDSafe app and not just that individual but also that person's family as well, is safer than those who don't have the app. Statements as these are quite concerning as they not only could be perceived as misleading and create a false sense of security, but they were also putting pressure on the part of the public that chooses not to or does not have the possibility, for instance does not have a smartphone with a software that is compatible to download the app

In table 2, Riemer used the Australian COVIDSafe app as an example on centralised proximity trace apps, where he states that this type of contact tracing app option can be effective if they are used widely and integrated with manual contact tracing. As already described, the Australian government were quite vocal in their attempt to persuade the population into downloading the app. When the COVIDSafe app was launched, the target download was 40% of the population, however this number was quickly changed, and the government instead stated that their target population were the 16.4 million adults who have a smartphone<sup>232</sup>. From the launch on the 26<sup>th</sup> of April and until 1<sup>st</sup> of June 2020, the COVIDSafe had been downloaded approximately 6 million times<sup>233</sup>, however, the number of downloads slowed down quite significantly after that and by December 2020 that number had only

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<sup>230</sup> Carlton, B. (2020). Scott Morrison Tells Triple M Why He Believes The Government's Coronavirus App Is "A Matter Of National Service" For Australians. Triple M 17 April 2020. <https://www.triplem.com.au/story/scott-morrison-tells-triple-m-why-he-believes-the-government-s-coronavirus-app-is-a-matter-of-national-service-for-australians-159829>. Accessed 15.02.21

<sup>231</sup> Goggin, G. (2020). p.66

<sup>232</sup> Meixner, S. (2020).

<sup>233</sup> Meixner, S. (2020).

increased to 7.1 million downloads<sup>234</sup>. Furthermore, those numbers do not say anything about the usage of the app, if it's being used, been deleted, or if these numbers include re-downloads. The Australian government have been very reluctant in providing information on the number of active users and have even refused freedom information requests, as they claim it could pose a risk towards public safety<sup>235</sup>.

Although their justification for not revealing active users, is due to public safety, it does come across as somewhat strange that they are so reluctant. This certainly does raise the question whether or not this is an attempt to hide the numbers, particularly since the Australian governments have had such a massive focus on the number of downloads in the media.

One should also consider if the flattening curve in the number of downloads can in part be explained by the so-called Gartner Hype Cycle<sup>236</sup>. Many awaited technologies are faced with particularly in cases where there are inflated expectations to the product. Initially there will be a strong uptake which then develops in to a "trough of disillusionment" which leads to a flattening of the curve/uptake<sup>237</sup>.

### 5.2.3 Lack of trust

On the other hand, what the timeline does not show, and what could be an explanation for the low uptake of the app, is that Australians seem to harbour some rather serious trust issues towards the government and how they have handled personal information, or more correctly the abuse of personal information on previous occasions as has been mentioned in chapter 3.6.4.

The data retention laws that have been introduced over the past few years<sup>238</sup>, were, initially, meant to be reserved for only a very small number of security agencies, for only

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<sup>234</sup> Taylor, J. (2020a). Covidsafe app identifies close contacts in just 20 NSW cases in six months, researchers say. The Guardian 15 December 2020. <https://www.theguardian.com/australia-news/2020/dec/15/covidsafe-app-identified-close-contacts-in-just-20-nsw-cases-in-six-months-researchers-say>. Accessed 03.02.21

<sup>235</sup> Taylor, J. (2020b). Releasing Covidsafe app usage number could risk public safety, government claims. The Guardian 19 September 2020. <https://www.theguardian.com/australia-news/2020/sep/20/covidsafe-app-government-refuses-to-release-numbers-citing-public-safety>. Accessed 15.03.21

<sup>236</sup> Meixner, S. (2020).

<sup>237</sup> Meixner, S. (2020).

