#### ACADEMIC HONESTY STATEMENT

I/We declare that all parts of this report are prepared by the below listed members and no uncited material from any external sources is included. I/We declare that this report genuinely reflects my/our activities and tasks performed as a part of assessments within the course DECO6500 - Advanced Human-Computer Interaction. The work contained in this report has not been previously submitted to any other courses offered by UQ or any other universities around the world.

Furthermore I/We declare that (place a cross in each box):

- I/We did not cut-and-paste information from others without appropriate use of quotation marks and direct reference to their work;
- I/We did not re-word the ideas of others without proper and clear acknowledgement;
- I/We did not write ideas or suggestions that originated from other students and claim these as my/our own;
- I/We did not include words from other students' work unless this was explicitly permitted in the description of this assignment.

We understand that any violation of the above will result in a possible:

- ZERO mark for this assignment, and/or
- My/Our names will be recorded and will be forwarded to the faculty to handle.

For assessment purposes, we give the assessor of this assignment the permission to: reproduce this assignment and provide a copy to another member of staff; and take steps to authenticate the assignment, including communicating a copy of this assignment to a checking service (which may retain a copy of the assignment on its database for future plagiarism checking).

Student Name & Number Signature

Hyun Jeon 42865320

Eunji Choe 45653005

Zezheng Shi 44856078

MMM rxz/ rechem shi

## Public perception on the privacy concerns and its impact on the effectiveness of using voluntary mobile app-based technology as the primary medium for contact tracing in Greater Brisbane Area

Zezheng Shi (44856078) zezheng.shi@ uqconnect.edu.au Hyun Jeon(42865320) hs.jeon@uqconnect.edu.a u Eunji Choe(45653005) eunjichoe8225@ gmail.com

#### **ABSTRACT**

COVID-19 pandemic virus has caused worldwide deaths and hospitalised many people due to its infectious nature in close contact and as such, many individual's daily activities that require close regular contacts have either been limited or transitioned to a virtual setting whenever possible. A large size of the subpopulation affected by the ongoing pandemic are the full-time students who usually attend campus for teaching and learning activities and white-collar workers who often have to work closely to each other in a confined setting to actively collaborate. The primary disease prevention mechanism used in Australia is through voluntary contact tracing mechanisms using a combination of technology based system and written documentation based materials of which the individuals are only allowed to enter a confined, crowded area if they provide their personal identifiable information should they have an active case diagnosed. The widespread of technological tracking in the name of contact tracing has raised concerns to its effectiveness of usage as users' attitude to privacy concerns changes, it was found that despite most of the times that not major privacy breach was observed, but participants supplied information for purely contract tracing purpose was often misplaced and subject to undesirable disturbance in the form of junk mails and harass calls, yet the effectiveness of using tech-based contact tracing proves to be effective as throughout the time of probing duration that has been no a singled community based infection.

#### **AUTHOR KEYWORDS**

Privacy, mobile application, contact tracing, privacy attitude, COVID-19, privacy perception, QR Code

#### **CSS CONCEPTS**

• **Human-centered computing**; User studies; Cultural Probes;

#### 1. Introduction

The virulent nature of corona virus(COVID-19) indirectly forced an unprecedented scale of transitions in all aspects of an individual's life. This transitional phase of shifting activities that traditionally requires close contacts to a virtual online environment inevitably becomes heavily dependent on the ubiquitous technologies that our society currently has access to, i.e. mobile devices, laptops. Nonetheless, the differences on the current pandemic compare to its historical counterparts of similar scales, e.g. 2003 SARS, or 1918 Spanish flu, is that the omnipresent of cheap and affordable computing devices enabled the inhabitants around the world to have a cost effective and efficient way to control for

the spread of the disease by conducting digitised contact tracing to a certain extent within their respective communities. Although, despite the novel intention behind the suggestion of conducting contact tracing through digitized means, the closed form factors of consumer graded software and its derivatives barricades the privacy transparency on some of the identifiable sensitive information that these software products has been asking from its users, and the detailed purpose of its usage and relevant means of protection of most of them is either unclear or hidden behind incomprehensive legal jargons.

Recent news articles of wide scale privacy breach on some of the presently populated software products such as video conferencing platform that of Zoom, has had an alerting effect on reminding the society of the potential downside of becoming heavily dependent on technologies that could potentially contain sensitive personal identifiable information on its users.

Given the potential concerns of reviving topic of privacy and its perception on technologies, when the governments around the world successively endorses different digitalised methods of conducting contact tracing using various medium, we find it timely to study whether a potential change in perception on privacy could have an impact on the effectiveness of these voluntary community scale contact tracing primarily using technological based solutions in Brisbane region.

Specifically, we proposed to narrow the scope of the investigation and its associated sample space by focusing on primarily two groups of affected individuals that of white collar workers and students as we deemed these groups to be the most impacted group by the mandatory transition from their traditional methods of conducts to if not complete, a partial shift to perhaps an unfamiliar domain of online environment. Due to the qualitative nature of people's perceptions, the investigation process will principally revolve around purposefully crafted online cultural probe materials which consists of both numerical and texted responses for a total duration of six days that spans over the course of three consecutive weeks. The returned probes will then compare to the baseline condition, that of the initial

sets of interview questions that we had with the total of 13 interviewees prior to the distribution of the probes, we found that participants' privacy had been breached when they scanned a QR code to fill their detail.

The significance of the research question is of high importance as it seeks to understand a multicultural community and how its members would collaborate together to reach a collective goal that is heavily technological dependent as far as some concerns, sensitive at times, its success relies critically on accessing private personal identifiable information from its community members, how members would behave and act within the premises of contact tracing and potential design considerations or new opportunities of interest could arise by focusing on complementing the potential concerns of these user groups.

The report will begin with presenting relevant existing literature with commentary on how it has impacted and shaped the overall research topic, and a brief prime for all its related fields of studies. The section immediately following the literature review will be focusing on providing rationales and design considerations for the study model used, i.e. cultural probes, and how we seek to provide a miniature, yet comprehensive analysis to the question by taking control for variables that would affect the concern of privacy. The report will then end with a detailed analysis breakdown on the entire research process and suggest for any future improvement while acknowledging the limitation of the present study to achieve complete objectivity of its results and process.

#### 2. Related Work

In this section, existing researches and current systems will be reviewed in the field and related fields of contact tracing system and privacy concerns of people on using such system. Due to the matter of this being quite new system that has been introduced after COVID-19 pandemic issue, there are not large amount of related work that has been conducted. Therefore, this section will introduce any related work that could be found. Firstly, mobile phone

based technological contract tracing system will be presented. Secondly, motivation, action and risks of voluntary actions of the participants will be introduced. Thirdly, possible privacy breach issues that can be caused from using technological system will be introduced and privacy concerns of users and its' measurement on security breach of private information will be introduced. Lastly, privacy perception and information transparency will be introduced.

## 2.1. Current Contact Tracing System

Currently in Australia a mobile application named 'COVIDSafe' is being used as technological contact tracing tool. It is a mobile application tool developed and operated by Australian Government to help identify people who may have been exposed to COVID-19 virus carrier. A user of this app has to download the app on their smart phone and install. During installation user needs to give permission to the app to take their location. After installation user needs to register by inputting their user data and give permission for the app to record their personal data in the database. The user data user needs to provide is their name, age range, mobile number and post code. Once this is complete, whenever user walks around and gets into certain distance with another phone with the same app installed, the app will communicate with other phones and collect the details and store their details on the phone. These data will be encrypted when saving. All user data will be saved into third party service AWS(Amazon Web Service) and Amazon will keep the data safe. Australian Government guarantees privacy security with these.

Another digital method that is being used is QR Code system run by third party mobile applications where both the business owner and user installs. The business owner should have little or no control over the information. User needs to install the app and give permission to the app to record and provide their personal information they input to the app. Whenever user enters a shop user needs to either scan the QR code or write their details in piece of paper. If the owner provides method to scan QR code, user can

turn the app on and show randomly generated QR code and scan. The QR code will be scanned by the owner's smart device and encrypted user details will be stored either on their device or in the app provider's database. They claim these data will be deleted after certain period of time (Eg. 21 days as government guideline), but this cannot be verified, and the security can be still questionable by users.

Non digital method that are being used is normal paper and pen. When a customer enters a shop, either if they do not have QR code app installed or the business owner doesn't provide a method to scan QR code, customer needs to write down their full name, phone number, residential address and date/time. These personal data are can be very easily exposed to public or to the owner and this information may be used for unwanted purposes. There is no encryption or safety behind this, and there are some reports of these papers being lost or stolen.

## 2.2. Voluntary Actions of Participants

In this report all user research has been conducted by voluntary actions of participants. In most user researches, participants take part voluntarily and can withdraw their participation any time. In some voluntary researches, some rewards are promised upon completion of the voluntary actions. According to research in [10] there has been significant drop in volunteering when there has been no physical reward. In this research all participants were close relative or friends of researchers and participated with the relationship. Participants would easily participate in easy activities but would drop out in long term when more work is required. Participants motivation can work with loyalty to the researcher or with reward. In this paper, since the researchers are students with no income, there has been no rewards promised, so there would be high risk of taking voluntary research.

## 2.3. Possible Privacy Breach and Concerns of Users

Breach in privacy is extremely important matter, as personal information can be leaked to people who the owner of the information does not know. When this personal information is leaked, this information can be used for spam or scamming. Research [2] shows how there can be privacy breach and users are scared about this. With contact tracing, there can be multiple routes where personal information can be leaked. Users provide sensitive information, such as name and contact details. Even the digitalised systems such as QR code or COVIDSAFE app provides secure and encrypted data, these still can be breached by hackers. Even database servers like AWS provides best security, there still can be hackers who can breach into them and hackers can get into the connection between the app and server. However, these kinds of breach can happen to any digitalised system that requires user's personal information, such as online shopping.

Most users who use such online system are well aware that their information can be breached. Some people have experienced getting spam text messages and e-mails after they signed up for promotions and free giveaways. This can be reason why users have some concerns over providing their personal information to contact tracing.

## 2.4. Privacy Perception and Information Transparency

Research [2],[3],[4],[5] introduces about user's perception on privacy and transparency of information they get from application providers. The researches show that most users are worried and aware of their privacy issues. They do care about their private personal data and hate their data being used by other people. However, it also shows that even they are aware, they still give out information, as they are required. The research shows most people just give out information without thinking or thinking that their private information is already been breached.

Most internet and technology-based system has obligation to provide information on where the collected data will be stored and be used. However, according to research [11], most users do not read these policies well and properly. This shows, even how people care about their privacy, users are lazy to read them.

### 3. Methodology

#### 3.1. Experiment Design

To explore the potential changes of privacy concerns in its ability to effectively deploy contact tracing mechanism through the uses of technological based medium, we conducted a series of cultural probing studies with selected participants after our initial brief, the participants were selected based on their ethics, race and their relevance with the identified impact group of either work or student based, the decision was made to invite participant from a group of individual that would reflect a minimal demographics of the overall residents of Brisbane City Area [6].

#### 3.2. Design Rationale

The qualitative nature of unquantifiable individual perception on privacy means that the traditional methods of quantitative data collection and its analysis will not be effective to access the potential changes of attitudes in privacy concerns [1]. Cultural probes are often used in our quasi experiment to allow users to self-report their feelings, thoughts, and ideas regarding the topic of studies with minimal influences from us, and as stated on [2], there are instance of which that the individuals will not change their privacy attitudes, i.e. the protection behaviors at different levels, immediately, hence we have decided to span the cultural probes studies for a total duration of three weeks with our provided brochure containing entries for only six entries for recording their respective encounters with contract tracing requirements. This predefined limitation in the length of the brochure was done to not intimidate the participants of having to provide every single contact tracing instance within their three weeks duration of the studies, the purpose of the probing kit was to monitor the thought process of the individuals on the concern of privacy and efforts were made to shape the probing kits relevant to the current state of the pandemic which consists of three categories of questions, basic questions assertion questions of the reason of visiting as individual tends to have different level of willingness of sharing their privacy related activities based on their purpose of visit [5],

questions regarding the level of confidentiality of providing personal at request where or not it's necessary, questions on any noticeable repercussion due to providing personal identifiable information at request.

