Moderator: I'm going to share a poll with you, and it's just a couple of basic questions. Which of the following devices do you use and then how much time you spend online per day on average? And again, it's just for me to get a sort of basic idea of how often you go online and how you go online. Can you all see that okay?

Group: \*Agreement\*

Moderator: Lovely.

Callum?: Am I supposed to fill it in?

Moderator: Yes. On the first one you should be able to choose as many options and then obviously the second is just one option.

\*Pause while poll is completed\*

Moderator: We're just waiting on one more person. Great. Thank you for that, that's really interesting to see. Lots of smartphone users, I think probably inevitable in this day and age. Desktop users, laptop computers, and a couple of smart speakers and wearable technologies. Okay, that's really interesting. And then, most people are one to three hours and then a few people, three to six hours as well. Can I ask if someone would be comfortable sharing what the last thing they did online was?

Roy: Check my bank balance.

Callum: Check emails.

Moderator: So, had a couple of people saying checking emails.

Tina?: Yes, checking emails this morning.

Moderator: Okay. People nodding as well.

Samuel: I was checking on the cricket score in India, actually.

Moderator: Can I ask what site you used to check the score?

Samuel: Cricbuzz.

Moderator: Pardon, what was that?

Samuel: Cricbuzz. It's an Indian-based thing, I understand. So, you get predominantly the Asian results more so than the English results.

Moderator: Okay. Are you a big cricket fan then, I take it?

Samuel: Yes, moderator.

Moderator: Can I ask, to use the site, did you have to sign up?

Samuel: No, I didn't actually.

Moderator: You just click through.

Samuel: It's just a general app, yeah.

Moderator: That's really interesting. And can I ask, for those of you who checked your email, I'm assuming you had to sort of sign up to an account. Is that the case?

Group: \*Agreement\*

Moderator: Can I ask, what sort of information you had to give to sign up? Do you remember?

Louise: Too long ago to remember really. I mean, it was 12 years ago?

Elizabeth: Too much, I think. I'm having a lot of problems with a lot of websites knowing my every move. I've had four languages on Duolingo this morning already and I've been getting adverts for old people in care homes in my locality, which is very worrying, and neck braces and things like that.

Moderator: So, that that's quite interesting, so it's information around your location, your age and also the activities that you're doing online as well. Can I ask, how you think they got that data?

Elizabeth: Well, I don't know because I haven't got any location enabled, which is an absolute pain because I would like the one to find my phone, find my iPad, but I daren’t because then everybody knows when you're not there.

Moderator: Yeah.

Samuel: Well I think with online purchasing nowadays, no matter what you buy, you've got to take your email address obviously, otherwise, and your full address. But I think so many companies know whatever you buy have your email address. And I'm not saying that they keep it all to themselves but some people must share it. Otherwise, we wouldn't get these ad hoc requests for, you know, for things.

Allan: Yeah, they just tag at you and say, "We’ve got you- Oh, you've been looking at this coat, would you like to buy it?"

Group: \*Agreement\*

Louise: I have noticed that Google adverts that come up on my computer tend to be aimed towards the sort of things that I've looked at or bought on eBay.

Allan: Yeah.

Callum: I think one of the main things here is that Google used to be known as a search engine. Now, it's primarily a tracking engine, so it knows what you're looking at, where you're looking at it and everything you've ever searched for in your life.

Samuel: But even your supermarket, if you go to the supermarket, within a few times of going there and buying the same things, they'll promote to you the things that they think you are commonly buying.

Callum: You've probably got a Tesco's loyalty card.

Samuel: Yes, but not in [X X]. They're very clever and they keep, obviously keep a note of what you're buying. They know which ones to promote if you haven't been buying that say for two or three weeks.

Elizabeth: Yes.

Moderator: Can I ask Samuel, do you find that recommendation useful?

Samuel: It can be, but I find also with Amazon, which I use quite a lot, I'm a Prime user. But, whatever they buy, in two or three weeks’ time, they'll bombard you with things similar to what you have bought in the past.

Louise: Yes, there’s a tendency to think, "Well, hang on I've already got that. I don't need to know about that."

Samuel: Exactly, yes.

Moderator: Can I ask, is this a similar experience for everyone else that's kind of targeted?

Group: \*Agreement\*

Roy: [X X X] that nowadays, you have, a lot of sites talk about cookies and you have to go in and say, "I don't want this that and the other," whereas sometime back, there was no law about the cookies. So, sometimes if you don't clear your cookies at regular intervals, you’ve got the old cookies left behind from many moons ago and they're still working. So, if you're getting fed up with it, clear your cookies and start again.

Louise: I wouldn't know how to clear my cookies. I know how to clear them out the cupboard in me kitchen, but not on my computer.

Tina: Google it, just say, "How do I clear my cookies?" And it'll tell you.

Louise: Yeah, I know. But then, it'll tell me things about how to do. I had this with the bank yesterday, "Hold control down and do this.” Well, I'm sorry I'm disabled, I've only got use on one hand. I can't hold and do. I can only do one key at a time.

Moderator: Yeah.

Louise: And it took me a long time to persuade the girl I was talking to at Natwest that I could only do one key at a time.

Moderator: Yeah.

Samuel: It would appear from this discussion, where you’re leading, that privacy is the big thing that concerns all of us really and specifically yourself when you're developing an app. I would think the biggest worry you have is privacy.

Moderator: Mm-hmm. Absolutely.

Samuel: Is that the case?

Elizabeth: Definitely.

Moderator: Yeah. So, I'm interested and so we're certainly going to talk about privacy and in relation to our personal data. So, I wondered if anyone, do you understand what personal data are? So, does anyone feel like they could give a definition or description of personal data? Tina, you gave a little nod there?

Tina: Yeah. Well, I don’t know if I'm going to be exact. I mean, I know a bit of it obviously. I mean, obviously they're going to know your name and date of birth even and your email address, probably home address as well. So, it's quite scary actually how much they do know about you.

Moderator: Yeah. Are there any other sorts of data that you might classify as personal data? I think Elizabeth, you nodded as well before?

Elizabeth: Well, I’ve sold two things on eBay this morning. I use it all the time and I've had to put no endless stuff in as you do for {Research Platform} incidently, isn't it?

Moderator: Yeah.

Samuel: Also postcode and household earnings,

Moderator: Yeah, absolutely.

Samuel: is something that I am a bit wary about giving away. Exact postcode and your earnings.

Moderator: Yeah.

Louise: And how many people live at your address and things like that.

Samuel: Correct, that's right. Yeah.

Moderator: Yeah. So, these are all absolutely examples of personal data so it's-

Roy: Plus your passwords.

Moderator: Yep. Yep. So, we might think about personal data in terms of how it identifies you. So, all these different elements that we're talking about. Are there some types of data that you feel more comfortable sharing? So maybe Roy, you were saying about passwords, how do you store and use your passwords, can I ask?

Roy: Well, I don't store them at all.

Moderator: Okay. Yeah.

Roy: I keep them separate. But there are some times when you log on to certain sites, it will say, "Do you want to keep your name and password?" And I just say “no”, which means I have to remember it. If you say “yes”, then you tend to forget what the password is after a sign-in. If things go tits up, you can't get back in.

Moderator: Yeah. Can I… is that a similar experience for other people? Maybe-

Louise: I tend to let my computer remember for me.

Moderator: Okay.

Elizabeth: Yes, I do.

Moderator: And do you feel comfortable with that storage of your passwords, sorry?

Elizabeth: Fairly.

Louis: Fairly comfortable.

Elizabeth: Because they do prompt me every so often and say, "You've used this password on a website," and so I hastily change it and they're getting more and more complicated now with asterisks and all sorts. I write them down as well in code in a little book.

Moderator: Okay. So, it's similar to Roy, it's offline storage.

Elizabeth: Yes.

Moderator: Does anyone use a password manager just out of interest?

Samuel: I just use Apple Keychain. Apple-

Allan: Yeah, I use Apple.