<sup>238</sup> Keane, B. (2020) The tracing app isn't a huge threat to privacy. But from past experience, the government is. Crikey 27 April 2020. <https://www.crikey.com.au/2020/04/27/covidsafe-tracing-app-government-abuse/>. Accessed 15.01.21

serious crimes and to protect against function creep and abuse of information. Instead, the result has been that the usage of metadata, have seen a rather alarming upsurge in its usage and where minor offences are also included, without any of the agencies being held to account for their actions <sup>239</sup>. In recent years there has been several incidences where the Australian government have abused their powers when it comes to the usage of surveillance technology and personal information. Most Australians will have the Robodebt initiative from 2016<sup>240</sup> fresh in mind, a case that has created a lot of mistrust amongst the public. A mistrust that has been carries over to the COVIDSafe app and have affected how the Australians have responded towards the COVIDSafe app<sup>241</sup>

According to Greenleaf and Kemp, there are three specific reasons why the COVIDSafe app has not gain the amount of trust from the public as expected: the lack of transparency, flaws in regulation and misleading statements made by the government about how the app works<sup>242</sup>. They have even referred to the COVIDSafe app as an experiment in surveillance and trust<sup>243</sup>. Furthermore, some of the mistrust can also be ascribed to the fear of function creep based on the effectiveness of the Australian government to deliver digital services in addition to government surveillance and the user's personal privacy<sup>244</sup>.

The trustworthiness of the Australian government did probably not increase when Morrison presented the sunscreen metaphor or the "Digital sunscreen" as it has been referred to by the Australian media <sup>245</sup>.

#### **5.2.4 From relevant to not so relevant**

Furthermore, it is rather puzzling how the COVIDSafe app went from being one of the most relevant and hyped-up topics in the press conferences and media exposures, to hardly being mentioned in a matter of days. The timeline shows how the COVIDSafe app was presented as

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<sup>239</sup> Keane, B. (2020)

<sup>240</sup> Whiteford, P. (2020). Robodebt was a fiasco with a cost we have yet to fully appreciate. *The Conversation* 16 November 2020. <https://theconversation.com/robodebt-was-a-fiasco-with-a-cost-we-have-yet-to-fully-appreciate-150169>. Accessed 03.02.21

<sup>241</sup> Keane, B. (2020)

<sup>242</sup> Greenleaf, G., & Kemp, K. (2020). p. 2

<sup>243</sup> Greenleaf, G., & Kemp, K. (2020). p. 2

<sup>244</sup> Ladders, A., & Paterson, J. M. (2020). p. 158-159

<sup>245</sup> Dick, S. (2021). COVIDSafe app: The \$8 million ticket to the pub that has barely been used. *The News Daily* June 4, 2021. <https://thenewdaily.com.au/news/coronavirus/2021/06/04/covidsafe-app-cost/>. Accessed 10.06.21

the solution to lifting the enforced restrictions from the middle of April 2020 and up until the 8<sup>th</sup> of May 2020. However, after the 8<sup>th</sup> of May the COVIDSafe app is less and less mentioned in the press transcripts, press meeting and in the speeches given by the government. The public officials even toned down their language and stopped referring to the COVIDSafe app as the key for lifting lockdown and securing a return to a more liberated economy and society<sup>246</sup>. Instead, the COVIDSafe app were now referred to, in the media, as an “add-on to existing contact tracing methods”<sup>247</sup>, which it in fact have been the whole time. However, the collected data does not give any explanation or indication for what brought along this sudden change in how the Australian government referred to the COVIDSafe app. Of course, if one were to speculate for this sudden lack of exposure of the COVIDSafe app, one could question if the 8<sup>th</sup> of May and the National Cabinet meeting has had any influence on this change as this seems to have been a very central date for the Australian government, a sort of do or die date, as has been described earlier.

As already described in chapter 4.1, solutionists seem to struggle with the fact that for the most part there are no quick fixes from the problems that are presented in front of them, and that misconception can at times be a quite significant problem. This is also an aspect that is visible when considering the COVIDSafe app, particularly based on the statements made by both Morrison and Hunt, where they present the COVIDSafe as the silver lining, the solution to, not only the lockdowns, but also as a safety measure to keep the people safe from becoming infected with the virus.

