HOTEL GENERATION PROPOSAL 2019

Raised by Google

SARAH SELBY

"All parents damage their children. It cannot be helped. Youth, like pristine glass, absorbs the prints of its handlers. Some parents smudge, others crack, a few shatter childhoods completely into jagged little pieces, beyond repair."

MITCH ALBOM, THE FIVE PEOPLE YOU MEET IN HEAVEN

INTRODUCTION

'Raised by Google' focuses on the psychographic (or behavioural) microtargeting of internet users in a way that jeopardises autonomy, undermines democracy and threatens diversity - exploring impact this may have on future generations.

Psychographic microtargeting is a method of citizen profiling that goes beyond previous demographic segmentation by dividing groups into narrower subsets based on attitudes, interests, moods and dispositions. This level of extreme microtargeting has been made possible by large available amounts of big data, the availability of targeted media platforms such as social media, and advances in experimental methodology such as artificial intelligence/machine learning. Behavioural data collected through our online browsing habits and use of connected devices is sold to the highest bidder for financial, social or political gain. In 2019 the global big data and business analytics market was valued at 169 billion dollars and is increasing exponentially. Behavioural data is utilised in various ways, often with negative social impacts. For example, during the Brexit referendum and Donald Trump election, behavioural data became psychological warfare as voter's emotions were weaponised to influence their decisions. Controversial 'predictive policing' based on bias algorithms has led to increased racial profiling. Echo-chambers are contributing to an increasingly polarised society.

We are still in the 'first generation' stage of big data and behavioural analysis yet are already seeing the impact of psychographic targeting and bias applications. I want to raise questions and provoke critical thinking around what the impacts of this may be over time, when companies have access to not only our data, but our parent's data. Our grandparent's data. If black-box algorithms are already playing a role in employee screening, health insurance and crime risks, how will tracking this lineage over time influence predictive algorithms and their applications? This thinking can be considered from the perspective of individuals, or with regards to entire communities.