#### 3.3. Sample

A total of thirteen participants were recruited from different ethnicity and cultural background(6 of Korean, 1 of American, 3 of Australian, 1 of Hongkong, 1 of French and 1 of Chinese) as well as social status(5 of students and 8 of office workers) with mainly student or working professions were selected to best reflect the a minimal representation of the major impacted group of individuals in Brisbane due to the pandemic forcing majority of their daily activities transitioning online and becoming more dependent on technology. We also tried to keep the gender balance ratio whenever possible as found in [3], although females are just as concerned about their online privacy as their male counterparts, they appears to be more concerned about setting up their privacy boundary and is therefore more incline to change their behaviour with digitised interactions to reach their a level of protection that they feel in control. Additionally, in order to account for the differences between changes of privacy due to the cultural background[4], i.e. Western and Eastern, the participants' ethnicity was also considered within the sampling process to the best of our ability within the time constraint.

#### 3.4. Study Procedure

The participants were asked to share their opinion on a series of privacy related issues, that consist of basic assertion statements such as their personal details and other dedicated questions focused on the current available method of contact tracing which can be found in the appendix item 1. Their initial responses were then recorded on an answer form, the whole process is either video tapped or audio recorded to be later transcribed while all the materials are kept for references and reflection for any subtle hints or body languages that might be also helpful in drawing conclusions between the initial responses with the final data collected and compiled from the probing

process. The participants were then invited to undertake the cultural studies by completing the provided brochures through the subsequent weeks, the brochure comes with a preset of instructions and an example of a typical probing item with instruction can be found in appendix 2, and they were instructed to fill in the brochure items in ordinal manner whenever they went out and is being asked to provide their personal details in the name of contact tracing, the responses were recorded with extra space to provide any additional commentary should they find it necessarily to express their feelings, thoughts, or even concerns regarding their privacy with contact tracing.

#### 4. Discussion

This project used a qualitative approach to explore the domain of privacy concern and its relevance in behaviour changes on related technological paradigms through different privacy related events, and incidents that the participants experienced. The primary focus has been targeting professions that are mainly college students and white-collar office workers as they seek to transition to an uncharted online territory for most of their daily routines.

The section aims to provide a summary of the analysis and it continues with a discussion with the probing results. Conclusions will be made and presented before the recommendation for further study and experiment improvement is suggested.

### 4.1. Data Analysis

Initially, we transcribed most of the audio or video samples from the initial interviews to capture any interesting findings that would be useful for later comparison purposes. The probing kits were studied by each member of the team to capture the multidisciplinary nature of the team then similar ideas were grouped together to analyse separately to ensure the collaborative outcome of the experiment. Nonetheless, due to the fact that not all the probes are completed fully, a few participants choose to only return one entry from the probing kit for either they have not go out to places that did not implemented the contact tracing safety measure or they simply did

not forgot to complete the entry until it was too late, hence a systematic approach to best align the results from the probing kit with the collected initial responses becomes difficult, however a general trend of change of attitudes on the concern of privacy could still be expected with fair level of accuracy.

#### 4.2. Findings

Three main themes emerged from the data - analysis: Responsibility to the community, Individual data protection, lack of transparency of contact tracing. These themes will be further explored and discussed while being categorised into relevant subsections as identified from the returned probes, if applicable.

#### 4.2.1. Responsibility to the community

All members of the community share a common goal of preventing the spread of the virus and it's their responsibility to other members of the community to assist with the contact tracing process. Such responsibility can be characterised through two subthemed categories; Accepting, and reluctant.

## 4.2.2. Accepting responsibilities to the community

Most of the participants have shown their willingness to corporate with the request of providing personal identifiable information for contact tracing purpose, nonetheless, through the cultural probing process we have discovered that at times participants are more tolerant to giving out their personal information if it was for the greater good of the community and its members, as one individual participants pointed out, "... Providing contact details for tracing measures is necessary, it is not a burden," and further the same participant elaborated on the note of whether the completion of the probing question has brought up any new aspects of their corn for privacy, to which the she responded, "...Few weeks back, I was more concerned about the potential leak of my details to other entities non-COVID related, however, with another outbreak in Europe, I believe we as citizens need to be more vigilant and if this means we need to provide our contact details every time we enter a business, so be it. It's a safety measure. ". This was a recurring message from those participants who displayed the willingness to corporate, the

consideration for general health and wellbeing for those, just like this participant has pointed out, at times, it is part of the responsibility of a country's citizen to engage in such activities on request. Throughout the entire probing process, most of the participants did not seems to have their opinions changed, and the results from within the same period of activities, from late September to the near end of October, as stated from the QLD health department's given numbers, there has been 0 community transmission of the COVID-19 virus within QLD which includes the Brisbane region.

#### 4.2.3. Reluctant to the community

However, some participants complained about providing their personal details to the community. They said they started receiving junk mail after they entered their details, and one of the participants even received junk calls. One of the participants said, "...I don't want to enter information (...) There's nothing I can do about providing my information for society, but sometimes I want to ignore filling in my details when I enter into a restaurant." Some participants are upset that they have been forced to provide their information under social pressure. One participant said, "...It's true that I have to offer my privacy for the sake of society, but, I don't want my privacy to be breached." As their saying, some participants had no trust in contact tracing because they didn't like and were worried about their privacy breaching. They also had concerns about crime. Anxiety about hacking or invasion of privacy raises restrictions on people's provision of their information[7] and makes them take an attitude of rejecting the community. As a person in the community, responsibility should be accepted. However, still, as some participants mentioned earlier, they were not happy with the position that the community forced them to provide their private information.

#### 4.2.4. Individual data protection

All contact tracing mechanisms within the community relies on the level of willingness of the corporation from its members, this means the validity and accuracy of the privacy data is not only essential but also critical in the success of the community for preventing the spread of COVID-19, within this level. As we proceeded with the culture probe, we

found that privacy data has not been protected. According to one participant's response, she noted that while conducting a culture probe, she realised a privacy breaching that she had never known before. She said, "I haven't realised that I'm getting more junk mail because of COVID-19 detail before this survey, but I could know clearly that I'm getting more junk mail than usual." As such, she said she received about 25 junk emails every week after she provided privacy data. To prevent the spread of COVID-19, the accuracy of information is essential, but if people feel their personal data is unprotected, they will hesitate to provide their information. Besides, when she was asked that she felt privacy breaching after sharing her personal details during undertaking cultural probes, answered that she had received Chinese emails that she didn't get before COVID-19. As a result, it has been discovered that people's personal information has been being breached and this lack of privacy protection can cause problems in providing accurate privacy data which is people's cooperation for the community.

However, on the other hand, another participant said she also had been receiving junk emails since before COVID-19, so that junk emails were not caused by contact tracing. Also, she mentioned that she has no choice but to provide her information for the community, and as a citizen, she has to believe that this is a safety measure. In the first week of receiving the probes, she said "Completing the probing questions when entering restaurants/cafes have become a norm, and my perception has not changed since the outbreak."

It means that providing personal information has become routine and that she has no deep interest in it. She also noted on the first day of the third week - 15/10/2020 since participation "A few weeks back, I was more concerned about the potential leak of my details to other entities non-COVID related, however, with another outbreak in Europe, I believe we as citizens need to be more vigilant and if this means we need to provide our contact details every time we enter a business, so be it. It is a safety measure." Her view of providing personal information was initially apathetic and began to worry as the days went by, but felt that the protection of personal information was well protected. Also, on the last day - 22/10/2020, she said "The outbreak in Europe has cemented my

attitude that contact tracing is vital 'first step' in managing the current situation. Therefore, I believe, although tedious, as a community, we should provide our contact details for any future threat to the pandemic."

Her view of providing personal information initially was indifference, but it had been changed as she drew up the tasks for three weeks. She said that in order to prevent the spread of COVID-19, personal information must be provided, there is no concern about contact tracing, and she thought that her personal information is well protected, and also mentioned "I simply hope the data is kept safely and to be discarded privately in the future."

#### 4.2.5. lack of transparency of contact tracing

People don't know where their information has been sent. The cultural probes result in the conclusion that the transparency of contact tracing was insufficient. Participants did not know where their information was being forwarded, and some of them speculated that the government might be keeping personal information. People can also experience privacy breaching, as participant Sol said, after providing her personal information, unknown junk mail has increased.

#### 4.2.6. Design implications

The results from our experiment have some major implications on design for privacy, and as we have seen from [9], it is not only important to consider privacy related concepts as components towards the end of the design of a product, the increasingly connected and digitalised ways of the society interacts with its citizens, calls for greater considerations on design for privacy. We would attempt to briefly address some such considerations in superficial details here.

## 5. Limitations

After the first initial briefing sessions, although the participants exhibited a great enthusiasm in completing the probing materials according to its instructions, there were a few instances of which incomplete probing materials were returned hence it was difficult to employ appropriate statistical tools to

categorise the quantitative aspect of some of the probing questions. Some users forgot to complete or lost the probe when it was handed in a hard copy. The probing materials thus found that it cannot be as effective as we planned to be. Despite the probing materials come with a section of inviting users to include photo/screenshots of any interested images of their daily lives that might concern their privacy attitudes, however, this additional question was answered poorly as participants appear to be confused with its wording at times albeit it was explained to them.

The chosen methods for conducting the user studies were suitable and appropriate, however another limitation of this study was that not many participants have got the COVID safe app installed or have enabled the required permission features on their device upon installation to make the application function properly. The inclusion of more questions related to this aspect of the technological domain would have been more useful to integrate the existing methodology with a potential wider area of impact on their associated privacy items, and provide further insight on how users would adapt their interaction behaviours with the technological mediums to adjust their privacy attitudes for the context.

#### 6. Future work

For future work, a more rounded probing materials, including more participants from more diverse backgrounds and professions should be considered to some other variables that have been controlled for in this research project to further examine the privacy perception and the impact it has on the associated technological domain in a community setting.

It is worth reminding the users that during this particular research process, although we have explored the potential change in the effectiveness of

the application of technologies from the users privacy aspect, we however, did not address other possible factors that could also have caused a shift of change in attitudes in privacy for the users. It is understood that most of the participants from our research process have undergone different levels of privacy breach of various degrees, i.e. fraud calls in foreign languages, increasing level of junk emails and texts. We, as researchers collectively, did not explore whether or not these leak of personal identifiable information is a result of an intentional act by the respective bodies of responsibility, or it was simply a breach of online security from their behave, which ultimately translates into undesirable information leakage for the users and hence a reduce level of trust on both the technologies, as a medium, or the business as the conductor of this medium, should be blamed for.

#### 7. Conclusion

Additional knowledge to the field of HCI was added by this quasi-experiment, by extending on the basis of previous research findings. The main benefit from conducting this research enabled us to understand that in some instances, although in a traditional sense, an increase towards more preservative stands on privacy could reduce the effectiveness of the technologies that has caused such a shift of perception [8]. In the case of COVID contact tracing scenario where the government bodies imposes related restrictions on the necessity of such information to be made available, the public although reluctant, their engagement and the effectiveness of using technologies as primarily medium for contact tracing was not effect by a sentimental changes in the perception of privacy as the community infection within the region where the study look place, experienced over thirty days of zero community cases.