However, this also brings up the question whether or not, Morrison and his ministers have been misinformed about the abilities of the COVIDSafe app, not fully understanding the limitations for what the COVIDSafe app could achieve or if they have deliberately been “prettifying” the information they released in order to get people to accept and download the COVIDSafe app. On the other hand, it also raises the question if Morrison and his fellow ministers truly believed and envisioned the COVIDSafe app as the “dealbreaker” in their fight against the COVID-19 pandemic and therefore released the information in good faith? With increased number of downloads, Morrison could, on behalf of the Australian government,

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<sup>246</sup> Taylor, J. (2020c). How did the COVIDSafe app go from being vital to almost irrelevant? The Guardian 23 May 2020. <https://www.theguardian.com/world/2020/may/24/how-did-the-covidsafe-app-go-from-being-vital-to-almost-irrelevant>. Accessed 15.02.21

<sup>247</sup> Taylor, J. (2020c)

claim that the COVIDSafe app was a success to the Australian public, further pressuring the reluctant part of the Australian public to download the COVIDSafe app. There is also the question if the COVIDSafe app have become a personal prestige issue for Morrison and Hunt, making them resort to questionable statements in order to reach their goal and avoid losing face?

### **5.2.5 A technological solutionist approach?**

When looking at the timeline of the COVIDSafe app as a whole, it clearly indicates that the Australian government chose to use a technological solutionist approach when developing and launching the COVIDSafe app. Even before the COVIDSafe app was launched, it had already assumed an agency of its own as it was expected to perform and work in big social settings where multiple users had access to it. The COVIDSafe had been assigned certain effects and features that had been decided upon by the Australian government.

One could argue that by choosing the technological solutionist approach, they are only following the recommendations from the UN, where they stated “Governments need to make full use of digital technologies to confront the COVID-19 pandemic”<sup>248</sup>, along with their encouragement of using the pandemic as an opportunity to establish collaborations, policies as well as incorporating digital technologies for future incidences.

By applying Morozov’s description of technological solutionism, “an ideology where social circumstances are portrayed as problems that, although they are discrete, they can be enhanced or optimised by using a suitable technological intervention”<sup>249</sup>, it emphasises even further that the COVIDSafe app was launched as a technological solutionist approach.

One example on this can be found in the statement given by the Minister of Resource and Water, The Hon Keith Pitt, MP on the 27<sup>th</sup> of April:

“Downloading the COVIDSafe app will get lives and livelihoods back to normal sooner”.

“The app not only helps keep you, your family, and the community safe, but the more people who download it the sooner we can start safely lifting restrictions and get back to business and out in the community”

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<sup>248</sup> United Nations, Department of Economics and Social Affairs (2020).

<sup>249</sup> Gardner, J., & Warren, N. (2019). p. 364-365

“It is an important public health initiative to help limit the further spread of coronavirus through early notification of possible exposure”<sup>250</sup>

Another example is the statement PM Morrison gave on the 29<sup>th</sup> of April:

“So we would encourage all Australians, if you want to see us return to the more eased restrictions that I know you're looking forward to and that I'm looking forward to, then it is important that you download the COVIDSafe app. That is your ticket, that is Australia's ticket to a COVIDSafe Australia where we can go about the things that we love doing once again”

“and as I said, downloading the app is like putting on sunscreen to go out into the sun. It gives us protection as a nation. It protects you, it protects your family, it protects your loved ones, it protects our health workers, and it protects your job, and the jobs of many others, because it enables us to move forward and to get the economy back on the track, we want it to be on”<sup>251</sup>.

The above-mentioned statements shows that the COVIDSafe app was, at least up until the 8<sup>th</sup> of May, promoted as the Australian Governments silver bullet. The COVIDSafe app was not only the key to lifting restrictions, but it would keep the public, jobs, and health workers safe. Additionally, the Australian government also promoted the COVIDSafe app as essential in getting the economy going again, further promoting technology as a solution for everything, from pandemic response through to sustainable development and there by following the technological solutionist thinking.