As surveillance culture is increasingly normalized and data collection becomes more subtly ingrained in our lives with the arrival of 5G, we are at a critical point to initiate conversation around the process, ethics and impacts of this practice. 'Raised by Google' is a call to action for the netizens of today to set boundaries that protect the freedom and autonomy of the children of tomorrow.
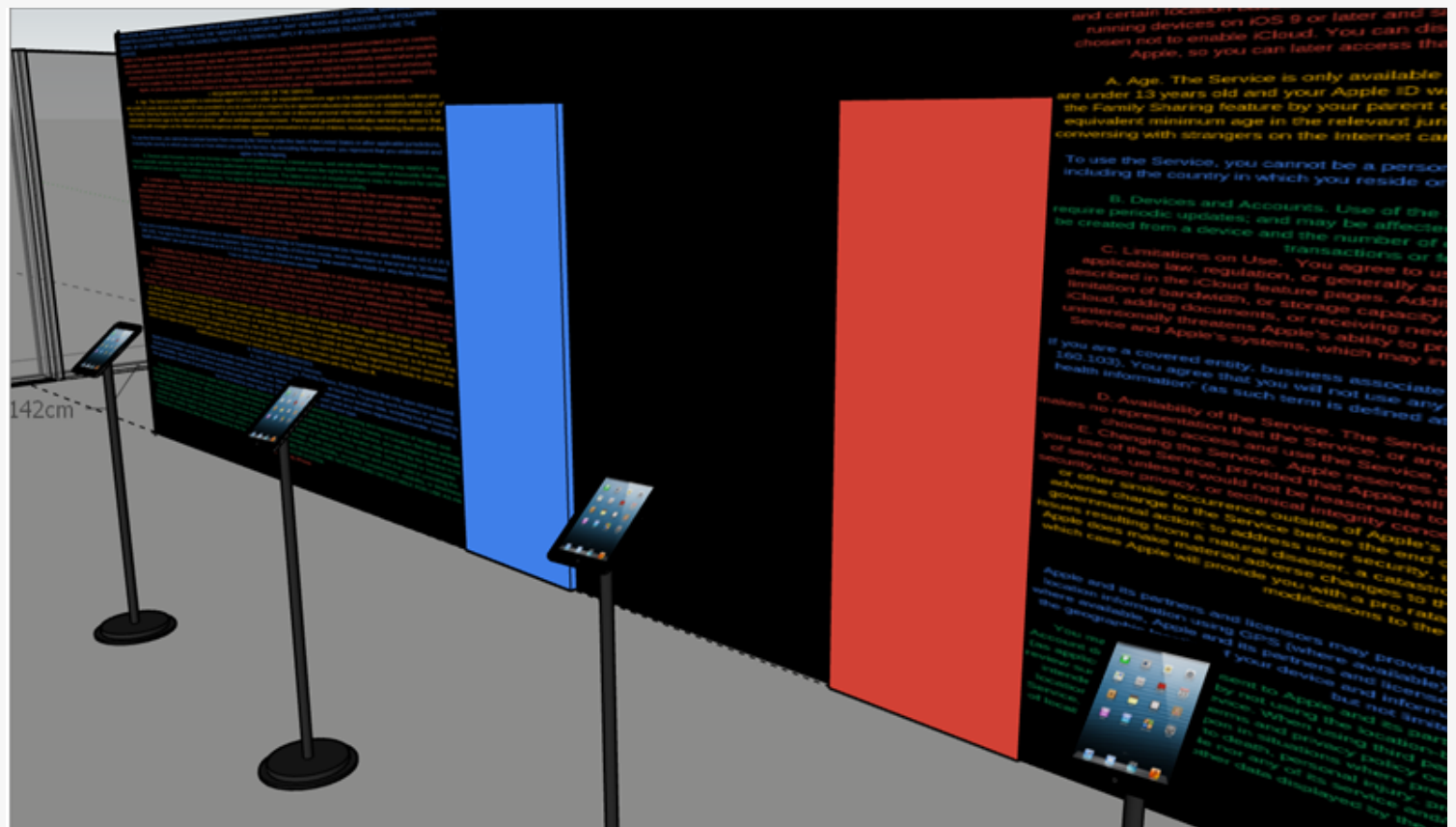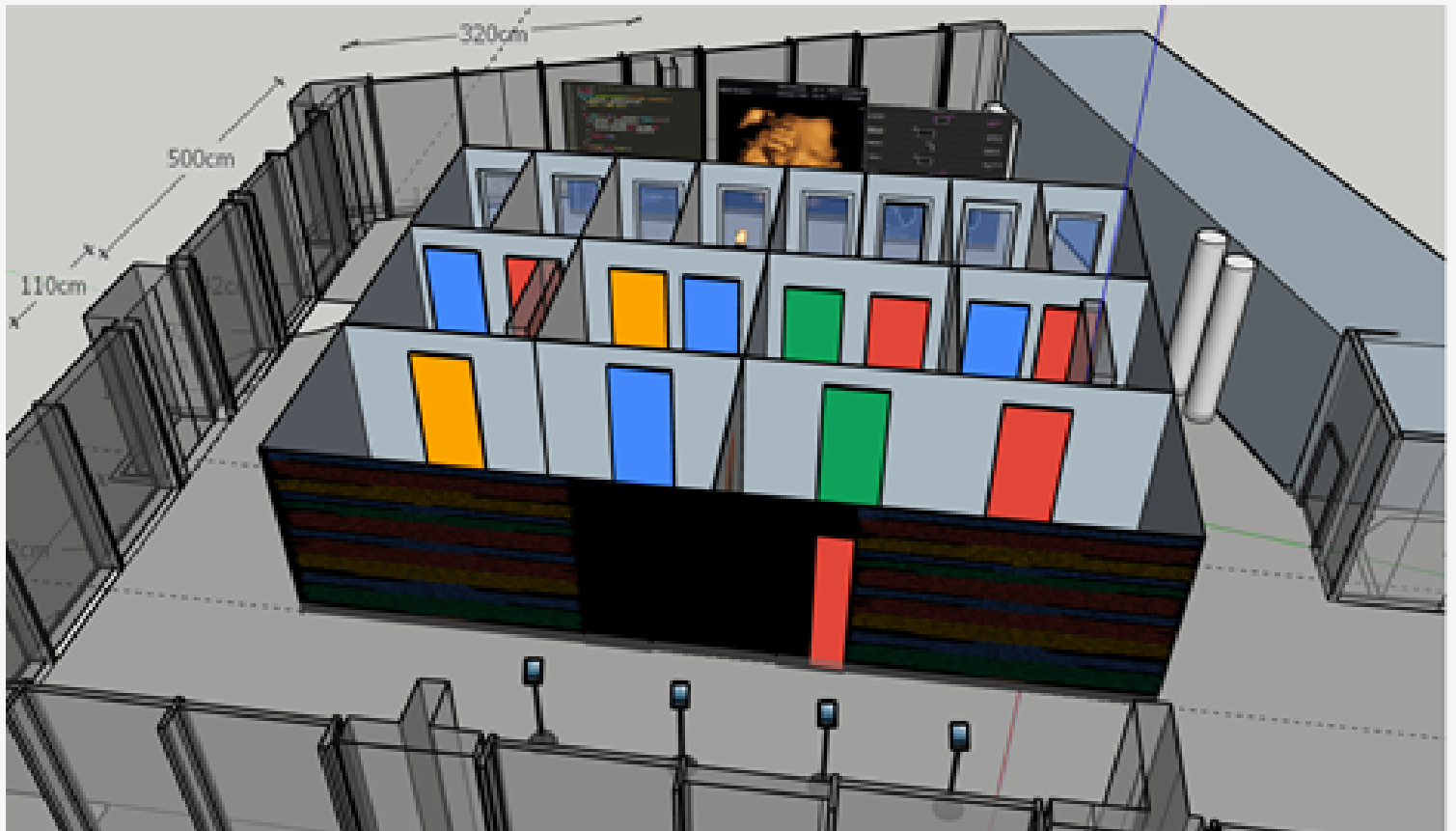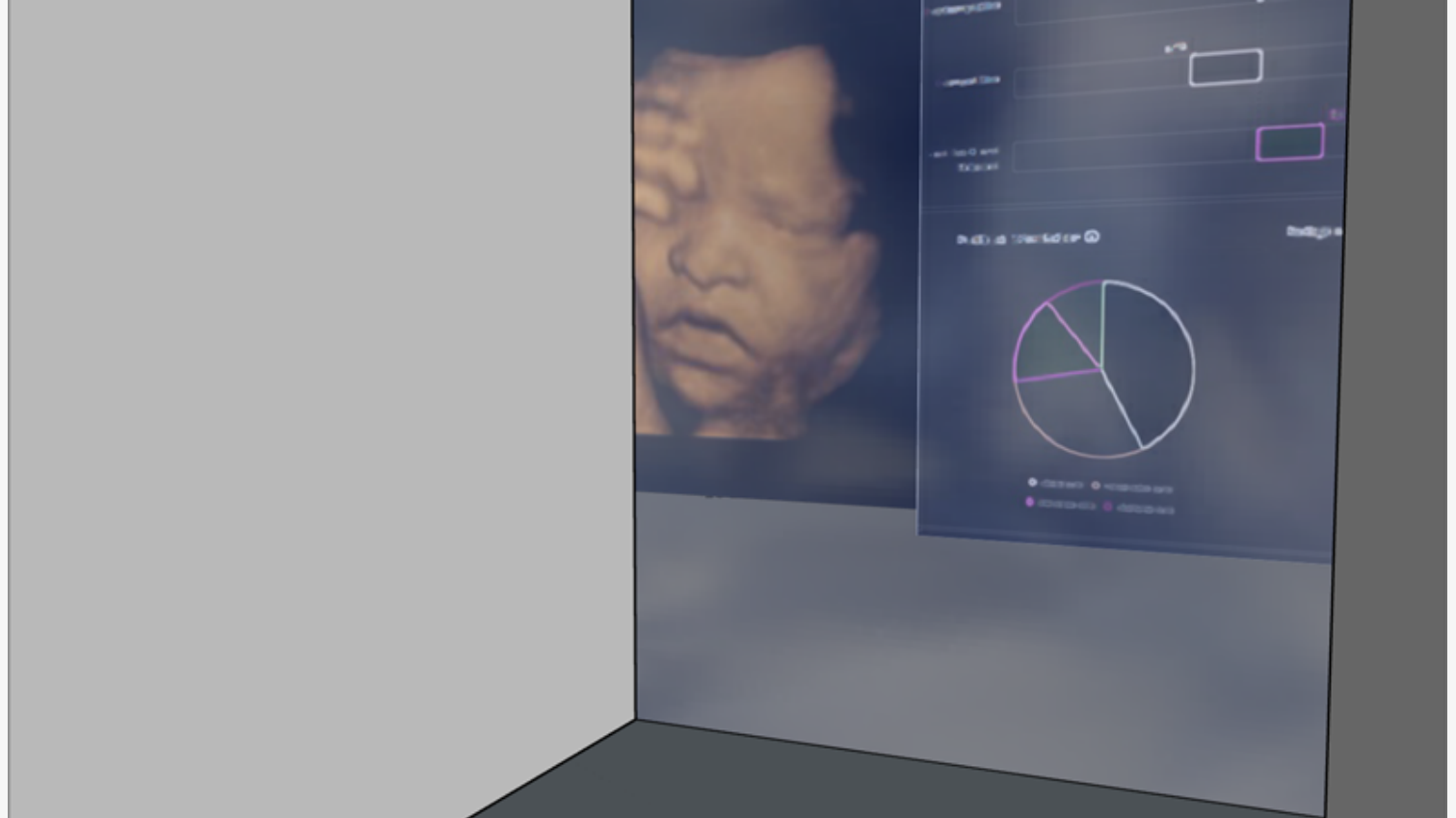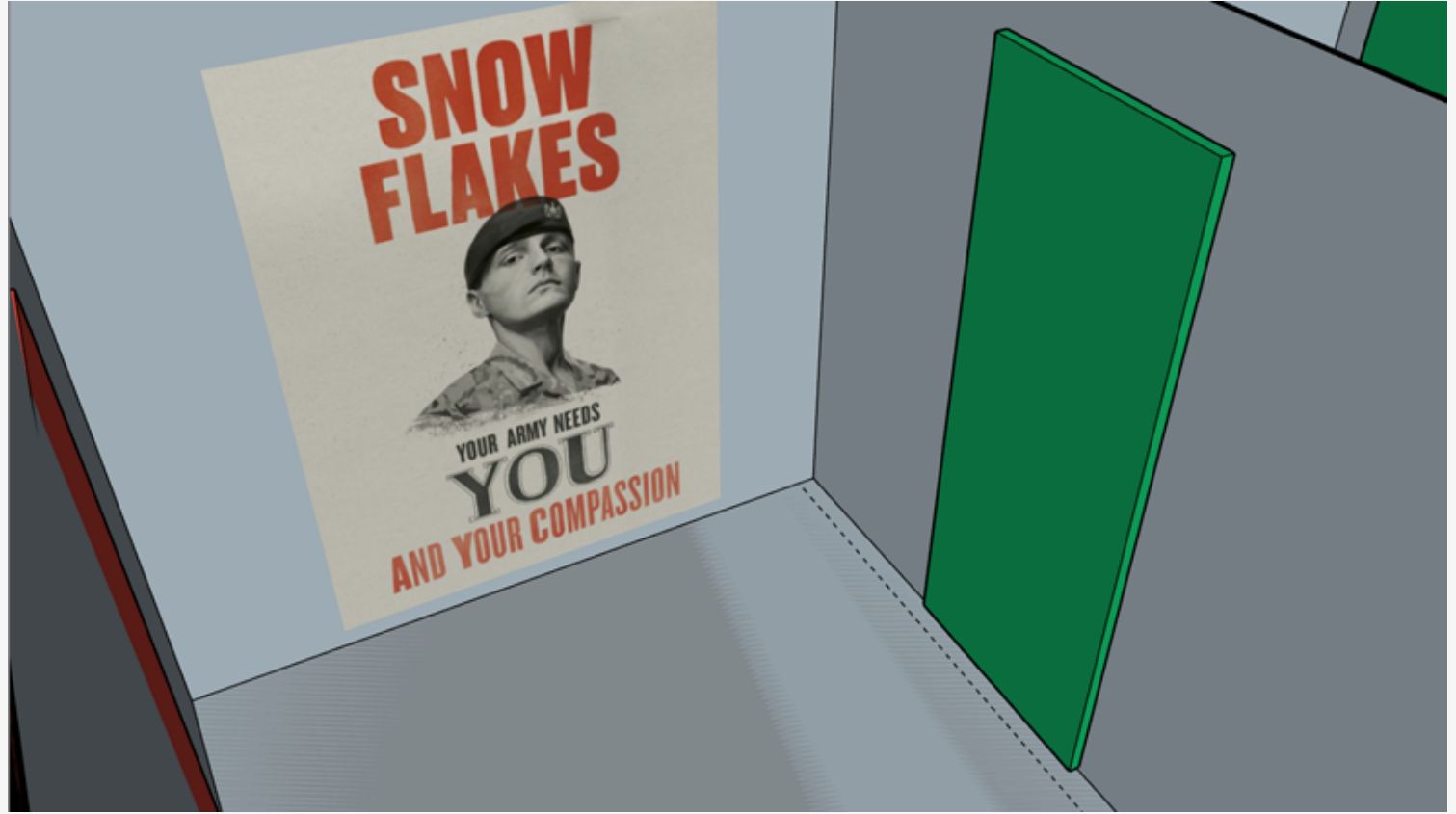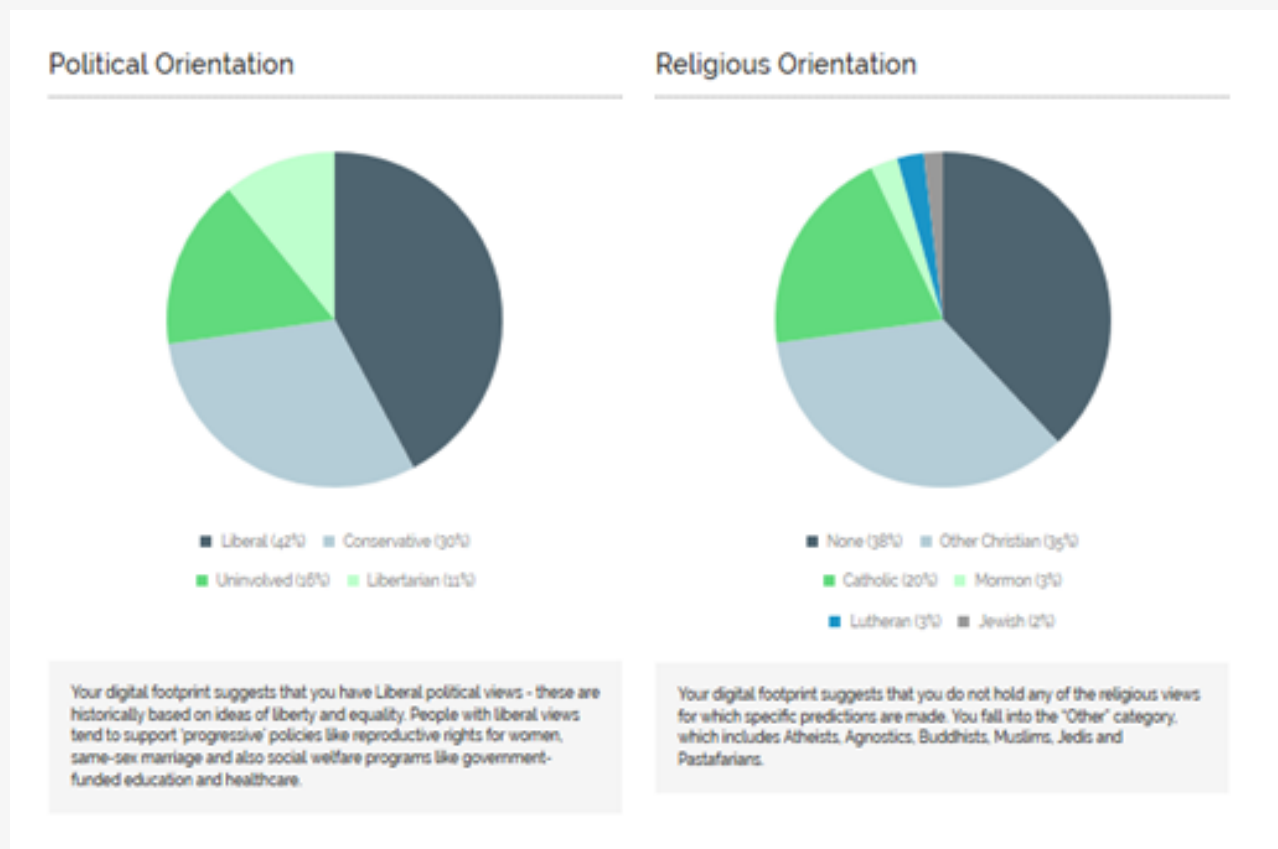
KEY THEMES