#### **REFERENCES (ACM Referencing Format)**

- [1] Bill Gaver, Tony Dunne, and Elena Pacenti. 1999. Design: Cultural probes. *interactions* 6, 1 (Jan./Feb. 1999), 21–29. DOI:https://doi-org.ezproxy.library.uq.edu.au/10.1145/291224.291235
- [2] Donghee Yvette Wohn, Jacob Solomon, Dan Sarkar, and Kami E. Vaniea. 2015. Factors Related to Privacy Concerns and Protection Behaviors Regarding Behavioral Advertising. In *Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '15)*. Association for Computing Machinery, New York, NY, USA, 1965–1970. DOI: <a href="https://doi-org.ezproxy.library.uq.edu.au/10.1145/2702613.2732722">https://doi-org.ezproxy.library.uq.edu.au/10.1145/2702613.2732722</a>
- [3] Panayiota Efthymia Michalopoulou and Christos Kalloniatis. 2017. The role of Gender Privacy in the use of Cloud Computing Services. In *Proceedings of the 21st Pan-Hellenic Conference on Informatics (PCI 2017)*. Association for Computing Machinery, New York, NY, USA, Article 13, 1–6. DOI: <a href="https://doi-org.ezproxy.library.uq.edu.au/10.1145/3139367.3139397">https://doi-org.ezproxy.library.uq.edu.au/10.1145/3139367.3139397</a>
- [4] Blase Ur and Yang Wang. 2013. A cross-cultural framework for protecting user privacy in online social media. In *Proceedings of the 22nd International Conference on World Wide Web (WWW '13 Companion*). Association for Computing Machinery, New York, NY, USA, 755–762. DOI: <a href="https://doi-org.ezproxy.library.uq.edu.au/10.1145/2487788.2488037">https://doi-org.ezproxy.library.uq.edu.au/10.1145/2487788.2488037</a>
- [5] Peter Eklund, Jeff Thom, Tim Wray, and Martin Thomson. 2010. Location privacy in a digital ecosystem for context-aware applications. In *Proceedings of the International Conference on Management of Emergent Digital EcoSystems MEDES '10*). Association for Computing Machinery, New York, NY, USA, 137–144. DOI:https://doi-org.ezproxy.library.uq.edu.au/10.1145/1936254.1936278
- [6] ABS. 2016 Census QuickStats for greater brisbane region. Retrieved from <a href="https://quickstats.censusdata.abs.gov.au/census">https://quickstats.censusdata.abs.gov.au/census</a> services/getproduct/census/2016/quickstat/3GBRI
- [7] R. A. Coldwell. 1995. Australian attitudes toward legal intervention into hacking. Commun. ACM 38, 11 (Nov. 1995), 115–117. DOI:https://doi-org.ezproxy.library.uq.edu.au/10.1145/219717.219812
- [8] Marco Furini, Silvia Mirri, Manuela Montangero, and Catia Prandi. 2019. Privacy perception and user behavior in the mobile ecosystem. In *Proceedings of the 5th EAI International Conference on Smart Objects and Technologies for Social Good (GoodTechs '19)*. Association for Computing Machinery, New York, NY, USA, 177–182.
- DOI:https://doi-org.ezproxy.library.uq.edu.au/10.1145/3342428.3342690
- [9] Yilei Liang, Dan O'Keeffe, and Nishanth Sastry. 2020. PAIGE: towards a hybrid-edge design for privacy-preserving intelligent personal assistants. In *Proceedings of the Third ACM International Workshop on Edge Systems, Analytics and Networking (EdgeSys '20)*. Association for Computing Machinery, New York, NY, USA, 55–60. DOI:https://doi-org.ezproxy.library.uq.edu.au/10.1145/3378679.3394536
- [10] Niza Yanay and Galit yany-ventura. 2008. The decline of motivation?: From commitment to dropping out of volunteering. In *Nonprofit Management and Leadership.* (Wiley InterScience '08). DOI: 10.1002/nml.205
- [11] Nili Steinfield. 2016."I agree to the terms and conditions": (How) do users read privacy policies online? An eye-tracking experiement. In *Computer Human Behaviour*. Ariel University. 55:992-1000. DOI: 10.1016/j.chb.2015.09.038

## **Appendices**

## **Appendix directory:**

Section 1. Paper Review

Section 2. Initial form for capturing a preliminary privacy concern

Section 3. Ethics Form

Section 4. Probing Kit

Section 5. Results of Interview, Probing Kit and Consent Form

#### Appendix 1. Paper review

### DECO6500 - Paper Review

Appendix 1.1 – Paper review of Privacy nudges for mobile applications: Effects on the creepiness emotion and privacy attitudes

#### Title of Paper:

Privacy nudges for mobile applications: Effects on the creepiness emotion and privacy attitudes

#### Authors of Paper:

Bo Zhang (The Pennsylvania State University, University Park, USA) Heng Xu (The Pennsylvania State University, University Park, USA)

#### Citation – use ACM format

Bo Zhang and Heng Xu. 2016. Privacy Nudges for Mobile Applications: Effects on the Creepiness Emotion and Privacy Attitudes. In Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing (CSCW '16). Association for Computing Machinery, New York, NY, USA, 1676–1690. DOI:https://doiorg.ezproxy.library.uq.edu.au/10.1145/2818048.2820073

What is the main argument of the paper – the contribution to knowledge?

The paper explored how interface design cues could be an influencing fac- tors to nudge the user's groups into agreeing to privacy settings that might otherwise have been unclear to them. The conducted empirical trial also established proven relationship between certain emotive and subjective dependent variables and their effect on their effectiveness of alternating users' privacy attitudes towards accepting technologies that requests to handle sensitive personal information.

A distinctive difference in the types of privacy nudging and it was determined that social nudge tends to result in a wider acceptance as the result of generally positive evoked emotion from collective acknowledgement and social effect.? (wording requires a bit of twist)

What methods/techniques were used?

Privacy nudging, statistical sampling, interviews and massive surveys.

What is so novel/innovative about the findings? Do you think it could be done better?

It was useful in terms of confirming that different categories of factors have a direct effect on an individual's privacy concerns.

The part where the research could have been done better would be creating more value for the participants to make genuine input, as the whole trial process only last for around 15 mins to 30 mins and the participants are fully aware that there will be not direct consequences associated with their own individual opinions hence the validity of the result could be in question as the methodology is rather confined to a certain sampling environment.

Why is the work important? How will it have an effect in the real world?

The work is important as it reminds us how powerful different patterns in interface design could potentially change the ways of how the users could be interacting with the system thus producing unique individual user experiences that may or may not be welcomed.

What new ideas did it give you for your own work?

The work also highlighted that the importance of human factors in design for privacy conscious user interfaces, different types of individual character traits will resulted in Different users' responses to the underlying technological system.

The team can therefore tailor the interview questions to explore the different factors that might influence users' perception on privacy and ultimately how they interact with the system that requires the users to provide sensitive personal information. Moreover, the research in the paper reminded the team of the importance of having a large sample space and the possible incorporation of statistical tools to better analyse our research process using cultural probes.

Appendix 1.2 – Paper review of The role of gender privacy in the use of cloud computing services

Title of Paper:

The role of gender privacy in the use of cloud computing services

Authors of Paper:

Panayiota Efthymia Michalopoulou (International Hellenic University) Christos Kalloniatis(University of the Aegean)

Citation – use ACM format

Panayiota Efthymia Michalopoulou and Christos Kalloniatis. 2017. The role of Gender Privacy in the use of Cloud Computing Services. In <i>Proceedings of the 21st Pan-Hellenic Conference on Informatics</i>
(<i>PCI 2017</i>
). Association for Computing Machinery, New York, NY, USA, Article 13, 1–6. DOI:<a href="https://doi-org.ezproxy.library.ug.edu.au/10.1145/3139367.3139397">https://doi-org.ezproxy.library.ug.edu.au/10.1145/3139367.3139397</a>

What is the main argument of the paper – the contribution to knowledge?

The purpose of this paper was trying to determine whether gender affects the way online privacy is perceived and practiced within the domains of social networking, ecommerce, and online banking.

What methods/techniques were used?

Cross tabulation; Hierarchical multiple regression analysis; Survey

What is so novel/innovative about the findings? Do you think it could be done better?

The paper used statistical research devices to account for the changing of online behaviour as a result of perception of privacy primarily based on gender differences and some of the other dependent variables to approximate a magnitude of such differences.

Why is the work important? How will it have an effect in the real world?

I think the work is done fairly well due to its well-designed experiment as it controls for most of the variables of interests and had a focus on differences of privacy opinions based on gender, this experiment opens up and signifies the potential changes required in future real life experiments regarding privacy issues to account for change of its attitudes and its magnitudes as contributed to gender. This will subsequently open up new design decisions and considerations in a community-based design scenario.

What new ideas did it give you for your own work?

It reminds me that it would be important to take gender into account when recruiting participants for a privacy related project such as this one, because as the paper pointed out, they are a interrelationship exist among a user's gender, educational background and the way the same user perceives and acts regarding online privacy, which again, would be technology based, and as indicated in the research question, most of the contact tracings mechanism that are in place nowadays primarily consist of mandating private information at request, so it would be helpful to consider this aspect of the issue in our project.

#### Appendix 1.3 – Paper review of Australian attitudes toward legal intervention into hacking

Title of Paper: Australian attitudes toward legal intervention into hacking

Authors of Paper: R. A. Coldwell

Citation – use ACM format

R. A. Coldwell. 1995. Australian attitudes toward legal intervention into hacking. Commun. ACM 38, 11 (Nov. 1995), 115–117. DOI: <a href="https://doi-org.ezproxy.library.ug.edu.au/10.1145/219717.219812">https://doi-org.ezproxy.library.ug.edu.au/10.1145/219717.219812</a>

What is the main argument of the paper – the contribution to knowledge?

Australian's different response to computer crime.

What methods/techniques were used?

During lectures, create a hypothetical situation, ask students and they respond. Organised the responses and made a result.

What is so novel/innovative about the findings? Do you think it could be done better?

People responded that they would report to the police when their bank or account was targeted for hacking. However, if there were no individual involvement, only a few Australians responded that they were suing the crime. Like this, people did not care if it was not their problem. If people are interested in not only their problems but also problems for the community, the above issues may be solved.

Why is the work important? How will it have an effect in the real world?

People said that without personal involvement, they did not care about hacking that much. This could soon cause a significant social issue because of the ignorance of other people's damage in real life. Therefore, we must address this indifference and ignorance of other people's damage.

What new ideas did it give you for your own work?

As it is mentioned earlier, others are suffering a lot from COVID-19, because of many people who do not care if it is not their problem. After reading this paper, It is found that people were indifferent to things that were not related to them, which can be linked to our indifference to privacy breaching. Therefore, we decided to think about how we can promote people's interest in privacy breaching and create a healthy community.

## Appendix 1.4 – Paper review of A cross-cultural framework for protecting user privacy in online social media

Title of Paper: A cross-cultural framework for protecting user privacy in online social media

Authors of Paper: Blase Ur, Yang Wang

#### Citation – use ACM format

Blase Ur and Yang Wang. 2013. A cross-cultural framework for protecting user privacy in online social media. In Proceedings of the 22nd International Conference on World Wide Web (WWW '13 Companion). Association for Computing Machinery, New York, NY, USA, 755–762. DOI: <a href="https://doiorg.ezproxy.library.uq.edu.au/10.1145/2487788.2488037">https://doiorg.ezproxy.library.uq.edu.au/10.1145/2487788.2488037</a>

What is the main argument of the paper – the contribution to knowledge?

Social media is becoming increasingly global, but personal information is not well protected. Therefore, it introduces some examples of websites and frameworks of how personal information should be protected.

What methods/techniques were used?

Survey, A framework that discusses social media privacy issues.

What is so novel/innovative about the findings? Do you think it could be done better?

The framework created by researchers evaluated how personal information used on social media is protected. They divided into six sections, discussed issues on privacy, researched related disciplines, and discussed differences in user expectations. These studies can be used as one of how we will derive results when we deal with the subject of privacy breaching in our research paper.

Why is the work important? How will it have an effect in the real world?

As the popularity of social media increases and spreads, privacy must be protected as well, but it is not. Therefore, solutions should be found through people's opinions and discussions on the protection of personal information. The research work covered in this paper looks for ways to support privacy and deals with user expectations and findings of it. These jobs can tell us what we need to be aware of when using social media.

What new ideas did it give you for your own work?

We will discuss the privacy breaching on the contact tracing app used to stop the spread of the COVID-19. The frameworks used in this study was a good inspiration for perverse search. In the future, it would be good to refer to these researchers' methods when we conduct experiments on cultural probes and deal with user findings as a result.