Louise: What's a password manager?

Moderator: So, maybe I'll ask Allan to explain what Keychain is because that's a good example of a password manager.

Allan: Well, on our iPad, Apple just, [promotes,] you say, "Do you want to use a strong password?" And there's a long list of letters and numbers and hyphens that you can't remember. And you just use a strong password and then it's stored on your iPad and you can go and look at it or use it.

Moderator: Yeah, that's a nice explanation. Essentially, it provides or generates very strong passwords for you so you only have to remember one password to access your keychain and then it does multiple different passwords for different sites. So, it's an added level of security, basically.

Callum: I mean, just to add to that, the advantages of using that on Apple is that it syncs your password effectively across any Apple device. So, if I'm using an iPad or an iPhone or a Mac, which I'm using now, I don't need to remember my password, it's cloud-based so it's always there, immediately.

Moderator: Can I ask again a similar question I asked I think to Roy, are you comfortable allowing or sharing that password with Apple across these different devices?

Allan: Yes.

Moderator: Yeah? And Callum as well or?

Callum: Yeah, 100%.

Moderator: Yeah. And can I ask why you're comfortable or why you have trust in that service?

Callum: Because Apple provide very, very good security and I believe they don't even allow FBI and people like that into their system so it's 100% secure, that's as secure as you can get online.

Moderator: Yeah.

Callum: I certainly wouldn't trust any Android-based password.

Moderator: Okay. Can I can ask you to expand on that?

Callum: I feel more in control over the whole, over their environment, whereas Android is more open to hacking.

Moderator: Yeah. Can I maybe ask that to the group? So, I think Tina, you mentioned Googling, are people comfortable using Google products and obviously Callum's less comfortable but-

Tina: Not really.

Callum: I’d go as far as to say not comfortable at all.

Moderator: Not comfortable at all? Okay, yeah.

Tina: But I do rely on Google a lot for searching, I have to say, I think it's a- I do google.

Samuel: I would be lost without Google, to be honest.

Callum: But there are many alternatives out there like DuckDuckGo that do not use any tracking at all under and they're a lot more secure.

Moderator: Yeah.

Elizabeth: I use that, mainly because my grandson, who's 22 and has Asperger's and an IQ higher than Einstein's, can't live in the real world, he says and he's researched it all, that Bing is the one to use, for this lack of tracking, he says.

Moderator: So, I'm really interested in this idea of the different processes or different steps people take to protect themselves online so I might come back to this. I just want to circle back to this idea of Google first or indeed more generally different sites online. Do you know why they're collecting your data?

Elizabeth: To sell.

Moderator: To sell? Okay, yeah. And any other reasons?

Tina: Well, just so they can target adverts and such like towards you. If they know a lot about you, they know what you like and they can target you.

Moderator: Yeah.

Roy: No, Google don't actually collect it to sell, they collect it for other people to sell, don't they?

Tina: Oh.

Roy: And they get a percentage of whatever comes through.

Samuel: But any question you ask in Google, your answer is always, the top five are always adverts and the temptation is just to take the first one that you get but you've got to scroll down before you get the actual, the real-

Roy: [X X X]

Moderator: Sorry, what was that Roy?

Roy: Companies pay to have their ads at the top. It’s a premium.

Samuel: Yeah.

Moderator: Do you see any positives of this data collection? So, I asked before about targeting, does anyone like the targeted ads?

Elizabeth: No.

Moderator: All no?

Roy: I've never used one.

Moderator: Okay. What about, so they use it to target you, they use it to collect your data possibly to sell it on. What about improving your experience or personalizing the experience for you? So, Samuel mentioned about the supermarket recommending items that you might want to buy. Does that seem like a good use of your personal data or are you still not happy with that?

Roy: Well, we have a Nectar account. We’ve got the Nectar app on one of the phones and that gives us bonus points on Nectar for certain items that we have bought in the past. So, they're collecting it and then feeding it back to us and we actually make quite a few Nectar points out of it. So, in that way I'm happy because it's a bonus.

Moderator: Yeah.

Roy: Same with Sainsbury's.

Moderator: Yeah. So Allan, I think you were ...

Allan: Yeah, it's just, again, if you've been looking at a coat or a pair of shoes or something like that they say, "Oh, you've looked at these, here's 20% off," so that's tempting.

Moderator: So, if there's some value to you, then the data collection becomes less of an issue?

Allan: Yes.

Moderator: Okay. How does the rest of the group-

Elizabeth: I think it- sorry.

Moderator: Sorry, yes, please, Elizabeth, share.

Elizabeth: It's very worrying that people like Ryanair, when you're planning a holiday, and other carriers, although I do use other carriers, but Ryanair in particular, they'll give you a price for your date, your time but then when you go back again, it's gone up. But if you get your daughter or son to do it, it's the original price.

Moderator: Yeah. So, there's a little bit of issue of how they're collecting and how they're using the data and how transparent that is. That leads quite nicely onto the next topic that I'd quite like to discuss. It's around how in control we feel online. So, does anyone have any situations or examples where they felt at risk or out of control online? So for example, that Ryanair example is quite a nice one because you're not in control of the price. Does anyone have any other examples?

Roy: There's, sometimes on Amazon if you go in and look at something and don't actually buy it, then go back in again it says, "Oh, you've looked at that once before, we can give it to you at a better price now." That's something that comes from Martin Lewis's money letter. It tells you if you go to buy something, and there's a number of sites not only Amazon, you go and look at something, they sometimes send you an email saying that, "You've looked at this but we can do you a better price now."

Moderator: So, that's quite interesting and that goes back to the previous discussion that giving them a little bit of personal data for an offer, is that something that you're okay with?

Roy: If I'm buying it, yeah.

Moderator: Yeah. Tina, I think you were going to say something?

Tina: Well, I was just going to say, you say that, you were asking if we don't feel in control and sometimes when we get a text or an email for which is obviously a scam. And you're wondering where that came from and how they got the address and all that, it's quite annoying.

Moderator: Yeah. Can I ask, do you have, do you know or have any understanding of how they might have got your email address?

Tina: Again, if I bought them from these other unscrupulous companies, that's the only thing I can think of.

Moderator: Yeah.

Callum: Yeah. I'm sure. I am plagued, I'd say at least twice a day with calls from Amazon saying I've just bought something on Prime-

Roy: Yeah, your Prime account is due to expire. [crosstalk 00:18:37].

Callum: Yeah, all that stuff.

Louise: Yes.

Callum: And obviously, that information has been hacked from somewhere, probably from Amazon because they say, "This is Mr. So-and-so and this is your address," and all the information is correct that they have. So that’s moved from online data. Somebody sold them a database and they now got a call center in Pakistan or India and using that information to try and scam people.

Roy: Yeah and they use English sounding names and it just doesn't gel.

Callum: Sorry?

Roy: They use English sounding names, "Hello, my name is George."

Group: \*Laughter\*

Samuel: What worries me is how, you often get calls on your mobile phone. How do they get hold of your mobile number? That worries me, but I still don't know how they get it.

Callum: So, I always just block those calls now, you can block that number so that number can never call you.

Samuel: Yes, yes. Uh-huh. And I just-

Louise: They just use another number though. They just use a similar number but a different number.

Callum: Just keep blocking them.

Louise: I mean, I block calls with [X XX] number on the phone but they just call me back or it's the same people calling me back on a different number.

Samuel: Well, since I bought BT Guard for my main line phone several years ago, I've never had a bad call on main line, but I do get some rather [XX] ones on my mobile.

Louise: Yeah, I use a TalkTalk blocker on the landline and that's fine. It's the mobile, you can't stop them phoning you on.

Moderator: I'm going to maybe come back to these blockers, because that’s really interesting. But Samuel, this idea that you don't know where they would have got your mobile number from, can you think of any occasion where you might have had to give a mobile number to sign up to a site or anything?