The key themes that have arisen from my research are as follows:

- **Surveillance Culture:** Surveillance has become an inescapable aspect of modern-day society; from the CCTV that monitors us, GPS tracking on mobile phones and cookies that track us online. It has been increasingly normalised through its gamification and integration into our everyday lives.

- **Autonomy:** (Noun: 'The right or condition of self-governance'). My work has been heavily inspired by Shoshana Zuboff's idea of 'the right to a future tense' (Zuboff, 2019). She argues that our ability to choose our actions and decide our own futures is the very essence of free will, and that the intentional behavioral modification crucial to the functioning of surveillance capitalism undermines this basic human right, with devastating effects on democracy, diversity and autonomy.

- **Consent:** Many digital natives interviewed shared a feeling of betrayal through: misinformation around how data would be used; misleading or intentionally inaccessible terms and conditions, and the exposure to data-collecting platforms at a very young age. Through my work I hope to raise questions around the ability to consent to the unprecedented, the age of data privacy related consent and informed consent.

APPLY MAGIC SAUCE: "SEE HOW OTHERS SEE YOU"

In the exhibition I will be using behavioral software 'Apply Magic Sauce'. Apply Magic Sauce is a demo program created by Cambridge University's Psychometrics Centre. Using data from a variety of social media channels such as Facebook, Twitter and LinkedIn, Apply Magic Sauce produces a psychographic profile of the user (see example below). This program aims to make visible what is predictable (and therefore profitable) about you, based on your digital footprint. By utilising this platform in an interactive and visual way, I hope to increase awareness, engage users and facilitate discussion around data privacy and autonomy.

Political Orientation

- Liberal (42%)
- Conservative (30%)
- Uninvolved (16%)
- Libertarian (11%)

Your digital footprint suggests that you have Liberal political views - these are historically based on ideas of liberty and equality. People with liberal views tend to support 'progressive' policies like reproductive rights for women, same-sex marriage and also social welfare programs like government-funded education and healthcare.

Religious Orientation

- None (38%)
- Other Christian (35%)
- Catholic (20%)
- Mormon (3%)
- Lutheran (3%)
- Jewish (2%)

Your digital footprint suggests that you do not hold any of the religious views for which specific predictions are made. You fall into the 'Other' category, which includes Atheists, Agnostics, Buddhists, Muslims, Jedis and Pastafarians.

COLOUR SCHEME

The colour scheme throughout the exhibition is inspired by the Google Chrome logo and its origins. The logo is heavily inspired by electronic game 'Simon'. Invented by Ralph Baer and Howard Morrison in the 1970's, 'Simon' is a fast-paced memory game where the player competes against the computer to memorize colourful sequences. The game's slogan was 'Simon's a computer, Simon has a brain, you either do what Simon says or else go down the drain!'.

The colour choice has multifaceted meanings. At surface level, it's an obvious nod to Google and the birth of the behavioral futures market. On another level, it's a comment on the gamification and normalization of surveillance culture. During my research I was interested in how 'games' such as Pokémon Go and Farmville have been used to gather data and influence citizens (e.g. Pokémon Go placed Pokémon and 'gyms' at paying entities such as McDonalds steering players to them, and the questionable purpose behind Facebook's '10 Year Challenge' – thought by some to be an algorithm-training tactic). In addition, 'Smart Toys' connected to the IOT are on the rise, posing privacy and security risks for their young users. Finally, the previously mentioned slogan behind the 'Simon' game and the original concept of the family game 'Simon Says' feels incredibly relevant to modern digital culture. The position we now find ourselves in is a result of complacency – of following instructions and accepting the conditions without question.

IPADS

At the front of the exhibition there are four iPads used to collect visitor's data. Visitors will be invited to participate in the exhibition by supplying us with their social media handle or completing a personality test. After agreeing to the terms and conditions hidden in a click-wrap agreement (behind a hyperlink), the camera will secretly take 30 rapid fire photos of the visitor. These images will be used to create a facial recognition profile for the visitor. The data they supply will then be ran through Cambridge University's 'Apply Magic Sauce' programme (previously mentioned). This will create a psychographic profile of that person, and assign it to their facial ID. Once this is complete, the participant is ready to enter the maze. Participants will be able to view their psychographic profile on screen and an email version will be sent to them to keep.