# Appendix 2: Initial form for capturing a preliminary privacy concern

Questions number	Question
1	When was the last time that you went out from home? What sort of places did you go to?
2	Were you asked to do any form of contact tracing? If so, what?
3	If you answered QR code scan for question 2, what information were you asked to provide when creating the QR code, were you provided with information about where or how it will be stored?
4	Do you have any concerns about privacy issues when you scan the QR Code?
5	Are you currently a student or a working person?
6	At work, what application do you use for virtual chatting or meeting?
7	If you mentioned zoom in 6, Do you have any privacy concerns while you are using that application (zoom)?
8	What do you think when you first hear the word privacy? or what comes into your mind?
9	I'm going to show you an article from the news, have a read at it and answer this question, please. Do you have any differences of perception to data (privacy) breach before and after reading this article?
10	Did you install the contact tracing app yourself?
11	When did you install it? Do you have any idea how it works?
12	Did you give permissions to the contact tracing app to access your phone? Such as Bluetooth, WIFI or GPS? If yes, why?
13	Have you given proper reading to the questions asking for permissions?
14	Do you think the contact tracing app is working correctly?
15	When or how did you know that you had to install the contact tracing

16	What were you thinking when you had to repeatedly scan the QR code in the same area on the same day?
17	Do you think contact tracing is effective?
18	Do you have any concern that you might get junk mail?
19	I will be giving you a set of probes which you have to interact with and fill out three times a week for 3 weeks. Do you agree with this?

### Appendix 3: Ethics Form

School of Information Technology and Electrical Engineering

#### STUDENT RESEARCHER

<Hyun Jeon & 42865320.> <Eunji Choe & 45653005.> <Zezheng Shi & 44856078.>

#### COURSE

DECO6500 – Advanced Human-Computer Interaction

#### **COURSE STAFF**

Coordinator: Dr Dhaval Vyas Email: d.vyas@uq.edu.au

#### **Participant Information Sheet**

#### **Privacy Concerns on contact tracing applications**

#### PROJECT DESCRIPTION

To find out public perception on the privacy concern and its impact on the effectiveness of using voluntary mobile app based technology as the primary medium for contact tracing in Brisbane.

#### YOUR PARTICIPATION

To participate in the interview and answer questions that asks about previous experiences with contact tracing applications and any concerns regarding

#### **DATA WE ARE COLLECTING**

Photo images of body (no face), recording of voice doing the interview, script of the recording will be collected

#### **CONFIDENTIALITY**

Will not take any photos of your face, voice recording will be kept on the personal phone and will be deleted once it is unnecessary.

All information collected from you will be de-identified and/or allocated a code. Personal information that is obtained will be strictly confidential.

De-identified and/or coded information will be reported to staff and students of the course <code code/name> in which the student researchers are enrolled.

Evidence of your agreement to participate will be provided to the staff of the course for record-keeping, but will not be associated with the information you provide.

#### **RISKS TO YOU**

There are no risks to you participating in this project beyond those that exist in normal daily life.

#### **PARTICIPATION IS VOLUNTARY**

There are no direct benefits to you in participating in this project.

Your participation is entirely voluntary. You don't have to be in this study if you don't want to, and you can ask to stop at any time. There are no negative consequences should you wish to stop, data collection will cease immediately and any data collected from you or about you will not be included in the study.

#### ETHICAL CONDUCT OF THE RESEARCH

This research project is being conducted as a learning activity of The University of Queensland. If you would like to speak to the course teaching staff about any aspect of this project, you may contact them with the details provided.

School of Information Technology and Electrical Engineering

#### STUDENT RESEARCHER

<Hyun Jeon & 42865320.>

#### COURSE

DECO6500 - Advanced Human-Computer Interaction

#### **COURSE STAFF**

Coordinator: Dr Dhaval Vyas Email: d.vyas@uq.edu.au

### **Participant Informed Consent Form**

#### **Privacy Concerns on contact tracing applications**

Your written informed consent to participate in this study is needed by the researchers. Please read the following statements, and sign if you agree with them:

- The nature of this project has been explained to me and I have read and understood the Participant Information Sheet provided.
- I agree to participate in the study as described in the Participant Information Sheet.
- I understand that my participation in this study is voluntary and that I am free to withdraw from the study at any time, without penalty and without needing to provide any reason.
- I understand that my photo and voice recording will be provided and used
- I have been informed that I can contact the student researcher or a teaching member of staff if I would like more information on this study.
- I understand that there are no direct benefits to me in participating in this study.

Please indicate your preference below:

## YES / NO

Participant's Full Name:	
Participant's Signature:	Date:

Appendix 4: Probing kit

## Cultural Probing Kit

An investigation into public perception on privacy concerns

DECO 6500 (Advanced Human Interaction.)

45653005 Eunji Choe 42865320 Hyun Jeon 44856078 Kevin Shi

## Table of contents

Information for participants	27
Research method	27
Research question	27
Instructions	27
Day 1	28
Day 2	6
Day 3	8
Day 4	10
Day 5	12
Day 6	14

## Information for participants

### Research method

We will primarily collect information based on the method of a cultural probe. You can learn more about it here.

https://en.wikipedia.org/wiki/Cultural\_probe

## Research question

Public perception on the privacy concern and its impact on the effectiveness of using voluntary mobile app based technology as the primary medium for contact tracing in Brisbane.

### Instructions

- 1. Every participant needs to do 2 times a week for 3 weeks. (23/09/20~18/10/20)
- 2. You can do this any date but 2 times a week or more if you like.
- 3. You do not have to fill in complete or formal sentences, you can be as expressive as you like or you could simply respond to the questions using keywords only.

## Day 1 ~ 6

## ( Please fill in your date here)

Probing Questions	Your responses
1. Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity? Do you think this is necessary? As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.) Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	
2. Have you been receiving any junk mail more than before covid 19? Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	

4. During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.) Could you elaborate on this?	

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

#### Appendix 5: Results of Interview, Probing Kit and Consent forms

## 1. Stephen Knights

#### 1.1. Cultural Probes

## **Cultural Probing Kit**

\_

# An investigation into public perception on privacy concerns

DECO 6500 (Advanced Human Interaction.)

45653005 Eunji Choe 42865320 Hyun Jeon 44856078 Kevin Shi

### Table of contents

### Information for participants

#### Research method

We will primarily collect information based on the method of a cultural probe. You can learn more about it here.

<a href="https://en.wikipedia.org/wiki/Cultural\_probe">https://en.wikipedia.org/wiki/Cultural\_probe</a>

#### Research question

Public perception on the privacy concern and its impact on the effectiveness of using voluntary mobile app based technology as the primary medium for contact tracing in Brisbane.

#### Instructions

- Every participant needs to do 2 times a week for 3 weeks. (23/09/20~18/10/20)
- You can do this any date but 2 times a week or more if you like.
- You do not have to fill in complete or formal sentences, you can be as expressive as you like or you could simply respond to the questions using keywords only.

## September 24th

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places?  How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	Yes when I was out, I don't have the app and just write it down on paper, I think its necessary as long as the questions aren't too invasive and just ask essential things for tracing. Girlfriend had a bunch of places near her work have COVID so it was nice to know she hadn't been to any of those places other than just its in Southbank.
Have you been receiving any junk mail more than before COVID 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	no, I haven't noticed any
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	no not yet
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	i always try to not give out too much information unless its necessary
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	no I haven't had anything that concerned me

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

## September 27th

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	Yes we did have to give it while out at a cafe recently, I think its necessary as long as COVID needs to be traced in aus. most of the questions i see seem reasonable for tracing
Have you been receiving any junk mail more than before COVID 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	no I haven't noticed any
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	maybe more aware of wats being asked

During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	just be careful of wat is being asked and its purpose
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	no I haven't noticed anything

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

## October 1st

Probing Questions	Your responses
1. Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity? Do you think this is necessary? As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.) Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	No i havnt because i havnt been out, its still neccessary but maybe shouldnt be soon as covid isnt in qld, but theres always a chance.

Have you been receiving any junk mail more than before covid 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	no i havnt, i just fill in the forum and most of them dont ask for email just address and phone number
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	just wat questions were asked, phone and address seems reasonable.

4. During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	nothing new
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	no i havnt, emails seem regular and no weird texts.

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	

## October 4th

Probing Questions	Your responses
-------------------	----------------

1. Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity? Do you think this is necessary? As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.) Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	Yes we have had to fill it in, once again i still dont have the app just fill it in or my girlfriend uses the app. its neccessary i feel like as long as covid is still an issue, i do wonder what its used for if its just covid tracing or anything else.
Have you been receiving any junk mail more than before covid 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?      Do you think it is related to a privacy breach?	no i havnt noticed anything
Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	yes just wondering what questions were asked, i had my email address asked for instead of address and wondered why it seems less efficient as some people may not check emails.
4 During or offer these delta estimistics and the	inst he special of what is being policy dated
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	just be careful of what is being asked and why or who.
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes,	no i havnt noticed anything but the email stood out.

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	

No or Maybe.) Could you elaborate on this?

you think might be related to the research topic with us.	,	
---	---	--

## October 8th

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	No i havnt been out so i havnt had to, i still think its neccessary as we have cases in australia so its important to trace it to irradicate it.
Have you been receiving any junk mail more than before covid 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	no i havnt noticed any
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	just always cautious of wats being asked, i dont like giving out info to random places but its for the government.
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	still just be cautious to whos asking and what theyre asking

5. Are you noticing any potential privacy
breaches regarding your data lately? (Yes,
No or Maybe.)
Could you elaborate on this?

I got a notification there was a privacy breach but i didnt notice anything and got forced to change my password

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

# Day 6

#### October 11th

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary? As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	Yes while i was out, still neccessary but that might change if theres a vaccine or something for covid. its important to monitor. it might be used for something else but i trust that the government wont sell it to someone or for their own purposes outside of tracing.
Have you been receiving any junk mail more than before covid 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?      Do you think it is related to a privacy breach?	no i havnt noticed any.

3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	still the same but cautious to give it out. still dont have the app just fill in paper
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	just be caustious with what i give out and why
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	no nothing new

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

## 1.2. Interview notes

1, weekend, Sat Enterday, Stephan (9th/sep/20, (gym), worth . local

2. There to soan the tag.

gym card.

3. They are viry gym card to

carried thing.

12. No, Tobit Conv.,

13. Sure.

13. Sure.

15. Ves. Te.

15. Ves. Te. 6. Zoon, Occasionary, but emuil.
talking.
1, Not really, I don't real to the the 8. Storethy my Late. 8

lo. No T dist. but Clanu. to 4 we dritture any cases in Queencland, but if the are none and Till contain. 12. No, Tolast Enov, but Thope It is. It, No, Yes, To concered. Tooks

#### 1.3. Consent form

Participant's Full Name:

Participant's Signature:

Data:

The University of Queensland Brisbane QLD 4072 Australia

+61 7 3365 8302 E

d.vyas@uq.edu.au uq.edu.au

ABN: 63 942 912 684 CRICOS PROVIDER NUMBER 00025B

#### 2. Jina Cha

#### 2.1. Cultural Probes

# **Cultural Probing Kit**

# An investigation into public perception on privacy concerns

DECO 6500 (Advanced Human Interaction.)

45653005 Eunji Choe 42865320 Hyun Jeon 44856078 Kevin Shi

## Table of contents

Information for particular Research me Research que	thod	nts 3 3 3	
Instructions	3		
Jina Cha	4		
Day 1 - 24/09/20	)20	4	
Attended Pig &	Whistle E	Brisbane CBD for lunch.	4
Day 2 - 27/09/20	)20	6	
Attended Stellar	rossa As <sub>l</sub>	pley Qld for breakfast	6
Day 3 - 01/10/20	)20	8	
Attended Kinn-I	mm Brist	oane CBD for lunch	8
Day 4 - 06/10/20	)20	10	
Attended Yakini	ku Hachi	Brisbane CBD for lunch	10
Day 5 12			
Day 6 14			

### Information for participants

#### Research method

We will primarily collect information based on the method of a cultural probe. You can learn more about it here. <a href="https://en.wikipedia.org/wiki/Cultural">https://en.wikipedia.org/wiki/Cultural</a> probe

#### Research question

Public perception on the privacy concern and its impact on the effectiveness of using voluntary mobile app based technology as the primary medium for contact tracing in Brisbane.