#### **5.2.6 Criticism of the COVIDSafe apps public discourse**

It is rather striking that out of all the collected material in the timeline, there is only one minister, Shadow Assistant Minister for Cyber Security, Tim Watts, who contradicts, and to a certain level is the voice of reason and truth in regard to the many statements made by the Prime minister as well as the other minister as can be seen in the following statements made by Watts on the 12<sup>th</sup> of May:

“The first thing that it’s important for everyone to understand is that the COVIDSafe app’s objective is to protect the community, not the individual. The contact tracing enabled by the COVIDSafe app is designed to stop the spread of COVID throughout the community, making us all collectively safer. But the public must understand that installing this app will not provide any form of individual protection to you. It’s not a preventative. It is misleading to describe this app as being like sunscreen. That might be effective as a sales job to drive downloads, but it is misleading as to the COVIDSafe app’s individual health benefits. Unfortunately, there is an emerging misconception amongst some in the

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<sup>250</sup> Pitt, K. (2020). COVIDSafe app. <https://keithpitt.com.au/news/covidsafe-app-2/>. Accessed 02.05.21

<sup>251</sup> Prime Minister of Australia. (2020e).

community that the app provides some form of personal protection or warning if they are near infected people. It doesn't – and it's important that people who have installed the app do not behave as if it does. The COVIDSafe App is not a silver bullet for contact tracing"<sup>252</sup>.

These statements show forth that Watts, in no uncertain terms, firmly refutes many of the statements made, in particular by Morrison. He also contradicts the governments selling point regarding the COVIDSafe app by stating it is not a silver bullet for contact tracing. He is also very vocal about the fact that the government has presented the app as a safety, security and preventative feature, not only for the community but also for the individual, by claiming the COVIDSafe would keep them safe, as well as having an individual health benefit.

However, it is worth noticing that Watts did not publish his critique of the COVIDSafe app, until the 12<sup>th</sup> of May, approximately 2 weeks after the app was launched and Morrison made his sunscreen comparison. Watts's criticism also comes at a time when the COVIDSafe app is starting to fade away from the public discourse as can be seen in the timeline. Furthermore, considering Watts is assisting Minister for Cyber Security, one could argue that it would be reasonable to expect that such a reaction should have been brought to light at an earlier date and much closer to when the statements were released.

### **5.2.7 Going against the think tanks**

The timeline also shows that the COVIDSafe discourse contradicts what research has shown and which has already been presented previously in chapter 4.3. That regardless of the massive publicity the contact tracing apps have received, think tanks like the Ada Lovelace Institute<sup>253</sup> and Brookings<sup>254</sup> have highlighted the lack of evidence concerning the effectiveness of the apps.

Computer scientists and AI experts have argued that contact tracing app will not have a particularly significant effect on the spread of the COVID-19 virus, instead the public might be given a false sense of security due to the apps. Carly Kind, who is the director for the AI research centre at the Ada Lovelace Institute, argues that technology should never be

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<sup>252</sup> Watts, T. (2020). SPEECH: COVIDSafe Contact Tracing App. Transcript 12 May 2020. [https://medium.com/@TimWatts\\_MP/covidsafe-contact-tracing-app-c88413908b17](https://medium.com/@TimWatts_MP/covidsafe-contact-tracing-app-c88413908b17). Accessed 10.05.21

<sup>253</sup> Ada Lovelace Institute. (2020).

<sup>254</sup> Soltani, A., Calo, R., & Bergstrom, C. (2020). Contact-tracing apps are not a solution to the COVID-19 crisis. The Brookings Institution, April 27, 2020.

perceived as a silver bullet, particularly in relation to COVID-19, however, part of the existing problem is the fact that technology is most often portrayed as the silver bullet<sup>255</sup>.

Across Europe, researchers have gone out with warnings, stating that the apps alone will not ensure that states can resume public life, this will not be achievable until the majority of the public have been vaccinated<sup>256</sup>. Furthermore, although using the apps might help to some degree, there is a prominent misconception that apps are a catch-all solution that will lead to a lifting of the enforced restrictions<sup>257</sup>.

### **5.3 Other considerations concerning the COVIDSafe app**

#### **5.3.1 Visual promotion of the COVIDSafe app**

However, although the timeline does not show it, the Australian government was also very visual in their promotion of the COVIDSafe app, and when promoting it, they used the same language as they did at the press conferences, connecting the COVIDSafe app to lifting the lockdown. One example of how the government used visual effects to advocate the COVIDSafe app can be seen in Figure 3, which shows a tweet made by Health Minister Greg Hunt on the 2<sup>nd</sup> of May<sup>258</sup>.