TERMS AND CONDITIONS

The terms and conditions for entering the gallery space will be agreed to through a click-wrap agreement during participation in the data collection stage. However, I also like the idea of having them physically present, projected on to the front of the maze. Research undertaken in 2012 by Lorrie Faith Cranor and Aleecia McDonald concluded that it would take the average internet user 72 workdays in a year to read every privacy policy they came across. They are notoriously lengthy and obscure, something I'd like to play on. Since the GDPR laws came in, we are inundated with pop-up cookie agreements and privacy notices. Yet despite their prominence, are we really any better informed?
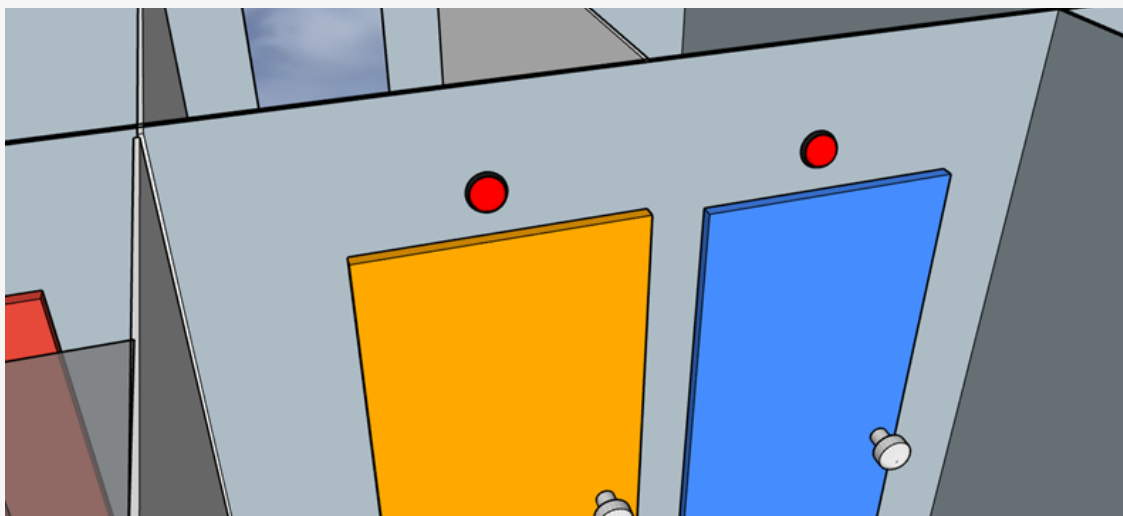
THE MAZE
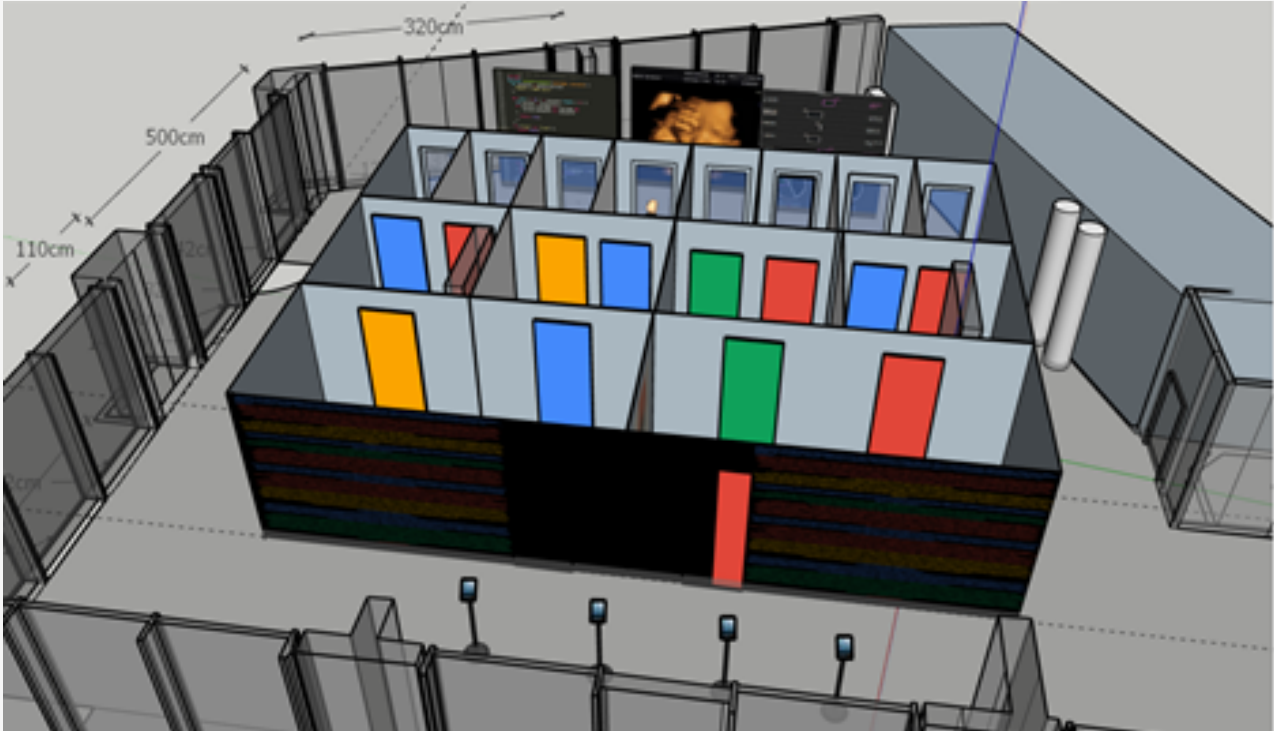
When viewed from above, the layout of the maze mimics a typical family tree, with each door leading to the next generation

The maze consists of numerous 'Game Show' style doors controlled by solenoid (electromagnetically controlled) locks. Each door is assigned a specific user trait (e.g. intelligence rating, political views etc), which is not known to the viewer. When the viewer approaches a door, a hidden camera will scan their face and compare their psychographic data to its parameter. The LED will then either light up green and the door will unlock, or it will turn red and set off the buzzer.

For example, if doors 1 and 2 relate to intelligence, door 1 will only allow those with 'above average' intelligence through, and door 2 will only allow those with below average. Another might allow only Conservative supporters, and the other Liberals. As viewers are allowed to proceed (or are blocked) by the doors they will be gradually herded into groups based on their psychographic profile, creating an echo-chamber effect.

The maze, itself a large box painted in matt black, is a physical representation of the 'black-box' algorithmic processes used to process our data and make decisions – such as insurance rates, predictive policing and employee selection. The scale of it and the light-absorbing properties of the colour will give it an overbearing and sinister presence in the gallery space. By physically controlling how visitors move around the space, it makes tangible the invisible barriers caused algorithms in our everyday life. It also explores the social and political segregation caused by the echo-chamber effect of our digital environments.

I wanted to use metaphor of a maze as it hints at an idea in my initial proposal of the first of the digital natives as 'lab rats', exposed to nonconsensual experimentation such as Facebook's controversial 'emotional contagion' test. It also hints at the Cue, Action, Reward (CAR) approach to habit forming and understanding addiction, tested on lab rats. This experiment explored the impact of regular rewards vs 'variable reinforcement' (unpredictable reward rates), determining that the uncertainty led to an increased pleasure response and addictive behavior. The CAR approach is used by the gambling industry and social media alike to induce habit-forming behavior (such as habitual phone-checking) and psychological dependency. For example, Instagram will withhold 'likes' to make the reward less predictable.