#### Instructions

- 1. Every participant needs to do 2 times a week for 3 weeks. (23/09/20~18/10/20)
- 2. You can do this any date but 2 times a week or more if you like.
- 3. You do not have to fill in complete or formal sentences, you can be as expressive as you like or you could simply respond to the questions using keywords only.

#### Jina Cha

#### Day 1 - 24/09/2020

Attended Pig & Whistle Brisbane CBD for lunch.

Probing Questions	Your responses
1. Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity? Do you think this is necessary? As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.) Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	The shops where I have supplied my details for contact tracing has not been random, they were shops I visited. Although in the same/similar vicinity, I voluntarily entered the shops, thus completing the contact tracing task.  I believe it's necessary for contact tracing. As a community, everyone must be vigilant in providing necessary information to ensure contact tracing can be conducted in the event of another cluster outbreak.  I have considered that my personal information could be used for other purposes (ie. Marketing)

2. Have you been receiving any junk mail more than before covid 19?  Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	Not necessarily, the amount of junk mail coming through as been consistent before and post-pandemic era.  7 Feeling – There is too much unnecessary information online, I should unsubscribe.  No, I don't believe so, the junk mail relates to businesses I have previously had minor/major dealings with.
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	Completing the probing questions when entering restaurants/cafes have become a norm and my perception has not changed since the outbreak.

4. During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?

Instead of various shops needing to complete contact tracing tasks for all their patrons, the COVIDsafe app by the Federal Government should be used primarily to track people's whereabouts when needing to trace.

5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.) Could you elaborate on this?

Yes. I do not believe full name and residential address is required when completing contact tracing tasks.

First name, phone number and maybe email address should be sufficient.

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

## Day 2 - 27/09/2020

## Attended Stellarossa Aspley Qld for breakfast

Probing Questions	Your responses

1.	I provided my details at the location of our
Did you have to supply your personal	breakfast; Stellarossa Aspley.
information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?	I still believe providing contact details is important step in tracing patrons in case of any COVID-19 outbreaks.
As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)	Unless there is a better way to track individuals' movements, logging their patronage at the shops is vital. Especially if the Government's Covid safe app is not widely downloaded/used.
Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	I still consider that my information may be used elsewhere in the future. However, as previously mentioned, unless there's a better way to track patrons' movements, providing contact details at every shop is the only way for future tracking.
Have you been receiving any junk mail more than before covid 19?	I have received 12 junk mails this week,
Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?	I am not overwhelmed by it, as it is various businesses' marketing efforts. I simply need to delete them if it's irrelevant to me.
Do you think it is related to a privacy breach?	It is only a privacy breach if I have not provided my email address to the certain business. However, all spam I have received this week is relevant to businesses that I have in the past, signed up for.
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	My perception of privacy breach remains unchanged.
4. During an often those della cetivities, what a	ort of new approach have you thought of adopti

4. During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?

Have a back up email address used solely for giving out details for non personal matters

5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.) Could you elaborate on this?

I would like a detailed explanation on how my personal details are stored and for how long

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	

Feel free to share any screenshot that	
you think might be related to the	
research topic with us.	

# Day 3 - 01/10/2020

#### Attended Kinn-Imm Brisbane CBD for lunch

Probing Questions	Your responses
1. Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity? Do you think this is necessary? As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.) Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	I have used the QR code to input my personal details before entering the restaurant. I was further asked to use the anti-bacterial gel on my hands prior to entering the premises.  I still believe it's necessary to log my detail before entering a crowded place for future COVID-19 tracking purposes.  I still wonder how my personal details would be used, if retained after COVID-19 crisis.
2. Have you been receiving any junk mail more than before covid 19? Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	The amount of junk mail received has not been impacted by COVID-19
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	Inputting of data into tracking devices (QR code, hand-written log) has not changed over the last few weeks. I simple hope the data is kept safely and to be discarded privately in the future

<sup>4.</sup> During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?

My concerns have increased regarding the safe discarding of information once the COVID-19 is declared over.

I have created a new email address purely to provide for non-personal matters.

<sup>5.</sup> Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.) Could you elaborate on this?

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	

## Day 4 - 06/10/2020

## Attended Yakiniku Hachi Brisbane CBD for lunch

Probing Questions	Your responses
1. Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity? Do you think this is necessary? As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.) Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	My colleague and I supplied our name, phone number, address and time of entry by writing it down in a log at the restaurant entrance.  We did not provide our contact details elsewhere.  Providing information for potential tracking needs for COVID-19 is necessary  I feel a little over-exposed. I think providing full name, number and perhaps the residing suburb is sufficient for tracking purposes  I have wondered that my information could be used for other purposes (ie marketing)
Have you been receiving any junk mail more than before covid 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?     Do you think it is related to a privacy breach?	No
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	no

<sup>4.</sup> During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?

#### Nothing different

<sup>5.</sup> Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.) Could you elaborate on this?

#### No I have not noticed any breaches

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

# Day 5

# 15/10/2020 Stanton Restaurant, Brisbane CBD

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other	I only visited the Stanton Restaurant within Queensplaza Shopping Centre. I provided my contact details for tracing only at the restaurant where I dined at.  I think providing contact details for possible tracing is necessary  Providing contact details for tracing measures is necessary, it is not a burden  I have considered that my details may be used for non-contact tracing purposes
purpose other than contact tracing because of the demanding request for your personal information?	
Have you been receiving any junk mail more than before covid 19?  Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?	No. I only receive junk from businesses who I subscribe to
Do you think it is related to a privacy breach?	
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	Few weeks back, I was more concerned about the potential leak of my details to other entities non-COVID related, however, with another outbreak in Europe, I believe we as citizens need to be more vigilant and if this means we need to provide our contact details every time we enter a business, so be it. It's a safety measure.

4. During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?

. Nothing

5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.) Could you elaborate on this?

No

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

# Day 6

#### 22/10/2020 Kushimaru, Brisbane CBD

Probing Questions	Your responses
1. Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity? Do you think this is necessary? As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.) Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	I supplied my details once at the restaurant via QR code.  Yes this process is necessary  With the recent outbreak in Europe, I believe the community health and safety is more important than breaches of privacy  I still fear that my details may be used for other purposes. I wish there would be more security measures in place to ensure personal data are not hacked.
2. Have you been receiving any junk mail more than before covid 19?  Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	no

3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?

The outbreak in Europe has cemented my attitude that contact tracing is vital 'first step' in managing the current situation. Therefore, I believe, although tedious, as a community, we should provide our contact details for any future threat to the pandemic

4. During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?

No

5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.) Could you elaborate on this?

No

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

#### 2.2. Interview notes

Friday, 18th, septen, Jina Cha Ly restrument, intigravant, 2, Tes, I had to scan the barrande nano, addica, phare own, 3, I have no idea what going to 4, when tes, There 51 yer, I'm working full time. 6, At work, & I we zon for neating profesitant decelopement 1, Thoward concerence I should. 8, being careful

& i breach privacy

10, The installed Obustavilla

(ewe on thing app.

62 Understanding 2 installed 6. It times my location War You

11, thick to keep it on.

12, I hadn't idea.

00, 64, 14, Citrus.

[ I assume it works, I live in city. so no problem.

13, Yes, Lagree!!

South loven & thing app.

14. Town think too huels.

fluttow, so I did.

15. I haven't got any Junkmost.

Till be concerend

Thope so, effectio,

#### 2.3. Consent form

Participant's Full Name: JIWA LANA

Participant's Signature: Date: 20/11/2005

The University of Queensland Brisbane QLD 4072 Australia

+61 7 3365 8302 E

d.vyas@uq.edu.au

uq.edu.au

ABN: 63 942 912 684 CRICOS PROVIDER NUMBER 00025B

# 3. Benjamin Mew

#### 3.1. Cultural Probes

#### (16/10/2020 - Fridays)

Probing Questions	Your responses
1.	Yes
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	Yes, for contact tracing. If case found there, easier to contact persons.  Probably but such is the modern day and age.
Have you been receiving any junk mail more than before covid 19?  Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	No. No.
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	No, it's always about standard contact details and never anything else.

4. During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?

Creating an email account for this kind of junk.

5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.) Could you elaborate on this?

No. Should go check out Have I been pwned website.

Extra	Your response

You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

## ( 22/10/20 - Brisbane CBD )

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal	NO but I do understand why one is asked to scan at every shop they go to. No shopkeeper wants to risk getting reprimanded by the administrator/council, so they will follow the guidelines, doesn't't matter if the guidelines are good or bad.
information?	YES, unfortunately it will be misused for sure. In my opinion, I havre given into this, cannot put up a fight as everything is digitalized and data is captured with or without our permission. The day we started using internet on our mobile phones, that was the end of data privacy.
2. Have you been receiving any junk mail more than before covid 19? Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time? Do you think it is related to a privacy breach?	Don't know, I receive a lot of junk mails – haven't activily keep track of who sends me junk.  I check my emails everyday – My feeling is that I receive a lot of mails and I wish I could go thru all and unsubscribe them. I lose patience quickly and quit going thru the "unsubscribe" step.
	Maybe – I cant tell for sure but I wouldn't be surprise it is privacy breach related.

Each time that you are completing the probing questions, has your perception of	Yes
privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	Sorry, I didn't understand your 2 <sup>nd</sup> question.

4. During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?

Consider giving wrong personal details (including email id) to avoid spam

5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.) Could you elaborate on this?

Maybe

Please see previous notes

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	Us as consumers should take responsibility to read the terms and condition, and UNCHECK those prefilled tickboxes before hitting the "submit" button.  Be brave and ask shops on how long will they save the data in their systems and ask them to send a written confirmation about the same.  Ask questions
Feel free to share any screenshot that you think might be related to the research topic with us.	Dint understand this comment sorry.

#### 4. Sol Choi

#### 4.1. Cultural Probes

# **Cultural Probing Kit**

\_

# An investigation into public perception on privacy concerns

DECO 6500 (Advanced Human Interaction.)

45653005 Eunji Choe 42865320 Hyun Jeon 44856078 Kevin Shi

## Table of contents

Information for participants			
Res	earch method	3	
Res	earch question	3	
Inst	ructions 3		
Day 1	4		
Day 2	6		
Day 3	9		
Day 4	11		

Day 5 13

Day 6 15

## Information for participants

#### Research method

We will primarily collect information based on the method of a cultural probe. You can learn more about it here. https://en.wikipedia.org/wiki/Cultural\_probe

#### Research question

Public perception on the privacy concern and its impact on the effectiveness of using voluntary mobile app based technology as the primary medium for contact tracing in Brisbane.

#### Instructions

- 1. Every participant needs to do 2 times a week for 3 weeks. (23/09/20~18/10/20)
- 2. You can do this any date but 2 times a week or more if you like.
- 3. You do not have to fill in complete or formal sentences, you can be as expressive as you like or you could simply respond to the questions using keywords only.

### Day 1

#### (25/09/2020)

Ī	Probing Questions	Your responses

1. Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity? Do you think this is necessary? As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.) Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	Yes. I went to the restaurant I visited last week and entered the same information. Due to COVID-19, personal information should be written every day because it is a world pandemic issue, and everyone's life and death are at stake. I don't mind putting my information on QR codes, but I think someone can see the numbers I write with my hands.
Have you been receiving any junk mail more than before covid 19?  Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?	Yes, I feel like I am getting more junk message since COVID-19 starts.  I got 25 junk mails since this Monday to today.
Do you think it is related to a privacy breach?	Of course, it is. Getting more junk mail that I do not want to get is a privacy breach. Also, I feel like my information is not a privacy information anymore.
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	I haven't realised that I'm getting more junk mail because of COVID-19 detail before this survey but I could know clearly that I'm getting more junk mail than usual.