Samuel: Possibly, yes, but… you know they ask for a backup number, your main line. Probably, I must've given it to somebody in the past but it's not this kind of thing that you change, you don't change your mobile number, but you can change your password or you can change an email address, I suppose.

Elizabeth: I found a canny way around all this. I don't know if this will work forever. This is Sky Mobile and I've got a deal, I only pay £3 a month and because I've obviously given my phone number to one or two websites, and not wanted to but had to, I began to get quite a few calls and I was paying whether I opened it or not. So, I now put, it’s not a blocker but I've arranged that my Sky mobile won’t receive any calls from anybody that will take my monthly payment above the £3. It’s all stopped.

Moderator: That's really interesting. Can I ask, I just want to pick up on something you said there, that you signed up to a site and you had to give the mobile number. Did you feel like you wanted more choice in that or are there, maybe I can open this out to the group, other examples of times that you've had to give bits of personal data where you didn't want to or weren't comfortable?

Allan: Yeah, when you're ordering things, you quite often have to give your mobile number in case they say the courier wants to get in touch with you. So, most sites that you order from you have to give your phone number.

Samuel: Particularly in surveys, and I do a few surveys, but it asks for your age and if you don't give your age, you think, “well, I'll be bombed out right away”. So, I always give my age and because it's quite high, inevitably above their [X] picks because of that. But that's the one occasion where I feel you shouldn’t really have to give your age but…

Moderator: I'm quite interested. So, there's a couple of examples of personal data there, so we've had phone numbers, we've got age. What about, there is a category of personal information that's called sensitive personal data. So sexual orientation, religious beliefs, ethnicity, are people comfortable sharing that kind of data or are there examples when you would be or wouldn't be comfortable? Maybe I could ask Louise?

Louise: I usually do share things like my ethnicity and things like that, but I have a niece who is half-white and half-Caribbean and it always makes me think, "Well how does Lizzie feel when she's asked this question?" And I do feel slight uneasy about it although I usually do give it.

Moderator: Yeah. Can I ask what situations you've had to give that data?

Louise: Well, it's usually when doing surveys and things like that and I know that they do have to have, I mean, I've done statistical work myself and I know that they do have to target certain people, they do have to have so many in this age bracket and so many in that age bracket and so many white people and so many colors and this sort of thing, but, so I know it is necessary so I do usually give it.

Moderator: Yeah.

Roy: Normally, with a survey, there's an option at the beginning, isn't it, saying, "Are you willing to share this information?" And you always think, "Well if I say no, I'm bombed out."

Louise: Yes.

Moderator: So, I mean that's quite interesting. So, do you feel that that's just part and parcel of doing a survey or do you think that's slightly pushing ...

Louise: I think it is, yes.

Moderator: Yeah? Okay.

Allun: Yes, it is, yeah.

Moderator: Yeah? Okay.

Samuel: Whether it's fair or not, it's a different matter but that is part of the survey, I suppose.

Elizabeth: I'd like to say to Samuel, I always give my age, particularly on {Research Platform}, because I was assured years ago that if- because of the age I am, I would never be screened out because they're looking for the few people, in their seventies.

Samuel: Yes, yes. But I find it amusing with… in your whole career you have forms, you're either male or female, it was just a binary thing. Now, there's about five different options for it.

Tina: Yes.

Louise: Yes.

Moderator: Does that make you feel-

Louise: Are you the same sex as you were born?

Moderator: Yeah.

Louise: It's an interesting question.

Moderator: And how do you feel about sharing that sort of thing?

Louise: I don't mind but then I haven’t, I don't have a problem with my gender so perhaps people who have had problems with their gender would feel more different about that.

Samuel: mmm.

Moderator: That's quite interesting because I'm obviously interested in how we feel, whether we feel in control or not. So, in most of the cases there Louise, you're saying that you do feel relatively happy sharing this kind of information. Can I ask, do you think though, if you're happy sharing it, and this feeds back into this idea of surveys, whether they have the right to take it or whether they should be more involved in asking permission and checking how comfortable you are? So, I'm thinking maybe in particular, in terms of perhaps marketing and advertising.

Roy: I think most of them do ask permission to collect that information and you've got the option to say yes or no. There's about three or four things that they ask you, your sexual preference, your age, where you live sometimes, they, so postcode.

Louise: Well, that's right. Postcode or prefer not to say. But when you do think, if I put prefer not to say, I might well be rejected because they've got to have people from the s- different areas.

Moderator: I'm interested in that. So, there is a degree where you feel like you have to give the personal data.

Group: \*Agreement\*

Moderator: Yeah, everyone's nodding there. Can I ask, is anyone, so we've talked about ad tech and marketing, is anyone concerned around government tracking and surveillance?

Roy: I've not come across it.

Moderator: No.

Samuel: No.

Moderator: No?

Louise: Not really, I mean, they've got census data anyway.

Moderator: Can I ask, does anyone use social media?

TIna?: No.

Allun Yes but..

Louise: Very rarely.

Moderator: Okay. Allan, are you aware of the type of personal data that you might share on social media?

Allan: Yes. Well, I'm careful what I post. I don't post all my holiday pictures when I'm away, you know? I might post them when I come back. And I only try and post to people I know.

Moderator: Yeah.

Allan: Use it more as a communication tool between family.

Moderator: Sure. So, that's interesting. You said you don't post the pictures while you're away. So, are you more worried about individuals knowing your location rather than Facebook?

Allan: Yes, you are. Some people say, "Oh look, Allan's away. Let's go burgle his house." Something like that. That's the typical thing.

Moderator: Yeah.

Roy: Or hold a party when he's not there.

Moderator: Yeah.

Elizabeth: I joined Facebook for about a month, years ago, and was horrified to find that if I looked up, say, the name of a daughter, I can see all her history, what university course she was doing. And I thought, "This is beyond the pale." So I downed tools on it.

Roy: Yeah. That depends on how you put your data up and what access you give to it. It's not a fault in the actual application. The fault lies normally in the fact that it's open unless you close it. It should be closed unless you open it.

Moderator: I'm quite interested, so, it seems to be the same for Roy and Allan, I think to a degree Elizabeth as well, that it's what other people, other individuals, can see. Is anyone concerned about what, for example, Facebook or Twitter or Instagram are reading or taking from your personal data?

Elizabeth: Yes.

Moderator: Yeah, you are. Yeah.

Callum: I think it's fair to assume that anything you post online is potentially out there for everybody.

Moderator: Mm-hmm.

Callum: You may not place it [to go] initially, but if you post something out there, it could go, it could be hacked.

Moderator: Yeah.

Roy: Yeah. The problem is sometimes that you allocate certain friends, say, to look at something and they can pick it up and pass it on to other friends.

Samuel: Yeah.

Roy: And that's how it goes whizzing around the world in seconds.

Callum: Yep.

Samuel: And then so-and-so wants to become a friend of yours. You know? You've never heard of them before.

Roy: These are people you might like.

Callum: Plus, I think everybody uses WhatsApp now.

Louise: No.

Elizabeth: No.

Callum: I don't think everybody quite knows WhatsApp's owned by Facebook. So the whole information is whirring around, it's going from place to place. So, WhatsApp is not secure either.

Samuel: Well, I-

Moderator: Can I-

Samuel: I use WhatsApp for the family, but I feel it's secure as far as that's concerned, but perhaps it's not, maybe.

Callum: Data is gathered there as well as Facebook. For sure.

Moderator: Can I ask, Callum. Maybe, could you explain your understanding of what they do with that data?

Callum: Depending whether you have a WhatsApp conversation or a video call or whatever. I've seen targeted ads coming through. Not from any written word on WhatsApp, but from spoken words. So they're obviously gathering spoken words on a WhatsApp conversation and then targeting direct advertising. Customized advertising to the individual.

Moderator: Can I ask? Is this something that you'd like more control over?

Callum: I would do, but that isn't going to happen, so I'm just more careful about what I put out there. And I use it the way I want to use it, but anything secretive or private I would not put online.