INSIDE THE MAZE

Inside the rooms will be hints at the parameters assigned to each door. This might include adverts targeted at their specific psychographic profile, which could be taken from the Brexit Campaigns or more current affairs such as the (potential) general election. Boris Johnson has recently appointed Dominic Cummings as his key advisor - the former 'Vote Leave' Campaign Director with connections to Cambridge Analytica. Over the next few months I will monitor targeted politically driven targeted advertisements and may include some in the show.
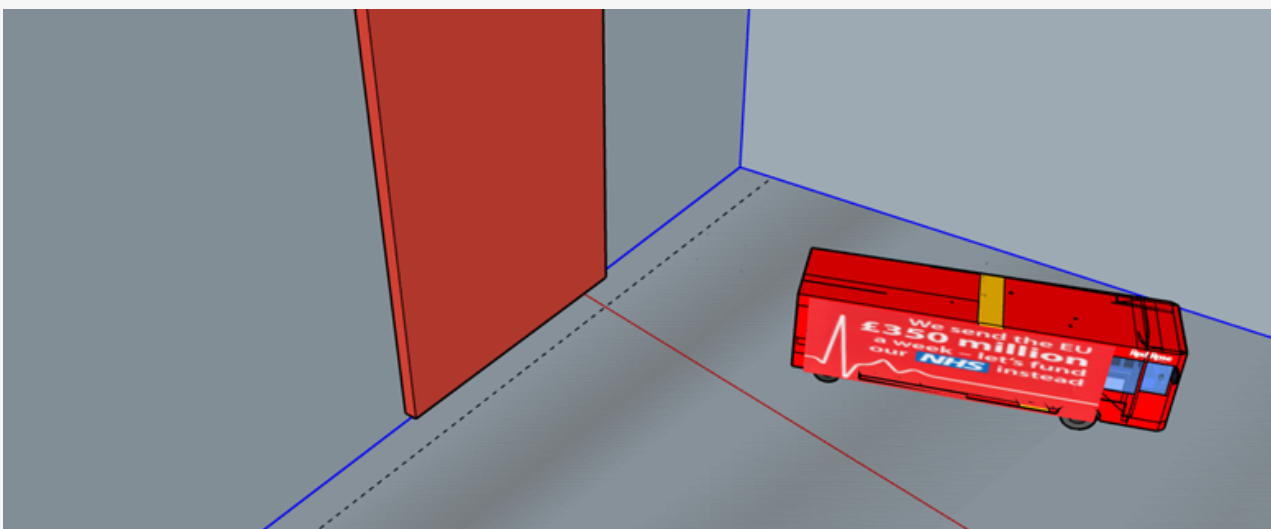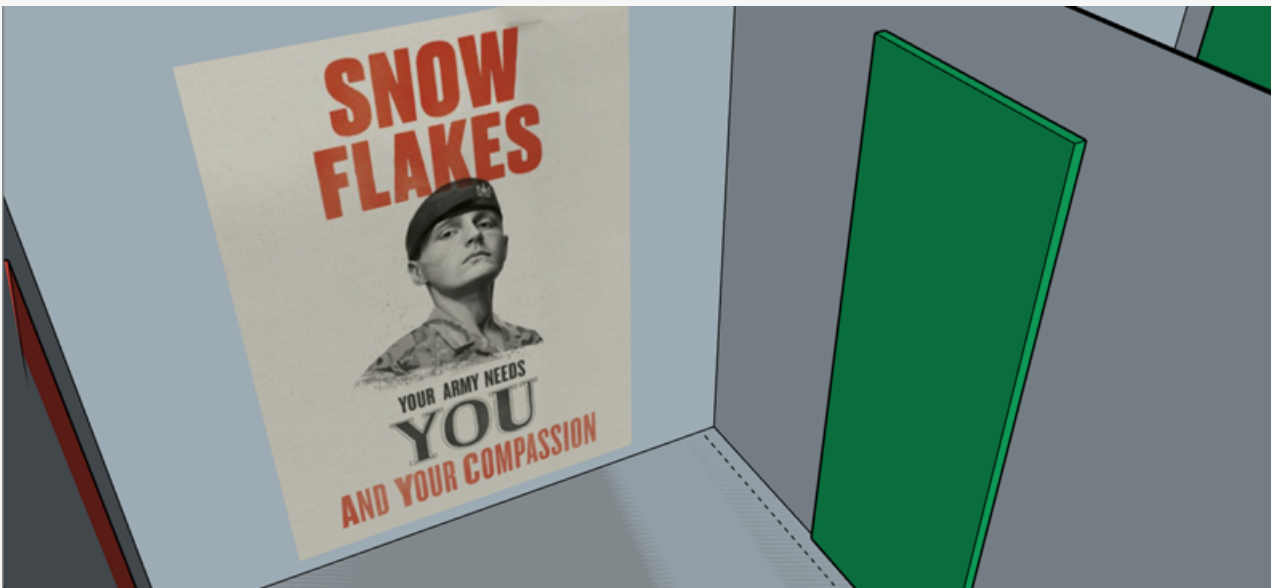
AREBYTE BABY

Upon reaching the end of the maze visitors will find themselves confronted with the future consequences of their shared data in the form of the 'Arebyte Baby'. This is an interactive, generative artwork consisting of three screens that respond to the psychographic profiles of visitors by combining their data to predict the 'future' of the Arebyte Baby – displayed in the center in the form of a 4D baby scan.

The main screen will show moving-image footage of the 'Arebyte Baby' taken from a 4D baby scan of my niece/nephew. 4D baby scans utilize high frequency sound waves which are aimed at the baby from multiple directions. They bounce back like an echo and are processed by a computer to produce an image of the baby. Unlike the more common 3D scans which work in a similar way, 4D baby scans allow the mother to view their child in live-time, resulting in moving-image footage. I'm interested in using the 4D scan as a medium as their presence on social media sparks an interesting conversation around data consent for children having their lives shared online. The process of the scan itself also seems invasive, violating the still-forming child's privacy by pulling out footage from the sanctity of the womb.

AREBYTE BABY

Screen 2

Screen 2 will show the raw java script working in live time, demonstrating the underlying processes and complex computing that is constantly analyzing data shared online.

Screen 3

Screen 3 will show the prediction of the Arebyte child's future. This profile is created by combining the traits of every visitor, resulting in a co-created 'baby' that leaves each visitor with a sense of accountability and responsibility. This might include predictions such as: personality, school grades, education level, political views, profession, health, criminal activity, relationship status etc.

WORKSHOPS AND EVENTS

Alongside the exhibition, I will run a series of workshops and events that support my aims to foster curiosity, facilitate discussion and provoke critical thinking. My current ideas for these events are as follows:

- **Talks and Discussion Panels**

I would like to invite speakers from a diverse range of backgrounds including Creatives, Psychologist, Sociologists and Data Scientists to promote a collaborative and holistic understanding of the issues. Examples of potential speakers I would like to involve include Lauri Love (Activist and Hacker), Thomas Webb (Creative Hacker and Ted X Speaker), Carole Cadwalladr (British Author and Investigative Journalist), Bill Posters (Artist-researcher and Facilitator), Tim Kindberg and Marcus Gilroy-ware (Authors and Pervasive Media residents).

- **Creative Workshops**

I will host a series of creative activities for visitors to participate in alongside the show. An example activity I would like to include is 'Future Family Trees'. Using the traditional family-tree mapping model, I would like participants to use their data to create 'future' family trees – mapping their children, grandchildren and great-grandchildren. This activity will give participants a greater understanding of how big data companies analyse data and build profiles of users, as well as encouraging them to think about the impact this may have on future generations.

- **School Workshops**

A crucial part of protecting future generations is through arming them with knowledge and counteracting the normalization of surveillance culture. Often these issues aren't discussed with younger audiences as they're considered too complex, however I believe art can be a powerful communication and education tool. My background is in youth work, which I have utilized during my research by facilitating data awareness sessions at a local primary school with children aged 7-8. These lessons have focused around session,

WORKSHOPS AND EVENTS

persistent and third-party browsing cookies, developing their understanding of how data is collected and steps they can take to protect their privacy online.I have found that through performance, creative activities and interactive games, I have been able to facilitate meaningful discussions around complex concepts. As the focus of my exhibition is a 'call to action' to protect the future generations, I would like to initiate that by leading more of these workshops around various topics (such as bias algorithms, behavior modification and predictive policing). These sessions may take place at the gallery or as more school visits.