4. During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?

I've been tried to put my information on QR code than hand writing.

5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.) Could you elaborate on this?

Yes, because I'm getting message in Chinese even I'm not a Chinese.

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	

Feel free to share any screenshot that you think might be related to the research topic with us.	

# Day 2

# (26/092020)

Probing Questions	Your responses
1. Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity? Do you think this is necessary? As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.) Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	I went to Myer shopping centre today so, I didn't need to put my information. However, I think we need to record where we visited even in the shopping centre. Also, I think address is too personal information to put on just random paper.
2. Have you been receiving any junk mail more than before covid 19? Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	I got 5 more junk mails than last night. I have been reported them but it's never stop.  I feel like my personal information has been selling well.  I don't think my personal information is saft now.
time?  Do you think it is related to a	well.  I don't think my person

3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	I can remind how my personal information is important to do not get a junk mail.
--	---

- 4. During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?
- I don't really know what I should do for keep my information safe.
- 5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.) Could you elaborate on this?

No, nothing really has been changed from yesterday.

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

# Day 3

## (30/09/2020)

Probing Questions	Your responses

1. Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity? Do you think this is necessary? As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.) Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	I stayed at home today so, I didn't have to put my information. I think putting my personal information on random place becomes a normal thing in my life now. I surprised that I'm giving my personal information to too many shops.
Have you been receiving any junk mail more than before covid 19?  Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	I've got 2 calls from unknown people this week. I didn't get any call from unknown people so it's scared me.
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	I've not worried about privacy breaching before. However, this question makes me more concern about privacy breaching.

4. During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?

I've changed my bank account passwords because of this activity.

5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.) Could you elaborate on this?

No, I'm worried that I couldn't notice that my personal information has been hacked.

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	

Day 4

## (3/10/2020)

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	I went out for dinner. In the restaurant that I haven't seen in a long time, the QR code was attached to the table, and the gap between the tables was widened. I was sad because I felt like the cultures that were created by COVID-19 were coming closer to me.  Now, I don't really mind putting my information anymore. It becomes to the culture.
2. Have you been receiving any junk mail more than before covid 19?  Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	I have got 29 this weekend. I got pretty surprised that I'm getting junk mail by English on my Korean web site. It means that I'm getting English junk mail because of COVID-19 detail document.
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	I think I need to protect my personal information, but I don't really know how to.

4. During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?

Now, I take it as serious problem.

5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.) Could you elaborate on this?

Yes, when I get English junk mail at Korean web site.

Extra	Your response

You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

## Day 5

## (9/10/2020)

Probing Questions	Your responses
1. Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity? Do you think this is necessary? As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.) Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	I moved to an apartment today, so I didn't have to go outside and scan the QR code or fill out my information. However, I was surprised to see the rules in the apartment elevator that more than two people shouldn't ride.
2. Have you been receiving any junk mail more than before covid 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	I have got 13 this week I tried to not go out a lot lately. I'm not sure it's effected on junk mail but I get less than last week.
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	Naturally, there's a growing interest in personal information breaches.

<sup>4.</sup> During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?

In order to reduce personal information infringement, I am deleting the ID of the homepage that I do not use.

5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.) Could you elaborate on this?

Yes, it is shocking that the number of junk e-mails has decreased as the number of times you go out and input information is reduced.

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

# Day 6

## (11/10/2020)

Probing Questions	Your responses
1. Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places?  How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	When I went to my favorite Korean restaurant, I was surprised not only to enter information with QR code but also to have a two-hour stay. Now I am a little surprised to find and input the QR code by myself without the staff asking.
Have you been receiving any junk mail more than before covid 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	I have junk mail, but I keep getting phone calls in Chinese even I'm Korean.  I don't feel good because my information seems to have been sold strangely.

3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	I think this survey is making me realize that personal information is selling really easily.
out the material.	

4. During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?

I think it would be nice to have a powerful protection app that protects my information.

5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.) Could you elaborate on this?

Yes, even though I am in Korea, I think phone calls, text messages, and mails in English are a bit strange and a bit threatening.

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

#### 4.2. Interview Notes

1, Today 10-920 vestaments, shops. Solder) 2, Yes, When Twent to 45hoping centre Sovern Strestaurut I scared OR water po fill hames, orderesc. 3) have, addies. phone number. L dit know excately. 4, Kes, I because, to after scapping, Zuegot spum 5, les Con a student. 6, Zoom, Lucebook with group wenter. 1) Yes, because they are using comen. Tobit like show my Aus SUBran. Soverins. Tooled Convern.

Bi my time, has to be protested, from unknow people.

(9, No. I was gomen to mornied but they asked use both of information, so T defensed it.

11, Tobothere upp.
12, Thereit wed, and Tobother.
But, Yeah Twonder.

(4), Teah, absorbery.

(4), Teah, absorbery.

That to the things.

15. Sure, It has to be nove specific information, To Yes. Tongotty 7.

## 4.3. Consent form

Participant's Full Name: Sol Chop

Participant's Signature: Male: 91 Sol 1200

The University of Queensland Brisbane QLD 4072 Australia

+61 7 3365 8302 E

d.vyas@uq.edu.au uq.edu.au

ABN: 63 942 912 684 CRICOS PROVIDER NUMBER 00025B

5. YeonJin Kim (Interview)

#### 5.1. Interview Notes

Yeon Jin kim.

I Today. Morning 9.300m. @ 23/09/20.

I went to Uni, 149 builting, library,
Case.

2. OR code in my classes.

3, my personal obtail (nome. email, phore num,

Titlink Student num)

Think Information is gothy to arr.

I think everyweek uni will be checking.

4. Actually, Igan very concernes.
The have expense sonone, herek
my phone. The to

5. Ten astudent, but also purtine

6. Uni, facebook, son & mostly Zoom and discord. Sometimes stack.

n. Court that concerned, but I'm howed it someone try to hack my phone, but @ Court care that much.

8. protection. Thate sombody knows my privacy.

Twannat protect my privacy.
9. Linkst - ) The put my privacy
and they cheek my locators.

11, Linkit, Cost year beamber,
was very funny app, I par my
Tressan)
Cars they know my car num
and my location, they truck
my detail.

11,2, Yeah, Tthinkso, Cocation permission Because, they have to know my location for changing pay.

12. Ees.
13. Ees.
14. annoied. To time consuming.

I don't want to do more this once

provide where we go and be Otc...

for could 101. It's duty.

Yes. T be borred a lot.

Could thate to.

Think The got have junknown of providing my personal detail.

Participant's Full Name:

Particinant's Signature:

Date: 28.04.20

The University of Queensland Brisbane QLD 4072 Australia

+61 7 3365 8302 E

d.vyas@uq.edu.au

uq.edu.au ABN: 63 942 912 684
CRICOS PROVIDER NUMBER 00025B

### 6. Zhang Meng Xuan

#### **6.1. Interview Notes**

Zhang Meny Xuan.

1, Taday, Uni, Cate. Classhoom.

2. I did in library and classroom.

6 T scanned barcode.

3. name, stylent num,

of Think Unit wais collecting my

detail

4. tes, so I don't use our things

using my privacy.

5, or student.
6, We churt, Zoom, discourd.
1, No. 10 C don't care.
8, We coust proper privary,
10, Coon't know what is that

(2. The Know.

13, Fes.

14. This good. It can protect

un from could.

15, Yes, but application will be

bother 
Ves probably, Now I don't

Cove: E don't get Junkhuni.

#### 6.2. Consent Form

Participant's Full Name:

Mengxuan ZHANG

Participant's Signature: Date: 9/23/2020

Mergano Date: 9/23/2020

The University of Queensland Brisbane QLD 4072 Australia

+61 7 3365 8302 E

d.vyas@uq.edu.au

uq.edu.au

ABN: 63 942 912 684 CRICOS PROVIDER NUMBER 00025B

## 7. David Hak Kim

Questions number	Question
1	When was the last time that you went out from home? What sort of places did you go to?
	Today, I've been to Coffee shop (Starbucks) for breakfast and coffee and here at uni
2	Were you asked to do any form of contact tracing? If so, what?
	Yes, I was asked to scan QR code
3	If you answered QR code scan for question 2, what information were you asked to provide when creating the QR code, were you provided information about where or how it will be stored?
	Name, phone number, location, I think. I think I may have been given information, but I can not remember
4	Do you have any concerns about privacy issues when you scan the QR Code?
	Not really
5	Are you currently a student or a working person?
	Student
6	At work, what application do you use for virtual chatting or meeting?
	I use zoom
7	If you mentioned zoom in 6, Do you have any privacy concerns while you are using that application (zoom)?
	I heard about zoom's security breach, so I am little worried, but I have webcam cover, so I feel alright
8	What do you think when you first hear the word privacy? or what comes into your mind?
	Um Security? And my personal area

9	I'm going to show you an article from the news, have a read at it and answer this question, please. Do you have any differences of perception to data (privacy) breach before and after reading this article?
	Hm not really. Just as I thought
10	Did you install the contact tracing app yourself?
	Yes
11	When did you install it? Do you have any idea how it works?
	I can not remember, but sometime around May or June I think. I am not 100% sure, but I think it just records my details and time in the database
12	Did you give permissions to the contact tracing app to access your phone? Such as Bluetooth, WIFI or GPS? If yes, why?
	Yes, because I needed to give permission for the app to work
13	Have you given proper reading to the questions asking for permissions?
	Not really, I just give permission to all other apps
14	Do you think the contact tracing app is working correctly?
	Not too sure
15	When or how did you know that you had to install the contact tracing
	I think around May? I saw ad
16	What were you thinking when you had to repeatedly scan the QR code in the same area on the same day?
	Annoying
17	Do you think contact tracing is effective?
	I think it can be, but not really sure
18	Do you have any concern that you might get junk mail?
	Not really. I trust the app

19	I will be giving you a set of probes which you have to interact with and fill out three times a week for 3 weeks. Do you agree with this?
	Yes

# Day 1

## September 26th

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary? As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	Yes. I visited a restaurant for lunch and café for coffee after. I was asked to do contract tracing at both places, when they were only few meters away.  I think it is necessary.  Not really
Have you been receiving any junk mail more than before COVID 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	No
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	No
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	Haven't thought of any

5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	No
Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

## September 29th

Probing Questions	Your responses
1. Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity? Do you think this is necessary? As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.) Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	Yes we did have to give it while out at a cafe recently, I think its necessary as long as COVID needs to be traced in aus. most of the questions i see seem reasonable for tracing
Have you been receiving any junk mail more than before COVID 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?      Do you think it is related to a privacy breach?	No

3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	No
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	No
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	No
Extra	Your response
You can record down any extra	
information on your thoughts on privacy, or just anything general regarding the topic here.	

## October 1st

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	Yes This time stores were far apart, so it was necessary I think. No

Have you been receiving any junk mail more than before covid 19?  Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	No
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	No
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	No
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	No
Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	

### October 4th

Probing Questions	Your responses

1.	Yes, I had to fill in on a piece of paper at one
Did you have to supply your personal	store and had to scan QR code at another
information in the name of contact tracing	On aire of a case was the American
multiple times at random shops in the same	On piece of paper, maybe. Anyone can see
vicinity?	my detail
Do you think this is necessary?	
As in the case of potential COVID positives	
might have walked all around the places?	
How did you feel? (For example, people are	
asked to scan the QR code and when they	
go to the next shop, they are asked to do it	
again.)	
Have you ever considered that your	
information might be used for any other	
purpose other than contact tracing because	
of the demanding request for your personal	
information?	
2. Have you been receiving any junk mail	No
more than before covid 19?	
Can you check the junk mail box every	
Friday and report the junk mail counts as	
well as describe your feelings at the time?	
Do you think it is related to a privacy	
breach?	
3. Each time that you are completing the	No.
probing questions, has your perception of	
privacy breaching changed? Is there any	
other event between the date of entry	
recording that has an impact on your filling	
out this material?	
4. During or ofter those daily activities, what	No
4. During or after these daily activities, what sort of new approach have you thought of	INO
adopting to address any of your potential	
privacy concerns?	
5. Are you noticing any potential privacy	No
breaches regarding your data lately? (Yes,	
No or Maybe.)	
Could you elaborate on this?	
Extra	Your response
You can record down any extra	
information on your thoughts on privacy,	
or just anything general regarding the	
topic here.	
Feel free to share any screenshot that	
you think might be related to the research	
topic with us.	