Moderator: Can I ask if other people in the group have a sort of similar way of using WhatsApp and Facebook? Is it... maybe censoring is not the right word, but limiting what we put out there for people to see? So I'm guessing, so Elizabeth, you closed your Facebook account. Is that right?

Elizabeth: Good. I’ve nothing to do with the…

Moderator: Yeah?

Louise: I might [try mine] out once or twice a month, and that's it.

Samuel: As far as WhatsApp's concerned, I really think the benefits of it are probably over, take over your fear of it being spread. And I had no idea that it would be spread actually. I'm a bit naive perhaps, but the benefits of it, I think are great. Especially in the last year or so with COVID, and you can't meet, but you can have a... It's like a mini Zoom, you know?

Moderator: Can I ask that, sorry, again, I think this has come up previously, but, so it's a case of you are okay sharing a certain amount of personal data if the benefit justifies it? Is that sort of fair to say?

Samuel: I think so.

Moderator: Yeah. And Tina's nodding as well.

Tina: Yes, I would agree with that.

Allan: \*Agreement\*

Moderator: Yep. Okay and Allan, as well.

Samuel: Yep. I would go with that too.

Moderator: That's really interesting.

Louise: And it's a case of trust. I mean, there are some people you trust and some people you don't. I wouldn't trust Facebook as far as I can throw them.

Moderator: Can I ask how you make those sort of decisions? So how do you decide whether to trust a company?

Louise: I don't know. I mean, when I do searches, I usually do them on Yahoo because my email is Yahoo. So I feel safer with them than with Google, really.

Moderator: Can I ask maybe anyone else in the group, do they have ways of deciding whether they trust a company or whether to sign up to a particular site, maybe Tina?

Tina: Well, you just have to read all the horror stories about Facebook, you know? All the terrible things that happen because people are on Facebook and the abuse that they can get, and not just that, you know, I mean, just worldwide, you know, countries are using Facebook to more or less go to war with other countries, and I think, "This is horrendous." So I've never, ever joined up with Facebook ever.

Samuel: What I find quite amusing, really, is some of these stars say that they're being mocked and followed by people on Twitter. Well, surely the easy way to come out is just to come out of Twitter, and you won't be bombarded with rude calls or rude remarks about your performance. Same with these footballers. Why are they on Twitter? What is the object of being on Twitter? I can't understand, other than promoting your-

Elizabeth: Yourself.

Samuel: Glorifying yourself.

Roy: That's what it's for, it's for promotion. And at the end of the day, promotion means money.

Samuel: Yeah.

Roy: That's what they use it for. They will accept the abuse because they normally have somebody to read it for them.

Moderator: I kind of want to ask a little bit more about that, Samuel. This idea that, do you think there should be more controls within the apps and the social media sites? Or do you think it's just a case of if you don't want to be involved, you don't want to share your data, you don't want to have those kinds of interactions, you just have to not use them?

Samuel: [X-]

Elizabeth: [The trouble is], well the youngsters feel they ought to use them. And my two granddaughters are fine about putting a lot of stuff on Facebook. But they've both said to me separately, that what is very worrying is that if you've got a child, particularly a teenage girl who is insecure, they're always told on Facebook they have to go to the best parties, they wear the best clothes, the best makeup. And some of them are committing suicide. Not many, but some are.

Samuel: Yeah

Roy: That's a comment on society, isn't it? Rather than the actual application, because I'm sure within the application, there are security measures you can take to stop that happening. I don't do any social media at all, apart from I have a WhatsApp account. All the others, I was just totally... passed me by. So I don't get abuse on Twitter because I'm not on Twitter.

Moderator: Yeah.

Samuel: Yeah, but is it-

Roy: And lots of stars these days, and not only pop stars, but people well-known in the world, gauge how good they are by the number of followers they've got, how many photos they've got. And even the youngsters now, as you say Elizabeth, a lot of them will compare “how many friends have you got? Oh, you haven't got enough friends. You can't be part of our group.”

Samuel: But Joe Bloggs will never write a letter into the paper, but he would put an anonymous remark or rude remark on Twitter or Facebook, where he's hiding behind his nom de plume. He's Brickhead or something, you know?

Roy: And they say they can kill the account as soon they know, but it's so easy these days, and I'm not an expert, but you can spoof the IP address that you're coming from.

Samuel: Yes, oh yes.

Roy: So you can start up another one seconds later with a different IP address.

Moderator: So do you think that Twitter or Facebook as well should have, take a more active-

Roy: I do, but I feel they've got a problem because of this ability of people to hide who they are, regularly. You know, you can change who you are, I think it was Tina that said about getting phone calls from different places, with different numbers from the same place.

Moderator: Yep.

Tina: Yes.

Roy: And it's so easy to do with modern technology. And that's the main problem. It's the modern technology that we haven't really, as a world, got a grip on.

Moderator: I'm really interested in that. So this is kind of examples of how people are sort of hiding their identity for sort of negative aims. Does anyone use any sort of software or take any steps to protect their privacy and personal data? So for example... well, a lot of people just don't use social media, for example, because they're not comfortable sharing.

Louise: Well, I don't use social media partly for that reason, and partly because I just don't have the time. I mean, I'm at the moment trying to write a book and I've been told that if I go down the route of self-publishing through Amazon or something, then I ought to open a Facebook account, a Twitter account, all sorts of things, and raise my social media profile. And it's a case of promotion, using them as promotion to try and sell your book.

Roy: Yeah. I've got a daughter that's had to do that because of the work that she's in. She's an illustrator, and to publicize her illustrations, she needs to open up a number of social media type accounts, and go on to various websites just to publicize it because there's no other way of doing it. Apart from paying somebody an enormous amount of money, and not getting anywhere.

Moderator: I find that really interesting. So, there's a couple of examples there where people have to share their personal data, they have to sign up to these social media sites.

Roy: It depends on what you mean by personal data. I mean, you can just give your name and an email address. That's fine. You don't need to give anything else. She just says, "Hello. My name's whatever. And I do this, and this is my email address, and these are the sites you can go to buy my wares."

Moderator: Yeah.

Callum: They're also a great platform for complaints should you ever need to complain. For instance, against an airline, where if you put something on Twitter, it's out there for everybody to see. And they will very quickly respond to you, whereas you could send 10 emails a day and not get an answer. You put it in social media and they're hot on it.

Louise: My sister recen- well, not recently, nearly two years ago, had water come through her kitchen ceiling from her bathroom and is still waiting for them to finish sorting out the insurance and get it sorted. And she posted on their Facebook page and heard back from their complaints department the next day. And they're trying to sort it out now, but without putting that on, she was getting absolutely nowhere. I mean, she's had a heart attack since then, and has been living with no ceiling in her kitchen for nearly two years.

Callum: [X X-]

Samuel: Is this any different from Tripadvisor? Is Facebook any different from Tripadvisor? Which could ruin a company or it could make a company by whatever's put in.

Allan: Yeah. All the companies nowadays have dedicated Instagram officers or Twitter officers, and so they employ somebody full time from eight o'clock in the morning till eleven o'clock at night to respond to people.

Moderator: So, I find this a really interesting discussion. Again, it's an example of where people have to use social media to achieve something. And again, do we feel comfortable then giving a certain amount of personal data in order to be able to use that platform so that we can complain, so that we can get a speedier response?

Allan: Yes, I think [so-]

Elizabeth: No. I certainly wouldn't do it.

Moderator: So Elizabeth, you feel- Okay.

Elizabeth: I found a way around it that's always worked so far. If I have a complaint, and I don't complain often about things, I always look up the CEO's email address, and send him a polite but to the point email. Just one example. We had a holiday to Portugal canceled last year, but because of the virus, my husband and I canceled it three hours before they canceled it. And I thought they knew when we canceled it, so I wrote to the CEO because we'd lost all our money, and within a day, he had personally written back and said, "Well, I can't give you the money but I'll give you a voucher for the full amount." It never failed and avoids having to do it via social media.