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<sup>255</sup> Deckler, J. (2020). Coronavirus: Actually, we don't have an app for that. The Politico 24.04.2020. <https://www.politico.com/news/2020/04/24/coronavirus-contact-tracing-apps-206302>. Accessed 30.01.21

<sup>256</sup> Deckler, J. (2020).

<sup>257</sup> Deckler, J. (2020).

<sup>258</sup> Meixner, S. (2020).



**Figure 3:** A tweet made by Health minister Greg Hunt

Here, Hunt is clearly linking the COVIDSafe app to the lift of lockdown both through his wording as well as by using football images, something most of the public can relate to. However, the usage of images also implies that it is a very calculated move from the government, a deliberate PR stunt, to get, in particular, football fans to download the app.

By using both visual and verbal tools in their attempt to convince the population to download the COVIDSafe app, shows that the Australian government goes all into connecting the app to the things the public miss by playing on people's emotions. Firing up under the cravings the public might have and the longing for a "normal" day to day life and to a certain degree uses the public's emotions against themselves. This also brings along the question if the government and the minister's repeated reminders on what the public is "missing out on", is a form of deliberate use of psychological egoism, where it is claimed that people deep down are always motivated by what is perceived to be in our own self-interest<sup>259</sup>.

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<sup>259</sup> Internet Encyclopedia of Philosophy (IEP). (2021). Psychological Egoism. <https://iep.utm.edu/psychegeo/>. Accessed 01.08.21

### 5.3.2 Failing the “trial of fire”?

When the app was launched there were several issues reported, such as blocked access to the app for people with offshore iTunes accounts, users having to have access to SMS and the need for an Australian phone number as part of the requirement in order to register<sup>260</sup>. As of December 2020, the Australian government were still declining to add and incorporate Google and Apple features in the app.

When the state of Victoria was hit with a significant breakout in July 2020, the Victorian government decided to stop using the COVIDSafe app. Their reasoning behind this decision was that they were under immense pressure combined with the lack of success when previously using the service. When talking to the press regarding the situation in Victoria. Dr Brendan Murphy, the Secretary of the Department of Health, gave the following explanation for why the Victorian government shut down the COVIDSafe app:

“Because they were so pressured, they kept going without using the app. The public health unit felt that for a period of time, because they hadn’t found value in it in those early cases, they did stop it, we believe”<sup>261</sup>.

Although, he quickly added that they were now using the app again. What could be considered the “trial of fire” for the COVIDSafe app, seemingly failed big time. This could have been a really good opportunity to prove to the Australian population that the COVIDSafe was in fact working, particularly since the app had been able to identify 14 persons who had been exposed to the virus in NSW<sup>262</sup>.

### 5.3.3 Number of identifications made by using the COVIDSafe app

Since its launch in April 2020, the COVIDSafe app has identified 17<sup>263</sup> people in total, all of which were identified in 2020. There have been no new cases identified, using the COVIDSafe app so far in 2021, even though there have been several big outbreaks in both New South Wales (NSW) and Victoria. Manual contact tracing has, on the contrary, been able to identify

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<sup>260</sup> Rollins, A. (2020) Coronavirus: federal government faces criticism over bugs and flaws in COVIDSafe app. The Canberra Times. 5 May 2020. <https://www.canberratimes.com.au/story/6745024/govt-under-pressure-over-app-bugs-and-flaws/>. Accessed 21.12.20

<sup>261</sup> Sadler, D. (2020). Victoria stopped using COVIDSafe during outbreak. InnovationAus 4 August 2020. <https://www.innovationaus.com/victoria-stopped-using-covidsafe-during-outbreak/>. Accessed 20.03.21

<sup>262</sup> Sadler, D. (2020).