#### 7.3. Consent Form

#### Participant Informed Consent Form

#### Privacy Concerns on contact tracing applications

Your written informed consent to participate in this study is needed by the researchers. Please read the following statements, and sign if you agree with them:

- The nature of this project has been explained to me and I have read and understood the Participant Information Sheet provided.
- I agree to participate in the study as described in the Participant Information Sheet.
- I understand that my participation in this study is voluntary and that I am free to withdraw from the study at any time, without penalty and without needing to provide any reason.
- . I understand that my photo and voice recording will be provided and used
- I have been informed that I can contact the student researcher or a teaching member of staff if I
  would like more information on this study.
- I understand that there are no direct benefits to me in participating in this study.

Please indicate your preference below:  YES NO	
Participant's Full Name:  David Hak Kim	
Participant's Signature:	Date: 25/09/20

# 8. Thomas Sommer

Questions number	Question	
1	When was the last time that you went out from home? What sort of places did you go to?	
	Today, I came to work and restaurant for lunch	
2	Were you asked to do any form of contact tracing? If so, what?	
	Yes, I was asked to scan QR code	
3	If you answered QR code scan for question 2, what information were you asked to provide when creating the QR code, were you provided information about where or how it will be stored?	
	My Name and phone number. Can not remember	
4	Do you have any concerns about privacy issues when you scan the QR Code?	
	No	
5	Are you currently a student or a working person?	
	Working Person	
6	At work, what application do you use for virtual chatting or meeting?	
	Don't use	
7	If you mentioned zoom in 6, Do you have any privacy concerns while you are using that application (zoom)?	
8	What do you think when you first hear the word privacy? or what comes into your mind?	
	My security	
9	I'm going to show you an article from the news, have a read at it and answer this question, please. Do you have any differences of perception to data (privacy) breach before and after reading this article?	

	No	
10	Did you install the contact tracing app yourself?	
	Yes	
11	When did you install it? Do you have any idea how it works?	
	Some time in July? Or August. I have no idea how it works	
12	Did you give permissions to the contact tracing app to access your phone? Such as Bluetooth, WIFI or GPS? If yes, why?	
	Yes, I did not think, I just did	
13	Have you given proper reading to the questions asking for permissions?	
	No, I didn't	
14	Do you think the contact tracing app is working correctly?	
	Yes, I think they do	
15	When or how did you know that you had to install the contact tracing	
	From a friend, I was told it would be easier to use QR code	
16	What were you thinking when you had to repeatedly scan the QR code in the same area on the same day?	
	It is annoying, but it needs to be done	
17	Do you think contact tracing is effective?	
	It should be effective	
18	Do you have any concern that you might get junk mail?	
	No not from QR code I think	
19	I will be giving you a set of probes which you have to interact with and fill out three times a week for 3 weeks. Do you agree with this?	
	Yes	

## September 27th

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	I only visited one restaurant today. Yes. I think it is necessary. No
Have you been receiving any junk mail more than before COVID 19?      Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?      Do you think it is related to a privacy	No
breach?	
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	No
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	No
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	No
Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	

Feel free to share any screenshot that you think might be related to the research topic with us.
--

## September 29th

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	Yes, every store required me to scan, even they were close by
Have you been receiving any junk mail more than before COVID 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy	No
breach?  3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	No
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	No
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	No

Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

#### 8.3. Consent Form

#### Participant Informed Consent Form

#### Privacy Concerns on contact tracing applications

Your written informed consent to participate in this study is needed by the researchers. Please read the following statements, and sign if you agree with them:

- The nature of this project has been explained to me and I have read and understood the Participant Information Sheet provided.
- I agree to participate in the study as described in the Participant Information Sheet.
- I understand that my participation in this study is voluntary and that I am free to withdraw from the study at any time, without penalty and without needing to provide any reason.
- I understand that my photo and voice recording will be provided and used
- I have been informed that I can contact the student researcher or a teaching member of staff if I would like more information on this study.
- I understand that there are no direct benefits to me in participating in this study.

Please indicate your preference below:

Participant's Full Name:

Thomas Sommer

Participant's Signature:

1 Somo

Date: 9/25/2020

# 9. Cynthia Chan

Questions number	Question
1	When was the last time that you went out from home? What sort of places did you go to?
	Lunch time. Restaurant
2	Were you asked to do any form of contact tracing? If so, what?
	Yes, they asked me to scan QR code
3	If you answered QR code scan for question 2, what information were you asked to provide when creating the QR code, were you provided information about where or how it will be stored?
	I am not sure, but they asked my phone number and personal information like full name. Maybe age? I think I have been provided information but not sure. I didn't read
4	Do you have any concerns about privacy issues when you scan the QR Code?
	No I don't have any concern
5	Are you currently a student or a working person?
	Working Person
6	At work, what application do you use for virtual chatting or meeting?
	Nop
7	If you mentioned zoom in 6, Do you have any privacy concerns while you are using that application (zoom)?
8	What do you think when you first hear the word privacy? or what comes into your mind?
	Something belongs to my personal information, such as location and phone number

9	I'm going to show you an article from the news, have a read at it and answer this question, please. Do you have any differences of perception to data (privacy) breach before and after reading this article?
10	Did you install the contact tracing app yourself?
	Yes
11	When did you install it? Do you have any idea how it works?
	I don't remember, but I think it records my name and phone number. Yes it records my time period, how many people were there etc
12	Did you give permissions to the contact tracing app to access your phone? Such as Bluetooth, WIFI or GPS? If yes, why?
	Yes
13	Have you given proper reading to the questions asking for permissions?
	Not really
14	Do you think the contact tracing app is working correctly?
	Not too sure
15	When or how did you know that you had to install the contact tracing
	I think around Augusy?
16	What were you thinking when you had to repeatedly scan the QR code in the same area on the same day?
	No problem
17	Do you think contact tracing is effective?
	I think it is effective especially in this situation
18	Do you have any concern that you might get junk mail?
	No Not really

19	I will be giving you a set of probes which you have to interact with and fill out three times a week for 3 weeks. Do you agree with this?
	Yes

# Day 1

## September 25th

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	Yes I had to. I think it is really necessary as time tracking is important I didn't really think about that
Have you been receiving any junk mail more than before COVID 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	No I haven't
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	No
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	Didn't think

5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	No
Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

## September 27th

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	I went to a shopping mall and had to repeatedly scan Yes, because there are many stores in here I don't think my information will be breached
Have you been receiving any junk mail more than before COVID 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	No

3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	No
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	No
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	No
Extra	Your response
Extra  You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	Your response

### October 2nd

Probing Questions	Your responses
1. Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary? As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	Yes, I had to write in restaurant and scan at other shops Yes it is necessary When I write my detail, some people can read and maybe use it for some other purposes

Have you been receiving any junk mail more than before covid 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	No
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	No
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	No
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	No
Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	

### October 6th

Probing Questions	Your responses

1.	Yes I had to scan multiple times
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	It is necessary No
Have you been receiving any junk mail more than before covid 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	No
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	No.
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	No
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	No
Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

### October 8th

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places?  How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	Yes I had to scan multiple times It is necessary No
Have you been receiving any junk mail more than before covid 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	No
Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	No.
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	No
Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)      Could you elaborate on this?	No
Extra	Your response

You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

### October 10th

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	Yes I had to scan multiple times at multiple locations It is necessary No
Have you been receiving any junk mail more than before covid 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	No
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	No.
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	No

5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	No
Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

#### **Consent Form**

				AUSTRALIA
	STUDENT RESEARCH Hyun Jeon & 428653.			
	COURSE			
		d Human-Computer Inte	eraction	
	COURSE STAFF			
	Coordinator: Dr Dhaval Email: d.vyas@uq.edu.	Vyas au		
		med Consent Fo	orm	
		on contact tracir		
t	our written informed on the following statement	consent to participate its, and sign if you agre	in this study is needed by the re see with them:	esearchers. Please read
	The nature of this p	project has been expla tion Sheet provided.	nined to me and I have read an	nd understood the
			cribed in the Participant Inform	nation Sheet.
•	Lunderstand that m	y participation in this	study is voluntary and that I are thout needing to provide any r	m free to withdraw from the
			cording will be provided and us	
•	I have been informe would like more info	ed that I can contact to	he student researcher or a tead.	aching member of staff if I
	I understand that the	ere are no direct ben	efits to me in participating in the	his study.
Porti				
raitio	cipant's Full Name:	11 +6 110	Ahr	
ranii	cipant's Full Name:	Chathia Un	an	
Farti	cipant's Full Name:	Chathia Un	an	01 112
	cipant's Full Name: ipant's Signature:	Son by	Ah	Date: 9/24/202
	cipant's Full Name: ipant's Signature:	Son h	Ah	Date: 9/24/202
	ipant's Full Name: ipant's Signature:	Son by	Ah	Date: 9/24/203
	cipant's Full Name:	Son by	efits to me in participating in the state of	Date: 9/24/207
	cipant's Full Name:	Gonly	Ah	Date: 9/24/20
	cipant's Full Name: ipant's Signature:	Sondy	Ah	Date: 9/24/202
	ipant's Full Name: ipant's Signature:	Son by	Ah	Date: 9/24/202
	ipant's Full Name: ipant's Signature:	Sondy	Ah	Date: 9/24/202
	ipant's Full Name: ipant's Signature:	Sondy	Ah.	Date: 9/24/202
	ipant's Full Name: ipant's Signature:	Gordy	Ah	Date: 9/24/202
	ipant's Full Name: ipant's Signature:	Sonly	Ah.	Date: 9/24/200
	ipant's Full Name: ipant's Signature:	Son by	Ah.	Date: 9/24/200
	ipant's Full Name: ipant's Signature:	Son by	Ah	Date: 9/24/200
Partic	i	Gn Ly  T +617 3365 8302	€ <b>d.xyas@uq.edu.</b> au	ASN: 83 942 912 584
Partic The University	ipant's Full Name: ipant's Signature:  sity of Queensland LD 4072 Australia			

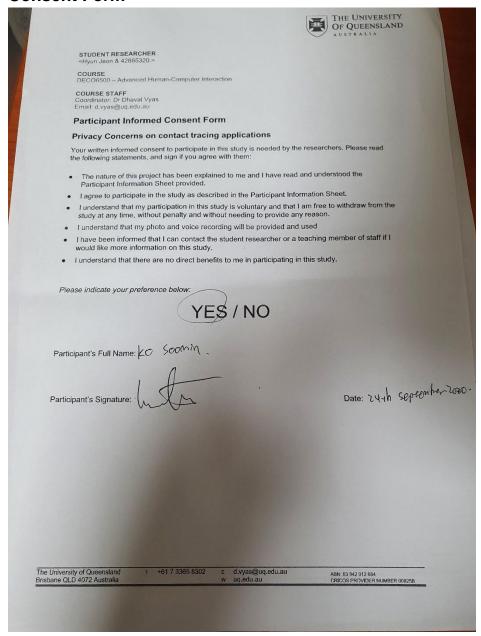
# 10. Soomin Ko

Questions number	Question
1	When was the last time that you went out from home? What sort of places did you go to?
	Today to work, nowhere else.
2	Were you asked to do any form of contact tracing? If so, what?
	Yes, I have been asked
3	If you answered QR code scan for question 2, what information were you asked to provide when creating the QR code, were you provided information about where or how it will be stored?
	Name, phone number
4	Do you have any concerns about privacy issues when you scan the QR Code?
	No
5	Are you currently a student or a working person?
	Working Person
6	At work, what application do you use for virtual chatting or meeting?
	Do Not Use
7	If you mentioned zoom in 6, Do you have any privacy concerns while you are using that application (zoom)?
	I
8	What do you think when you first hear the word privacy? or what comes into your mind?
	My personal area/space
9	I'm going to show you an article from the news, have a read at it and answer this question, please. Do you have any differences of perception to data (privacy) breach before and after reading this article?