Moderator: That's really interesting. And again, it's the type of strategies that we might employ to sort of preserve some sort of personal data. So rather than signing up to social media, you can have a direct email. I was just wondering if anyone else had other ways of sort of preserving their privacy online? Does anyone use a virtual private network, or VPN? No?

Allan: No. No.

Louise: I don't even know what you're talking about. Sorry.

Moderator: It's similar to what Roy was saying about sort of spoofing the IP addresses. It's a way of disguising your location so you go via another virtual location, as it were, a different server, and so whoever you're contacting doesn't know who you are or where you're based, essentially. But everyone's shaking their heads, so-

Samuel: But there must be, Moderator, there must be lots of people that actually do.

Elizabeth: I do. My Asperger's grandson.

Moderator: Oh, okay.

Elizabeth: "You don’t want to be using all these mainstream things, Gran. I'll set you up a way of bypassing them all. Private browsing and what have you.” I can't get out of it now if I wanted to. [Not that I] do. Should be safe.

Moderator: Yeah. Have you noticed a difference then since that's all been set up?

Elizabeth: No, not really. In fact, I just bought a third, a new, Apple iPad. And the amount of spam, junk I'm getting, has rocketed, and I don't know why. This is Apple.

Moderator: Yeah. So this is another example where you might want some more control over who's got a hold of your personal information essentially. That's really interesting. I'm aware that we're running a little bit long in this session. So I do want to just focus in on this idea of how we protect ourselves online. So Elizabeth's mentioned particular browsers and ad, does anyone use ad blockers?

Tina: Yes.

Moderator: Yeah, Tina?

Tina: Yeah.

Moderator: Can I ask why you decided to use them?

Tina: Ah, I just, I think I must just have read about them at some point, seeing how good they were. And they seem to work pretty much for me.

Moderator: Yeah. Did you pay for it or are you using a free-

Tina: No. It's a freebie.

Moderator: Free one, yeah. Would anyone consider paying for some of these protections? Like an ad blocker, or a password manager, or antivirus, for example?

Callum: No.

Moderator: No. Everyone's shaking their heads.

Samuel: I've dabbled in Robolock, which is, in fact something I've paid a modest thing for a couple of years ago. And then, in my discussion, I had a problem with Apple. Phoned up Apple, who were actually very good, I have to say, their help desk is excellent. And they said, "You're wasting your money. Keychain is more than adequate for what you are after." So Robolock got the heave ho and that was it. There must be dozens of companies like that. I know Virgin do one themselves, and another two or three that I know of that do.

Roy: Yeah. The problem with some of these bits of software is they take up resources on the actual device you're using and slows it down. I went to my local shop to have a word about my laptop that was going really, really slowly. He said, "Oh, I see you've got this particular thing running." It was just stop. What's it called? [X X Command]. But if you take it off, you don't need it because whatever Microsoft produced is good enough. Unless you go to some really dodgy sites, if you’re just a normal browser on the internet, then there's no problem. The Microsoft stuff is perfectly adequate and it's free. And I do get regular updates to it.

Moderator: So that's really interesting then that it's a case of sort of the security versus convenience, as it were?

Roy: Yeah.

Moderator: Yeah. Can I ask again, this is maybe sort of going back to this idea of trust, but how do you decide whether a site is dodgy or not?

Roy: Well, you can normally tell by what it's promoting. When I say dodgy sites, I mean like some of the pornographic sites and things like that. That's where a lot of viruses hang out. But if you're just going to Marks & Spencer’s and Tesco’s, and places like that, you're probably okay.

Moderator: Yeah. Can I just ask the group as a whole, do we tend to avoid what we might call dodgy sites? Not necessarily pornography, but file sharing, or the dark web as well.

Louise: I wouldn't know where to find them.

Tina: Occasionally when I click a link-

Moderator: Oh. Sorry. Maybe Tina and then Louise. So yeah, Tina?

Tina: Occasionally when I click on a link, I'll get a sign that comes up saying that this site is maybe not as good a site as you think it is, so think twice about it. So in which case I'll just not bother.

Roy: Yeah. Just, the certification's gone.

Elizabeth: Yes. I get that.

Moderator: Yeah. And do you know where that warning is coming from? Is that coming from-

Tina: It's probably coming from some of the software that I’ve got loaded on my laptop.

Moderator: Sorry. Did I ask...you don't pay for the ad-blockers, do you?

Tina: I don't pay for any of them, no.

Moderator: Does anyone pay for sort of protective… No. Callum's shaking his head.

Allan: No, I just got free antivirus.

Moderator: Free antivirus. Okay.

Allan: Yeah.

Louise: [I’ve got a free one too]

Samuel: One question I have-

Louise: I think it's Bitdefender that tells me if I go, going to go to a site it doesn't like.

Moderator: Yeah. And sorry, Louise. Is that a free-

Louise: Yes.

Moderator: Platform? Yeah.

Samuel: Slightly different, slightly different, Alexander. To open an email or not to open it when you...you know, I, nine times out of ten, open it then delete it. But perhaps the damage has been done by that time, I'm told. So what does everyone else do? Do they just look at it "Oh, I don't know that," and bomb it out, or what?

Tina: Yes.

Roy: I don't use any email software. I just leave my email on Virgin Media, which is who I'm with. I never pull it down onto anything other than... Just leave it on their website, so if I open it, it's open on their website, not mine.

Samuel: Right.

Moderator: Do people use spam filters? For their email I mean. Because that's one way, Samuel’s [X X-]

Roy: Well Virgin's got a built in spam filter.

Moderator: Yeah, yeah. And can I... Are you sort of-

Louise: I've no idea. I get an awful lot of spam so probably not.

Moderator: It'll depend on your email provider, but a lot of them will have it in-built. For those of you who do use spam filters, are you sort of comfortable with your email provider doing that initial scan, and sort of reading your emails in order for them to be able to filter out those that they think are safe and not safe?

Samuel: Occasionally, I've found a genuine thing from someone, and it's gone into the junk folder. And it's only because I know that they had sent it. I looked through my mail, it wasn't there, so I just looked in the junk. Because it mentioned a word that the company had obviously deemed pornographic, you know, it went in there. So, yeah, I'm fairly happy with what they decide what should be for you and what isn't.

Roy: Yeah. With Virgin, it puts it in the spam folder. Not the junk folder, and you can just scan though the spam folder and say, "Yes, yes, yes. Oh, I really need that one. That's a genuine one." And pull it back into your inbox.

Samuel: Yeah. Yeah.

Moderator: Yeah. I guess the point that I'm trying to understand is it's that initial… you're sharing your emails with the company in order to get that level of scanning, you're happy with that?

Roy: Yeah.

Moderator: Okay, yeah. Everyone's sort of nodding. Great.

Louise: We probably wouldn't be if we worked for MI5, but I don't think any of us do.

Moderator: Okay. So that's interesting. So it's a case of just feeling that nothing in your email is sort of incriminating particularly?

Louise: Yeah.

Moderator: What if they... And I'm not saying that they do this, but what if they were taking little bits of information to, again, target you and market to you? Would that make it less appealing?

Louise: Yes.

Moderator: Yeah? Even if they were providing that sort of filtering service?

Louise: Yes.

Moderator: Yeah. Okay. Samuel’s nodding along as well. Okay. That's really useful to know.

\*Focus Groups and Recording break\*

Moderator: So now, I want to sort of focus in on personal data stores. Can I just ask, had anyone heard of a personal data store?

Roy: You mean [something like] the cloud?

Moderator: Pardon, Roy?

Roy: The cloud? [XX XX].

Moderator: Some of these personal data store apps do you use the cloud to store the data, but they operate slightly differently. So they're actually designed as a sort of secure way of storing and sharing data. So, what I might do actually is I'm going to share my screen, and I've got a description of one which I'll... Can we all see that?

Group: \*Agreement\*

Louise: See what?