<sup>263</sup> Sadler, D. (2021). COVIDSafe hasn’t found any contact this year. InnovationAus 2 June 2021. <https://www.innovationaus.com/covidsafe-hasnt-found-any-contacts-this-year/>. Accessed 10.06.21

544 persons that had not already been identified through tests. What more is, all of these 17 cases were found in NSW, but nowhere else in Australia<sup>264</sup> .

Today, the Australian public have more or less stopped using the COVIDSafe app and are instead relying on using QR code check-ins. NSW and Victoria both have their own app that allows the public to use QR codes to check in<sup>265</sup>. Some argue that using QR codes are more beneficial than the COVIDSafe app, claiming the COVIDSafe app might not be in the Australians collective interest and are also point to the fact that it is a costly app to maintain, with very little return to show forth<sup>266</sup>.

The QR codes seem to have gained more popularity than the COVIDSafe app, which can partly be explained due to people being reminded of scanning the QR code when they enter a restaurant or a shop, as well as people not being allowed into venues without showing forth that they have scanned the QR code whereas the COVIDSafe app has not used such incentives in order to gain the public's compliance<sup>267</sup>.

As such one could argue that the COVIDSafe app has not lived up to the hype and promises the government exclaimed upon when the COVIDSafe app was launched in April 2020. As Reimer pointed out in table 3, in order for a centralised contact tracing app to be successful it needed to have a very wide uptake among the public, which has not been successful. Instead, it seems as if the government's multiple unsubstantiated statements, about the COVIDSafe app, such as the COVIDSafe app being compared to Sunblock and previous experiences, such as Robodebt and personal details about asylum seekers being posted online, have left the government hanging dry, caught in their own mistakes.

However, it is also possible to see the COVIDSafe app from a purely utilitarian perspective, where the contact tracing apps are beneficial if they save the life of only one person and if so, although the COVIDSafe app have only identified 17 persons, it is possible to claim it as successful.

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<sup>264</sup> Clun, R. (2020). COVIDSafe app identifies just 17 contacts not found by contact tracers. The Sydney Morning Herald 26 October 2020. <https://www.smh.com.au/politics/federal/covidsafe-app-identifies-just-17-contacts-not-found-by-contact-tracers-20201026-p568jr.html>. Accessed 23.03.21

<sup>265</sup> Garret, P.M. and Dennis, S.J. (2021). Australia has all but abandoned the COVIDSafe app in favour of QR codes (so make sure you check in). The Conversation 1 June 2021. <https://theconversation.com/australia-has-all-but-abandoned-the-covidsafe-app-in-favour-of-qr-codes-so-make-sure-you-check-in-161880>. Accessed 10.06.21

<sup>266</sup> Garret, P.M. and Dennis, S.J. (2021).

<sup>267</sup> Garret, P.M. and Dennis, S.J. (2021).

## 6 Conclusion

It's been over a century since the world experienced a public health crisis to a similar magnitude as the COVID-19 pandemic, and with the COVID-19 pandemic it has become apparent that existing public policies have not been well enough prepared for such an event. As such, it has become imperative that policy makers look beyond traditional public health mechanisms of surveillance and search for other and more efficient solutions than the existing ones. In response to the need to move beyond what is considered traditional responses, the world's governments have turned their eyes towards new technological solutions, taking advantage of the already existing mobile phone apps, global positioning systems (GPS) and facial recognition technology. However, as these new technologies have been presented to the public, it has created an increased imbalance and tension in the surveillance of the public health, particularly between the collective interests and individual rights<sup>268</sup>.

Most public health systems have become revolutionized with the arrival of digital surveillance tools, particularly in the way they are able to respond to outbreaks of diseases by quickly identifying and responding to the threat a spreading disease.

Contact tracing has become an important component for public health measure as well as for comprehensive strategies in the quest to contain the spread of the COVID-19 virus. Contact tracing have the potential to sever the human-to-human transfer by means of identifying individuals that have been exposed to the virus which then leads to quarantining, follow up to ascertain that isolation has commenced and if symptoms are developed that the infected individual will receive the appropriate testing and treatment<sup>269</sup>. Yet, some emerging research reports, about the COVID-19 contact tracing apps, show that contact tracing is most effective when there is a fairly low number of infected people which is quite contradictory when dealing with a pandemic<sup>270</sup>.