'Internet Privacy: Cookies' Session Plan 18/6/19

Time: 1 hour

Resources needed: *Acting props – (Good and bad cookies, accept Button, URLs), paper/card, scissors, glue, colours (felt-tip or paint), collage material, feedback sheets*

Introduction (5 mins)

General internet questions (raise of hands) – (Who here has access to the internet? How many of your own a smart phone or device? Is anyone familiar with online cookies? Can anyone tell me what 'privacy' means to them?)

Introduce the term online privacy – what do they think it means? Come up with a group definition.

Introduce cookies, where they might come across one and how they are used online. For example: "Cookies are like little bugs that like in your computer, and there are 'good' cookies and 'bad' cookies. Today we'll be learning all about what they do, and how we can make sure they don't affect our privacy when using the internet."

Starter: Cookie Role Play (10 minutes)

> 12 volunteers needed (Browser, 2x good cookies, 3x bad cookies, accept, 5x websites, 'Cookie monster')

12 volunteers will be chosen from the class to help act out this short role-play activity exploring how session cookies, persistent cookies and third-party cookies track our activity online.

Activity 1: Design a Cookie Monster (10 minutes)

In groups, return to tables. Fold down paper game to design one cookie monster per group. Share designs with rest of class, explaining why they have chosen certain aspects to represent the 'cookie monster'.

Activity 2: Create Own Plays (15 minutes)

Still in groups, the children will be asked to make up their own characters and stories and turn it into their own version of the cookie play.

Performance (10 minutes)

Perform plays back to the class, demonstrating knowledge. Cookie prize for the best!

Recollection, Reflection and Feedback Sheets (10 minutes)

Complete feedback sheets reflecting on session, illustrate with an image depicting their understanding of how cookies work.

ADDITIONAL CONSIDERATIONS

Contingencies

Due to the scale of the project, I have made several contingency considerations. These include:

· **Personality Quiz**: This can be used as an alternative to Cambridge's 'Apply Magic Sauce' If necessary (for example, if a visitor does not use social media, or we are unable to obtain an API for the software). Cambridge Analytica used this tactic to gather behavioral data on millions of US voters so the change would not affect the conceptual value. It would also be a much simpler process and will reduce the need for programming assistance.

· **Characters:** Should a viewer not wish to consent to the privacy agreement, or if we experience issues with the API, a number of pre-made 'characters' could be used. These might function by issuing visitors with swipe cards and psychographic profiles of the fictional characters before allowing them to navigate the maze.

· **Pre-collected data**: For the Arebyte Baby, we will have a bank of pre-collected data on the psychographic profile of gallery visitors to use in the case of technical issues. These will be collected through a series of personality quizzes taken at the gallery and online before the show.

· **Emergency Door Release:** Each door will have an emergency release function, should a visitor want to leave the structure, or in case of technical issues.

TECHNICAL SUPPORT

Joseph Allen: Joe is a Data Scientist from Manchester University. He specializes in live data analysis and has recently worked with artist Bill Posters as a front-end developer on his award-winning artwork 'Spectre'. I met Joe and I have worked on numerous projects together, most recently Twitter-based interactive piece 'If you leave it up to the audience, they can kill you', shortlisted for the Ashurst Emerging Artist Award. We have developed a strong working relationship and understand the challenges faced when collaborating - particularly across disciplines. Joe will be responsible for assisting with the 'Apply Magic Sauce' API and the Arebyte Baby's.

Sarab Sethi: Sarab is a PhD student at University College London who specializes in machine learning. Sarab and I met in 2017 whilst participating in Roche Pharmaceutical's Science and Art Residency 'Roche Continents' in Salzburg, Austria. Sarab will be assisting with various machine-learning aspects, such as the predictions for the child's future and the generative targeted advertising.

UWE: I work at a University of the West of England as a Technician and plan to utilize my contacts for logistical support. This includes Creative Technologists and Art Technicians with exhibition-specific production experience.

Hackspace: I am a member of Bristol Hackspace where I can access all the tools necessary and get support from other members.
Pervasive Media: I receive mentoring from Tim Kindberg, Technologist and resident at 'Pervasive Media Studio' in Bristol. Pervasive Media Studio is a community of over 100 artists, creative companies, technologists and academics exploring experience design and creative technology.

Spike Island: I volunteer at Spike Island Gallery and will use my connections with the Production Team for advice.

Electrics: I have a family member who is a qualified electrician and has agreed to install the wiring to power the doors free of charge. He will accompany me to the gallery in advance to map out the space and determine requirements.

BUDGET AND TIMELINE

Hotel Generation 2019 Budget			
Item	unit cost	Quantity	cost
Building Materials			
Gyproc Standard Square edge Plasterboard (L)2400mm (W)1200mm (T)9.5mm	7.12	75	534
R4C CLS treated timber (T)38mm (W)38mm (L)2400mm	4.38	130	569.4
Cottage 2 Panel Primed White Smooth Internal Standard Door, (H)1981mm (W)686mm	18	22	396
Door paint	18	4	72
B&Q White Polished Knob Door knob (W)27.5 mm, Pack of 1	3.85	14	53.9
Medium duty Satin effect Stainless steel Butt hinge, Pack of 2	5.15	14	72.1
Blackfriar Matt Black Paint 2.5l	31.6	3	94.8
Clear Acrylic (600x1000x5mm)	30	8	240
Screws/Glue/Nails	In kind		Arebyte to supply
Propoganda/Targetted Ads printing	80		80
Note: These figures are mainly taken from B&Q's website. I intend to order the materials through a trade account with Build Base so the actual cost is likely to be less.			
Electronics			
Solenoid - 12V (Latch / Lock) (ROB-15324)	9.5	14	133
Jolicobo 2 Pcs User-Friendly 1 Way Relay Module	4.29	7	30.03
ZeroCam NOIR - Camera for Raspberry Pi Zero	15	18	270
Wireless NodeMcu Lua CH340G V3 Based ESP8266 WIFI Internet of Things IOT Development Module For Arduino	2.5	14	35
Wall Mount Junction/Terminal Box for power/electrics	40	1	40
Note: Smaller electronic components such as wiring, buzzers, solder, LED's etc will be sourced through Hackspace Membership free of charge			