Moderator: It's a slide which just describes what a personal data store is. So I'll read it through and then I'll ask if you understand, and how you might think it's useful or not. A personal data store is an app. So a piece of software that lets people securely store and share their personal data. \*Accidental slide change\* It is a... oops, sorry. It's a single repository for your data, and gives you control over what is being shared with whom, for how long, and for what purpose.

So essentially you have an app that gives you access to a personal data store that might be on your phone or on another device, that's stored locally, or in the cloud. It encrypts the data so no one can see it, either in its location or when you share it to someone else, as well. And it allows you to pick and choose precisely what personal data to share with both people and companies.

So for example, for anyone who does online shopping, you could choose to share just your address with the shopping company. And then you'd also be able to choose how long they have access to your address for. So rather than just giving it to them, you give them permission to access it for a certain amount of time. Now, this is useful if you move address, for example, so it will update automatically. And it also gives you more control over who gets to see your data and how long they have it for.

The way that I kind of think about it myself is you have lots of different safety deposit boxes with different bits of personal data in. So that might just be your name, it might be your phone number, your email address, your postal address. And each one's got a combination lock. So you can give that combination to a person or a company so they can access the data, but if you then decide that you don't want them to have it anymore, you can change the combination.

And if you change your address or change your phone number, you can change the data within the safety deposit box without having to get in touch with lots of people again. So for example, you could let all your friends and family know that you've got a new phone number without having to email them or WhatsApp them with the phone number, and then giving out that personal data in lots of different locations. Does that make sense?

Allan: Yes, it does. Yeah.

Callum: How would the other people get that update if you've changed your phone number?

Moderator: Yeah. So the way that it works is they have this thing called a consent license, which is an agreement on what data the person can access and how long they can access it for. So while that consent license is valid, they can access your personal data.

Callum: Okay, I understand that, but how does it work? Let's say I'm on WhatsApp with 10 friends, and I changed my personal phone number. How are they notified because I changed it in my personal data store?

Moderator: So they'll have either their own personal data store or-

Callum: Oh, so they need a personal data store?

Moderator: Not necessarily. They might have a different way of storing personal data, as long as it's secure and could accept encrypted data. And so, yeah. So it might just be, for example, a company database. For example. But it's a way of just making sure that data is kept up to date. And so-

Callum: [No, I’m saying,] how would those 10 people know what my new phone number is by me changing it in my personal data store?

Moderator: Because when they go to access it, they'll access the updated number.

Callum: So access what?

Moderator: The-

Samuel: The data.

Moderator: Yeah. The piece of personal data.

Callum: Yeah, but-

Samuel: Is this similar to-

Callum: All I'm talking to is them on WhatsApp. So my question is how do they know that I've changed my personal phone number?

Moderator: Yeah. So it wouldn't be done through WhatsApp, but it would be a case of if you were letting them access that. So I'm not a sort of tech expert, so I'm perhaps not explaining this particularly well. But you need to imagine that they’ve got… so imagine that you’ve got phone, and it's got your personal data store with your number on, and they've got a phone, which is storing, which would normally store your phone number on, okay. And so that's how they access your phone number. But using this new personal data store, rather than them having a record or owning your personal data, they would have access to it. And so if you've then changed it in your location when they then went next back to access it, it would be changed and they'd have the updated data.

Samuel: They've got the facility to actually update it as well?

Moderator: So the way that it works is, you only have to update it and because they're accessing it rather than having a copy themselves, when they go to look at it, it'll automatically be updated.

Samuel: Yeah. But supposing six people share this database, which is stored somewhere, it's not in the cloud, it's on somebody's database, somebody's server somewhere. They surely could access their own particular data, which the others can share and see that you've updated it. Is that not like Dropbox with a sharing facility in it?

Moderator: So again, the difference would be that rather than you just... So, let's take the example of the phone number again. So rather than you actually giving them your phone number, which they can then store on their phone, you're providing them a license to access it. And so that gives you slightly more control over it. And part of the terms of the agreement is they're only allowed to use it for certain purposes. So for example, if you signed up to Tesco, you gave them your address and you say, “you can only access this address to send me my shopping, not for marketing purposes”. So again, it's getting that finer level of control over your data.

Callum: I understand that. But say the WhatsApp type scenario, I don't understand. As to how a WhatsApp individual or a WhatsApp group, would be automatically notified of your updated telephone number.

Moderator: Yeah. So in this current form, it wouldn't be able to be done through WhatsApp.

Callum: So they would have to be notified individually of your updated telephone number?

Moderator: Yes. Because you'd have an individual agreement with them, so it wouldn't be [X X X]

Callum: And any groups that you're in?

Moderator: Yeah.

Callum: That's fine.

Samuel: If you're updating your phone number, you would build in... No, the software would have, that as soon as anything's changed, it tells the other people who have access to this that Joe Bloggs has changed his phone number. It wouldn't have to tell them by email, it would just be an automatic thing.

Moderator: Yeah. And it would even be the case that it might not necessarily have to alert them. It was just if they needed your phone number, they would just get the updated number.

Roy: So if the personal data's on your phone, and they go to access it and your phones switched off, there's a problem isn't there?

Moderator: So it's encrypted, and then, again, this is where the technology... I'm not an expert, but the data is stored in that encrypted license. So they would still be able to access it.

Samuel: They would get an email informing them that the owner of the database, or whoever owns the database, has made a change, or one of the users of the database has changed, but it would be encrypted and sent as an email I would imagine, that changes have been made.

Moderator: So, again, it's about not requiring that contact to let them know that it's been changed. It would just be a case of when they are looking to access that data, it would just be the updated data.

Samuel: Right, right.

Moderator: Maybe if I explain it in a slightly different way or look at it in a slightly different use. So, we talked before about signing up to sites and not being in control of precisely what sort of data we give them and also not being entirely clear on how they're using our data. So using the personal data store, if the company has signed up, you could choose precisely which bits of data and also agree what that data is being used for. So it would make it slightly more convenient for you to sign up because you could just click to sign up, and also you'd have more control over the data. Would that be useful?

Samuel: Different people would have different levels of access. Mr. owner of it would have access to all levels, but the minions lower down, would only have access to their particular level. Is that right?

Moderator: Yeah, absolutely. Yeah.

Roy: And would the people using it, so the department store or supermarket, need software to enable them to use that personal data store?

Moderator: Yeah. So it would be a similar level of... I guess, people don't use Facebook to sign up things, but at the moment companies like Facebook or Google, you can give them your personal information and then lots of websites allow you to log in via Facebook or log in via Google. But that means that you give your data to a third party. So the personal data store could operate in the same way, but you retain control of your data. You wouldn't have to give it to a third party.

Samuel: And the owner of this data, where would it be stored? And how would they insure to the users of this, that it would be secure?

Moderator: Yeah. So again, for the person using it, it depends on which platform or which app they use, but it would either be stored locally on your phone or some of the companies developing it are using a cloud-based model. In terms of where it gets stored at the other end, they would have to agree when using this personal store, that it'd remain encrypted and secure and part of the agreement was that they would only use it for a specific purpose. We're still open to misuse in terms of, if someone's printing a packing label, for example, that someone else could see it and read it, but using the personal data store minimizes the risk and increases the level of security in that initial transfer.

Callum: Are they actually transferring data from your personal store? Or are they just accessing it read only, on each occasion that they wish to use it?

Moderator: Again, it's based on blockchain technology to encrypt it. So I'm not entirely sure in terms of the actual mechanics of it. But the underlying selling point is that it's secure and it's safe, and the person at the other end should only be able to use it for the purpose that they are asking to...

Callum: For one off use or every time they use it?

Moderator: So again, in the agreement it will have a length of time that they can use it, that they can access it. So it might be 30 days, it might be a year. So they'll be able to re-access it during that time.

Callum: So every time during that year period, let's say, they don't store the data on their system. They access your personal data store to pull that address off each time?