	No did not change
10	Did you install the contact tracing app yourself?
	Yes
11	When did you install it? Do you have any idea how it works?
	I don't know when I did. I think it just records my detail
12	Did you give permissions to the contact tracing app to access your phone? Such as Bluetooth, WIFI or GPS? If yes, why?
	Yes, because app does not work without giving permission.
13	Have you given proper reading to the questions asking for permissions?
	No. I did not read
14	Do you think the contact tracing app is working correctly?
	Probably it works correctly, but I don't really know
15	When or how did you know that you had to install the contact tracing
	I think 2 month ago.
16	What were you thinking when you had to repeatedly scan the QR code in the same area on the same day?
	Disturbing, but it's necessary to track time
17	Do you think contact tracing is effective?
	I think it is.
18	Do you have any concern that you might get junk mail?
	No. I don't really care about junk mails
19	I will be giving you a set of probes which you have to interact with and fill out three times a week for 3 weeks. Do you agree with this?
	Yes

Lost due to researcher being isolated due to confirmed COVID-19 case

#### **Consent Form**



### 11. Yui Jo

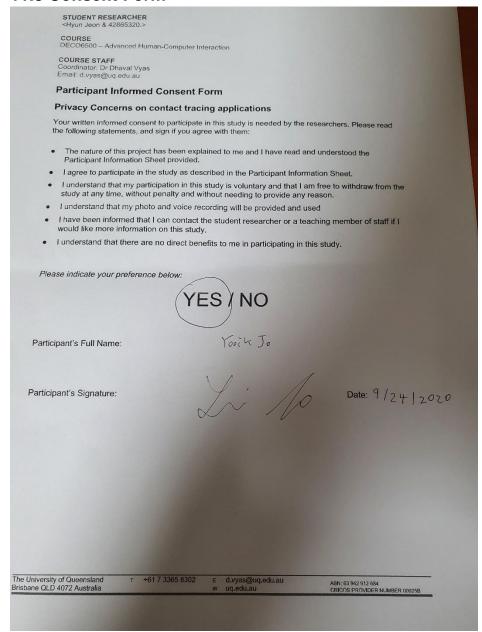
Questions	Question
-----------	----------

number	
1	When was the last time that you went out from home? What sort of places did you go to?
	Like two hours ago? To eat
2	Were you asked to do any form of contact tracing? If so, what?
	Yes, I wrote down and scanned QR code
3	If you answered QR code scan for question 2, what information were you asked to provide when creating the QR code, were you provided information about where or how it will be stored?
	Name, my phone number and my email address. Yes I have been provided
4	Do you have any concerns about privacy issues when you scan the QR Code?
	Nope
5	Are you currently a student or a working person?
	Working person
6	At work, what application do you use for virtual chatting or meeting?
7	If you mentioned zoom in 6, Do you have any privacy concerns while you are using that application (zoom)?
8	What do you think when you first hear the word privacy? or what comes into your mind?
	Protect myself and information
9	I'm going to show you an article from the news, have a read at it and answer this question, please. Do you have any differences of perception to data (privacy) breach before and after reading this article?
	No Same

10	Did you install the contact tracing app yourself?
	Yes
11	When did you install it? Do you have any idea how it works?
	June? July? I don't really know
12	Did you give permissions to the contact tracing app to access your phone? Such as Bluetooth, WIFI or GPS? If yes, why?
	I don't think so? Did i?
13	Have you given proper reading to the questions asking for permissions?
	No I did not read
14	Do you think the contact tracing app is working correctly?
	Yes
15	When or how did you know that you had to install the contact tracing
	The government was saying something about it
16	What were you thinking when you had to repeatedly scan the QR code in the same area on the same day?
	Inconvenient, but it is for tracing. It can help me when I get in to contact with COVID carrier
17	Do you think contact tracing is effective?
	I think it is effective for tracing
18	Do you have any concern that you might get junk mail?
	I already get a lot of junk mail so I don't really know whether its from this or not
19	I will be giving you a set of probes which you have to interact with and fill out three times a week for 3 weeks. Do you agree with this?
	Yes
	I .

Cultural probe has been lost by the participant

#### 11.3 Consent Form



### 12. Dahye Yoon

Questions	Question
number	

1	When was the last time that you went out from home? What sort of places did you go to?	
	20 minutes ago. I went to get some yogurt.	
2	Were you asked to do any form of contact tracing? If so, what?	
	Yes, I was asked to write my name and my phone number.	
3	If you answered QR code scan for question 2, what information were you asked to provide when creating the QR code, were you provided information about where or how it will be stored?	
	Name, phone number and location of where I was. I don't think so?	
4	Do you have any concerns about privacy issues when you scan the QR Code?	
	Never really thought about it before	
5	Are you currently a student or a working person?	
	Work person	
6	At work, what application do you use for virtual chatting or meeting?	
	No	
7	If you mentioned zoom in 6, Do you have any privacy concerns while you are using that application (zoom)?	
8	What do you think when you first hear the word privacy? or what comes into your mind?	
	Something more about respect. People needs to respect each other's privacy	
9	I'm going to show you an article from the news, have a read at it and answer this question, please. Do you have any differences of perception to data (privacy) breach before and after reading this article?	
10	Did you install the contact tracing app yourself?	

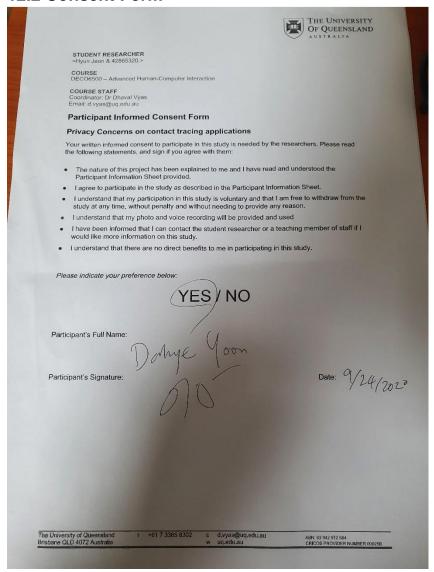
	Yes	
11	When did you install it? Do you have any idea how it works?	
	About month or two ago when the COVID situation got bad	
12	Did you give permissions to the contact tracing app to access your phone? Such as Bluetooth, WIFI or GPS? If yes, why?	
	I think so. Since QR code is mandatory	
13	Have you given proper reading to the questions asking for permissions?	
	No.	
14	Do you think the contact tracing app is working correctly?	
	It does track	
15	When or how did you know that you had to install the contact tracing	
	From the news couple month ago	
16	What were you thinking when you had to repeatedly scan the QR code in the same area on the same day?	
	Very inconvinient	
17	Do you think contact tracing is effective?	
	Yes	
18	Do you have any concern that you might get junk mail?	
	Not really. No. My phone number is already out there	
19	I will be giving you a set of probes which you have to interact with and fill out three times a week for 3 weeks. Do you agree with this?	
	Yes	

Day 1

September 26th

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	I went to starbucks and provided my QR cod and at the shop close by, I only looked from outside and did not provide my QR code.  I think it would be necessary, but since I am lazy I try not to enter the store if I don't really need to.  I think my information may be used, but I don't think about that too much
Have you been receiving any junk mail more than before COVID 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy	No, I don't think so. I block junk mails
breach?  3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	No, Not changed
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	There isn't anything new I can really do
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	No I don't think so
Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

#### 12.2 Consent Form



## 13. Chaelin Kwon

Questions number	Question
1	When was the last time that you went out from home? What sort of places did you go to?
	I went out today, about an hour ago for lunch. I went to restaurant and went to get coffee
2	Were you asked to do any form of contact tracing? If so, what?
	At the restaurant person asked me show QR code. At coffee shop, I did not enter, but waited outside so no need to scan QR
3	If you answered QR code scan for question 2, what information were you asked to provide when creating the QR code, were you provided information about where or how it will be stored?
	I believe everyday or once in a while, you have to agree to the conditions, but I just press check to get in to place I wanna go. I don't have option to opt out since I need to enter to eat
4	Do you have any concerns about privacy issues when you scan the QR Code?
	Yes, I have no idea what they are gonna do with my data, even they are big company

5	Are you currently a student or a working person?
	Working Person
6	At work, what application do you use for virtual chatting or meeting?
	No, I only use messenger App
7	If you mentioned zoom in 6, Do you have any privacy concerns while you are using that application (zoom)?
8	What do you think when you first hear the word privacy? or what comes into your mind?
	When I hear privacy, I think it's something personal. Privacy is my own. Direct attack to me if there is breach
9	I'm going to show you an article from the news, have a read at it and answer this question, please. Do you have any differences of perception to data (privacy) breach before and after reading this article?
10	Did you install the contact tracing app yourself?
	Yes
11	When did you install it? Do you have any idea how it works?
	I don't remember
12	Did you give permissions to the contact tracing app to access your phone? Such as Bluetooth, WIFI or GPS? If yes, why?
	Yes
13	Have you given proper reading to the questions asking for permissions?
	No. Not really.
14	Do you think the contact tracing app is working correctly?
	I think they can track me so yes.
15	When or how did you know that you had to install the contact tracing
	•

	I don't remember well, but I think I found out when I entered a restaurant	
16	What were you thinking when you had to repeatedly scan the QR code in the same area on the same day?	
	Just did as I thought, they are necessary	
17	Do you think contact tracing is effective?	
	I think they work well. I heard that people can be found with this.	
18	Do you have any concern that you might get junk mail?	
	No	
19	I will be giving you a set of probes which you have to interact with and fill out three times a week for 3 weeks. Do you agree with this?	
	Yes	

# Day 1

## September 27th

Probing Questions	Your responses
1. Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary? As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	They were not exactly same vicinity, but quite close by, but yes I had to do scan QR code at 3 shops I visited.  Yes Since I have visited all different shops Yes, with paper, anyone can read my details

Have you been receiving any junk mail more than before COVID 19?      Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?      Do you think it is related to a privacy breach?	No I haven't
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	No, it's same
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	Try to use QR code more than writing
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	No
Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

### October 3rd

Probing Questions	Your responses

Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places? How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	Yes I went to a shopping mall, but had to scan at all shops.  Would been much better if I could just scan once at the shopping mall.
Have you been receiving any junk mail more than before COVID 19?     Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?  Do you think it is related to a privacy breach?	No I haven't
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	No, it's same
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	Try to use QR code more than writing
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	No
Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	
Feel free to share any screenshot that you think might be related to the research topic with us.	

Day 3

### October 10th

Probing Questions	Your responses
Did you have to supply your personal information in the name of contact tracing multiple times at random shops in the same vicinity?  Do you think this is necessary?  As in the case of potential COVID positives might have walked all around the places?  How did you feel? (For example, people are asked to scan the QR code and when they go to the next shop, they are asked to do it again.)  Have you ever considered that your information might be used for any other purpose other than contact tracing because of the demanding request for your personal information?	Yes I still think they are necessary No
Have you been receiving any junk mail more than before covid 19?      Can you check the junk mail box every Friday and report the junk mail counts as well as describe your feelings at the time?      Do you think it is related to a privacy breach?	No I haven't
3. Each time that you are completing the probing questions, has your perception of privacy breaching changed? Is there any other event between the date of entry recording that has an impact on your filling out this material?	No, it's same
During or after these daily activities, what sort of new approach have you thought of adopting to address any of your potential privacy concerns?	Try to use QR code more than writing
5. Are you noticing any potential privacy breaches regarding your data lately? (Yes, No or Maybe.)  Could you elaborate on this?	No
Extra	Your response
You can record down any extra information on your thoughts on privacy, or just anything general regarding the topic here.	

#### 13.3 Consent Form