This master's thesis has sought to establish whether or not the Australian government's arguments favour of its COVID-19 contact tracing apps reflects technological solutionism as

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<sup>268</sup> Sekalala, S., Dagron, S., Forman, L., & Meier, B. M. (2020). p. 8

<sup>269</sup> World Health Organization. (2020c). p. 1

<sup>270</sup> Soltani, A., Calo, R., & Bergstrom, C. (2020).

well as whether the COVIDSafe contact tracing app was presented to the Australian public as a solution to returning to a “normal” society?

This thesis draws on the theoretical framework of constructivism, where one of the key concepts is that the world is socially constructed. According to the constructivist view concerning science and technology, they argue that human action determines technology and not the other way around. However, in order to understand how technology is used, one must first understand how technology is incorporated in the social context.

The timeline does clearly indicate that the Australian government followed a technological solutionist thinking and approach when developing and launching the COVIDSafe app to the Australian public. The app was presented as the solution to lifting restrictions and opening up the country as well as essential to the plan of saving lives and livelihoods. However, the data also indicates that the COVIDSafe app did not live up to the expectations, which amongst others, can be seen by the low uptake of the app by the Australian public as well as only 17 individuals having been identified through the usage of the COVIDSafe app.

On the other hand, what stands out in this research is how the Australian government presented the COVIDSafe app to the public, from hyping it up, claiming it was the key to returning to “normal life “, comparing the COVIDSafe app to sunscreen lotion, and claiming that those who had downloaded the app were safe, to almost overnight not referring to it when talking to the media. One might wonder if, the Australian government, and its politicians, decided to take a calculated risk, knowing full well that the COVIDSafe app would not be able to deliver or fulfil all off their promises and yet made them all the same in public, in the hopes that the COVIDSafe app would be the solution or the silver bullet for the COVID-19 pandemic?

The timeline of the COVIDSafe’s public discourse do show forth that the Australian government put a lot of emphasis on encouraging the Australian public to download the COVIDSafe app, measuring and basing the success of the COIVDSafe on the number of downloads. The Australian government claimed that for the app to be considered successful,

40% of the targeted population had download the app<sup>271</sup>. However, one would expect that the number of identifications of possible infected contacts using the app, would be considered equally important as to how many have downloaded the contact tracing app. The number of downloads does not, for instance, reveal how many are in fact using the app nor does it give us any information about the user experience with the app itself.

In order for the contact tracing to have any effect, critical elements must be in place, such as public support, getting the community involved. This has in particular been important when it comes to the COVIDSafe app, here the lack of public trust in the government, the low uptake of the app, as well as the lack of result in the number of persons who have been identified as having been exposed to the virus, have led to the COVIDSafe app being much less successful than what the Australian government originally anticipated. However, the lack of trust can in many ways be explained through both previous experiences, such as Robodebt, and the misinformation provided by Morrison and the other minister, such as Hunt and Murphy, on several occasions.

Hopefully will this master's thesis be able to situates itself, and contribute with new knowledge, in the ongoing debates concerning technological solutionism and whether or not technology is truly the answer to such large and intricate problems such as the COVID-19 pandemic, as well as contributing to the debate about the political discourse used by the Australian government regarding the COVIDSafe app and how the COVIDSafe app discourse have been presented to the Australian population. For future studies it would be interesting to compare the political discourse between the Australian government and the Australian territorial or state governments, in particular New South Wales and Victoria, as these two states have been hit quite hard by the COVID-19 pandemic, to see if there are any bid abbreviations between the different political discourses. Furthermore, it would also be interesting to continue researching the different COVID-19 contact tracing apps to see if the political discourse leans towards the usage of a technological solutionist approach.

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<sup>271</sup> Meixner, S. (2020). How many people have downloaded the COVIDSafe app and how central has it been to Australia's coronavirus response? ABC News 1 June 2020. <https://www.abc.net.au/news/2020-06-02/coronavirus-covid19-covidsafe-app-how-many-downloads-greg-hunt/12295130>. Accessed 29.12.20

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