BUDGET AND TIMELINE

Arebyte Baby and iPads			
Projectors		4	Arebyte To Supply
Screens		3	Arebyte To Supply
4 x ipads for sign up (borrowed from work)			In Kind
Freestanding Lockable iPad Enclosure	55	4	220
Technical Support and Labour Costs			
Programmer (Per Day)	100	5	500
Electrician	200	5	In Kind
Building/Carpentry Support	200	1	200
Van hire to transport doors to gallery	100		In Kind
Artist Fee	400	1	400
Workshops/Events			
Travel for facilitators	150		150
Materials	60		100
Contingency			300
Total			**4490.23**

Hotel Generation 2019 Timeline

Task Name	Duration	Start	Finish	Assigned To
August				
Meet with Hackspace, UWE and Pervasive Media Studio Manager to discuss project and available support	7d	08/12/19	08/18/19	Sarah
Request Apply Magic Sauce API	1d	08/12/19	08/12/19	Sarah
Critiques and feedback on proposal and design from judges and other contacts	8d	08/12/19	08/19/19	Sarah, Judges
Skype meeting with Joe to discuss project, requirements and timeline	1d	08/15/19	08/15/19	Sarah, Joe
Order locks, relays, camera, NodeMCU's	1d	08/18/19	08/18/19	Sarah
Visit Sarab in London	2d	08/20/19	08/21/19	Sarah, Sarab
Make facial recognition software and test with locks	20d	08/22/19	09/10/19	Sarah, Creative Technologist at UWE
Skype Progress Report with Arebyte	1d	08/23/19	08/23/19	Sarah, Arebyte
September				
Create list of potential speakers/facilitators and contact	3d	09/01/19	09/03/19	Sarah
Joe to work on psychographic profile software (including Arebyte Baby)	9d	09/03/19	09/11/19	Joe
Contact schools to arrange visits	2d	09/09/19	09/10/19	Sarah
Send Joe complete facial recognition programme	1d	09/11/19	09/11/19	Sarah
Create back-up 'Personality Quiz' that collects behavioural data	14d	09/12/19	09/25/19	Sarah, UWE
Joe to combine facial recognition with Apply Magic Sauce API	2d	09/12/19	09/13/19	Joe
Finalise events programme	3d	09/23/19	09/25/19	Sarah
Encourage gallery visitors and online contacts to complete Personality Quiz to build bank of back-up data	56d	09/26/19	11/20/19	Sarah, Arebyte
Visit Gallery to make plans for show	2d	09/26/19	09/27/19	Sarah, Arebyte
Plan workshops (creative and schools)	4d	09/28/19	10/01/19	
October				
Order doors and gloss paint	1d	10/01/19	10/01/19	Sarah
Visit to gallery with electrician to plan wiring and requirements. Create diagram.	2d	10/02/19	10/03/19	Sarah, Rob
Progress Report with Arebyte	1d	10/04/19	10/04/19	Sarah, Arebyte
Paint Doors	1d	10/05/19	10/05/19	Sarah
Put together tech requirements, send to Arebyte	3d	10/07/19	10/09/19	Sarah, Rob
Attach solenoid locks to all doors, wiring and soldering of components and test	14d	10/10/19	10/23/19	Sarah, UWE, Hackspace
Booklet Design with Stelios	7d	10/14/19	10/20/19	Sarah, Stelios
Finalise design decisions including what parameters are assigned to the doors, what objects/memorabilia should go inside the rooms	5d	10/24/19	10/28/19	Sarah
Source/create memorabilia for rooms	10d	10/29/19	11/07/19	Sarah
November				
Order construction materials (timber, plasterboard, hinges, black paint, acrylic)	1d	11/11/19	11/11/19	Sarah, Simon (Builder/Neighbour)
Visit Arebyte Gallery with 4D baby footage to test different scales and projectors	1d	11/12/19	11/12/19	Sarah, Arebyte
Check resources, final testing of doors and software	9d	11/13/19	11/21/19	Sarah
iPads ordered and collected from UWE	1d	11/20/19	11/20/19	Sarah, UWE
Deliver doors to gallery (storage dependent)	1d	11/22/19	11/22/19	Sarah, Stepdad
Construct maze structure	5d	11/23/19	11/27/19	Builder/Carpenter, Arebyte, Sarah, Friends/Family
Electrician to visit gallery and install wiring	3d	11/28/19	11/30/19	Rob
Screens, projectors, iPad stands installed	2d	11/28/19	11/29/19	Sarah, Arebyte
Connect all components and test - Sarab present to assist	1d	11/30/19	11/30/19	Sarah, Sarab
December				
Paint Maze	1d	12/01/19	12/01/19	Sarah, Arebyte
Install items/memorabilia in rooms	1d	12/02/19	12/02/19	Sarah
Contingency/testing time	2d	12/03/19	12/04/19	Sarah
Exhibition opens	1d	12/05/19	12/05/19	

Sarah Selby (Artist CV)

www.sarahselby.co.uk
Contact Information: sarahlselby@gmail.com // +44 7802 372 477

I am a new-media artist interested in the visual communication of multi-disciplinary research to foster curiosity, facilitate discussion and provoke critical thinking. I strongly believe in the power of art to contribute to research through the artist's ability to navigate unfamiliar disciplines, draw connections between disparate ideas and engage diverse audiences and new ways of thinking.

Education

Bachelor of Arts - Interactive Arts
Awarded First Class Honours
Manchester Metropolitan University

Level 3 Diploma/Extended in Art and Design
South Gloucestershire and Stroud College

Awards:

2019 – Shortlisted for Ashurst Emerging Artist Prize in New-media category (winner TBA in August)
2019 – Selected for Arebyte Gallery's 'Hotel Generation' programme (finalist TBA in August)
2017 - Roche Continents Science Community Award
One of 35 European artists selected for week-long residency in Salzburg, Austria

Selected Exhibitions

2019 – (Upcoming - November) *'Computational Futures'* at The Station, Bristol
2019 – (Upcoming – October) *'In the Psychiatrists Chair' (*A collaborative project with residents based at Pervasive Media Studios)
2019 – *Decoded* (As part of the 'Here, now' Creative Futures Exhibition), The Island, Bristol
2017 – *You Made It*, Manchester Metropolitan University
2017 – *Group Exhibition*, Link Gallery, Manchester
2015 – *Unit X*, Federation House, Manchester
2014 – *Save The Slides,* The Salutation, Manchester
2014 – *Unit X,* Federation House, Manchester
2013 – *SGS College Fashion Show*, The Goods Shed, Stroud
2012 – *Art Couture*, Painswick

Talks and Events:

Speaker at Women's March Manchester 2017: *Digital Abuse: A Collaboration Between Artists, Activists and Survivors*
Speaker at Roche Continents 2017: *Generative Design and Creativity*
Illustration Showdown Bristol – Co-organiser
Illustration Showdown is a cross-country initiative that facilitates the visual discussion of local and global issues through 'game-show' style events featuring live art-battles and audience participation
(2017) Digital Abuse – Project Organiser (2017)
Organised and facilitated the 'Digital Abuse' workshop, bringing together artists, activists and survivors of Image-based sexual abuse.