Moderator: It's saved in the... I believe this is the case, it's saved in the consent license that you've made with them.

Callum: On to your personal data store or their data?

Moderator: I'm not entirely sure, so to be honest, sorry. Yeah. Can I ask, so I'm not sure that I'm giving a very good account of it. Maybe again, if we think about it in terms of this metaphor of you have your data in a safe and that you just provide the combination to different people to let them access it. Does that sound like a good way of storing and sharing data? Maybe I could ask Tina, you're half nodding.

Tina: Well, it does, but why are you telling us about this? Are you trying to sell it to us?

Moderator: So we're just interested if people think that this is a good way of protecting and storing their data. And if it is, what they think needs to be incorporated into the design basically.

Samuel: How different, Moderator… is this different from Dropbox and iDrive and Apple iCloud Drive? How different is this, and how would you, I mean, these are huge companies, it's like a new company coming in, how would you get better than they are?

Moderator: So the difference being is that the company who provides the app has no access to your personal data. So again, only you have access to your personal data. So rather than saving it on a Google drive or on Dropbox, where you're essentially giving someone else your data...

Callum: Right. Right.

Moderator: This is the extra level of security. And the additional thing is, it's built into again, the whole idea of secure sharing as well. So in order for companies to be able to access it, they have to agree to these certain consent licenses as it were. Does that make it more attractive? Or can you see the difference between Dropbox, for example?

Callum: Yeah. The difference is that the company can't see that, only the members of this group have access to it and see it. So I can see how on a very small scenario, that a family perhaps could share all the personal data of that family. That's a small, silly idea perhaps, but only they have access to it and unlike Dropbox, where Dropbox can see it and perhaps misuse it perhaps. Is that the scenario you're looking at?

Moderator: Yeah, absolutely. So, that would be a scenario in which the storage company might have access to it. But also for example, it might be a safe way of storing financial data. So if you’re buying something online, again, rather than having to share your bank account details with lots of different companies, you could just license them to access it for that particular transaction and then they no longer hold it. Again, does that make it seem like a more useful application?

Roy: What's to prevent the company accessing the data, your data, once they've got it, to store it again on their own particular system?

Moderator: So there is a degree of trust, but it's, again, based on the fact that it's encrypted, once they lose the key, or once you change the key, they can no longer access it again.

Roy: And what sort of security level would the key be?

Moderator: So it's end-to-end encryption and distributed computing. So the way that it's been explained to me is that it's like not only locking your money away and then providing a key each that you have control over. It's also, if you... I'm not sure it's a helpful metaphor, but if you tore up the money into lots of different pieces and stored it in lots of different locations, and only you and the person you provide a key to knows where those elements are located. And so soon as you change the key only you know where your data is. So that's the level of security that they're operating at. I'm not sure if that's a helpful way. Essentially, they're working at the highest level of security or trying to.

Roy: How easy would these keys be to crack? I mean, when I was in gainful employment, I worked on what used to be called a mainframe system, and the passwords there were encoded with 128-bit encryption that was almost impossible to crack. Whereas at that time, the stuff that's on Microsoft was 16 bit and it was quite easy to crack by nefarious people.

Moderator: Yeah. So I need to check the exact type, I can't remember if it was 128 or 256, but it's meant to be almost impossible to break. And the argument again, is that rather than relying on, for example, lots of different passwords and storing your financial information, for example, on Amazon, on Sainsbury's, on Tesco's, it's all stored in one very secure location.

Roy: And as you said it relies upon the integrity of the people you're giving the data to, or allowing access to, not to store it themselves. Because, I mean, these days it's quite easy to cut and paste it into a little file, isn't it?

Moderator: Yeah.

Allan: Yeah, and then it involves companies then signing up to this personal data store so they can get the information. So you've got to get Tesco, Amazon, everybody, and they might not want to spend money on that.

Moderator: Hmm. But would it be something that you... Maybe going back to the previous discussion we were having about taking more control, would this be a positive move in the right direction? If the other companies were to sign up, maybe I could ask Allan that.

Allan: Yeah. I think it would, you've got everything in one place there and you're not searching little books for your password or, "Oh, what's my account number here? What's my account number there?" At least you've got it all in one place.

Roy: Can I ask, the problem is selling it to the big companies, that I think will be the major, it'll be a big uphill task for the companies to it take on. It's alright for the individuals like us, "Yes, that sounds really really great." But then if you find you can only use it on one particular website, it's not going to be much use.

Moderator: So that's interesting. So in order for it to be worth using, there has to be some sort of critical mass as it were.

Roy: Yeah, yeah.

Moderator: Okay. Can I ask maybe Elizabeth, how do you feel about this personal data store? Do you think it gives you more control over your data?

Elizabeth: I think it does. As everybody else has said, it needs so many companies to take it on board. I think I would actually use it.

Moderator: Okay. Can I ask if there's certain types of personal data that you would be happy sharing or wouldn't be happy sharing with the personal data store?

Samuel: Again-

Elizabeth: I don’t know really. It's new.

Roy: It would depend on the company.

Samuel: Yeah.

Elizabeth: Yes. I mean, I have to trust {Research Platform} and another survey company I use, and eBay. And so far, in 15, 16 years, I've not had any trouble with them. So I would be loathe to change.

Moderator: So the idea that you have slightly more control over the data and the fact that it's all on your own phone, that doesn't make a big difference?

Elizabeth: It does make a bit of difference, but I would [have to] think about it all.

Moderator: Yeah. Okay.

Elizabeth: It depends as well, very much, on how much it's going to cost.

Moderator: Okay.

Roy: And also what you use your phone for. I'm an old fogey and I only really use my phone for text, voice and WhatsApp. Nothing else. And for anything else I use a desktop PC.

Moderator: Okay. So-

Louise: Yes, I use my phone for very little. The only thing I use it for is for eBay, because I can take photos with it and put things direct onto eBay, but then I go on to the laptop to edit it.

Elizabeth: You can do all those things [on-]

Louise: And I use the laptop for everything else.

Roy: So you're just using your phone as a camera?

Elizabeth: Yes.

Moderator: So if you could have the personal data store on your laptop rather than your phone, would that be of use?

Louise: Probably, yes.

Moderator: Yeah. Can I ask a similar question, in terms of do you think there's types of personal data that you might be happy sharing and types of personal data you wouldn't be happy sharing on a personal data store?

Roy: I think the option would be there in the grand scheme of things to put in all your personal data, and then you decide which boxes to tick basically, to put in the bits you think are needed for your… whatever you do in business outside-world type things.

Louise: I think probably your bank details would go out to fewer people than other details would.

Moderator: Yeah. Yeah. And is that an advantage to this type of storage?

Louise: Yes.

Moderator: Yeah. Okay. I feel like what I might do is share, I've got a few scenarios of how you might use a personal data store, not just sort of online as it were, but out in the world. And this might help explain-

Samuel: I think it would help, Moderator, I think.

Moderator: Yeah. Yeah, the functionality. Sorry. I've obviously not done a good job of explaining it, but maybe this will help. So can you all see the change in screen? It should say personal data store scenario 1. Okay. So here's an example where you have certain types of personal data in your personal data store. So this might include body shape, clothing styles, age, gender and budget. And you're able to go into a shop and you're given the choice of sharing this personal data in exchange for getting a discount or for a tailored service. So, for example, if you share your body shape, they will know automatically if they have something in stock and will be able to find your size more quickly. Would you be comfortable sharing that type of personal data? And do you think this is a good use of personal data and a personal data store? Maybe I could ask Tina.

Tina: Yeah. I think it's quite good. Would this still be the same if it was an online store?

Moderator: Yeah, it could be used in an online situation as well, yeah. And, again, it's that idea that rather than just inputting your data and letting them hold it, you have control over exactly how long they've got it for. So it might just be while you're in the shop, they can access that data and then you can stop them accessing it.

Samuel: Well, that's a big advantage that. Because the way it works at the moment, they've got it ad infinitum really. And they could sell it to others as well or share it with others. So I see a very good use for that.

Moderator: Yeah. Is that the feeling of the rest of the group? Maybe I could ask Allan.

Allan: Yes. Yes. I think so.

Moderator: Yeah. Can I ask, would you be comfortable sharing those elements of personal data?

Allan: Yes. Yes, I would. There's not too much there, you know? You don't mind saying how big you are. If they say, "Oh yes, we've got one left in your size. We'll give you 20% off."

Moderator: Yeah, yeah.

Roy: Will this actually be in the shop or online?

Moderator: So it would work in either situation. I've envisaged it in a physical shop, but it would have a similar... you could use it for similar functionality for online shops as well.

Callum: I'm not sure whether the shop would be particularly keen on giving a discount when normally 99% of people just give it to them anyway, you know? So, that'd be the difficulty I would have in marketing it, really. But I think it's a good idea, actually.

Moderator: Yeah. I guess, for the shop, the incentive would be that they would be more likely to make a sale, but I take the point that they might be used to, or expect to have this data anyway. So again, it's about maybe rebalancing who has control over the data. [And so, if it is-] Sorry, Callum, yeah?

Callum: So, I think it's back to how it's implemented as well. We mentioned earlier about Facebook being... So everything's open to start with, then you've got to close it down. This needs to be implemented as everything's closed down and you open it up.

Moderator: Yes. Yeah. And again, that's envisaged of how it would work. So you enter the shop and they don't have any access to anything. They ask, "Can we access body shape, clothing style?" And then you get to choose exactly what you provide.

Callum: Yeah. Yeah. How would that work in a physical store then?

Roy: Well if I was in a physical store, I'd be talking to the person behind the counter and telling them that information. They could see what body shape I am,

Callum: Exactly.

Roy: and roughly how old I am.

Moderator: Yeah. But what about, say for example budget, so that extra level of personal data, but again, it means that they'd know what to recommend or they may know to offer a discount on particular items.

Roy: Well, I'd tell them that.

Moderator: Okay. So again, so it's...

Samuel: Presumably they don't have the facility where they can copy that and put it on their own database?

Moderator: Yes. So, again, it'd be a case of them abiding to the consent license of, “we can access this for a one-off period of time and then we then no longer hold on to that data”.

Callum: Yeah. It's the same as you giving them your credit card and then you ask them to, "Can you repeat that?" No, no, they can't because it's gone.

Moderator: Yeah. Yeah, absolutely.

Callum: So that'd be the same thing.

Moderator: Yeah. Can I ask if anyone doesn't think this is good? So generally people have been fairly positive. Does anyone in the group not think this is a good idea?

Elizabeth: It will be absolutely useless for me.

Moderator: Okay. Can I ask...

Elizabeth: I only ever buy foreign, specific foreign designer clothes on eBay. So I don't go into clothes shops anyway, in this particular instance.

Moderator: So maybe if we think about the online example. If you are able to share the same data set with eBay, for example, but only for a limited amount of time so that they then gave you a list of different options that you might be interested in. Would that be more useful? No, you're shaking your head.

Elizabeth: No. I have my favorite sellers who are my size, [and they have] what I like.

Moderator: Yeah. Okay.

Samuel: I can think it'd be very good to counter the likes of Amazon and other companies who hold the data and just proliferate you for the next N years with stuff, because they've got your data there. If they only have it for a certain time, they can't copy it onto their own database. Perfect.

Moderator: So, that's a really good point. And actually it goes back to the discussion we were having around ad tech and being targeted. So maybe I can ask the rest of the group, do you think that that's an advantage? So by controlling how long a company has your data for, it stops that targeted advertising, would that be useful?

Roy: As long as it can control the time and the usage.

Moderator: Yeah.

Louise: Yes. I mean, like Elizabeth, you see, I don't think my data would be very useful to people, because my data would have to say that I've only got the use of one hand, so no zips, very few buttons, things I can pull on rather than anything else. And that doesn't come into those categories or fit easily into any category.

Moderator: That's really interesting. So it might be a case of the quality of the data that you're giving. So if, hypothetically, if you were able to provide that data so that when you went shopping, they'd be much... be able to present options to you much more quickly, would that then become useful?

Tina: Well, yes, but it's not the... it doesn't fit very well into their categories, it only fits into mine. Or ones that you can verbalize to a salesperson.

Roy: But there must be some people who are also in your position, so there's no reason why the tick box couldn't incorporate that.

Moderator: Yeah. Again, I'm hypothesizing, but if it was a case of even something as basic as additional comments.

Roy: Yeah.

Louise: Yes.

Moderator: That might be helpful. Can I ask in terms of, if we think about a different kind of data to share, if they were tracking your reaction to particular items. So it might just be based on a heart rate monitor, and you getting interested or excited about a particular item. Would you be willing to share that kind of data? If again, for a tailored service or discounts. Tina, you were chuckling there a little bit, can I maybe ask you to comment on that?

Tina: Well, how would they get your heart rate?

Moderator: So again, we're talking hypotheticals here, but if you're wearing a smartwatch or a heart rate monitor, and you agreed just while you're in the shop, to share that that data. Would that'd be of any...?

Samuel: If it could be done, I think it's an excellent thing to do, to have. And it's not the sort of thing that people would, I personally wouldn't object to.

Louise: Well, I wouldn't object to it, but I'm sorry, I don't think I'd get that excited about anything like that these days.

Roy: You might get the-

Samuel: But the company might.

Moderator: Yeah. Maybe… I've got another example which has a similar data monitoring, which might be a little bit more relevant, Louise. So it's a sport event, but we can substitute that for any group activity that we might do. So going to the theater, or going to a museum for example, but imagine you're in a stadium or you're at the theater...

Louise: Sorry. Again, never applies to me. I went to a cricket match, I'm told, when I was three. I think I went to a football match when I was 17, and that's it. Aside from that sport is definitely out. Now, theaters or museums, maybe. But I don't see me getting that excited in museums.

Moderator: So maybe, let’s say theater then, but for each person you can choose the sort of activity that's most relevant to you. But just imagine that you're wearing a smartwatch for example, and you're sharing data from that smartwatch. So that might be heart rate, for example. And so the organizers can monitor the crowd emotion and so this is fed back at key moments. So it might be a particularly exciting passage of play, it might be an exciting moment within a play, for example, and they're able to use that information to change the lighting, project certain images, change the sound, essentially to create a more immersive environment and just heighten the experience of the crowd. Would you be willing to share that kind of data?

Samuel: I don't see why not. But I'm not convinced it would be easy to do and how useful it would be to them, but I don't see any problem sharing that scenario.

Roy: No, it would, just because the technology within the stadium. Could it cope with it? And lots of stadiums are really, really old.

Louise: I don't see a problem. I just… I don't know how smart watches and things work so I don't know how it would work.

Samuel: Well, probably, say a Fitbit instead that monitors your... Because there are apps, I've got an app that you look at it and it can tell you what your heart rate is and it can tell you how long, how aging you are, you know? It just clicks over certain things in your face and supposedly it can tell, well, you're actually older than you look.

Roy: Or you're dead.

Group: \*Laughter\*

Moderator: This might be something that we think about in terms of we're talking about monitoring crowd emotion, we're using emotion very broadly and we might want to question about the level or the different types of actual data they can collect. But if it was for example, heart rate, which they can do with heart rate monitors, does anyone see any value in this? Samuel, you were slightly keen. Tina, you look like you-

Tina: Well, I had a message for Samuel actually. I had to smile when I see the organizers can monitor crowd emotion. Well, these monitors, they obviously haven't heard the Hampden roar, Samuel, have they?

Samuel: No. No.

Tina: They could monitor crowd emotion quite well with that.

Roy: It’s a bit tricky when you've got obviously two teams playing a game of football. One half of the crowd will have one emotion, the other half will have a totally different emotion.

Tina: That's true.

Callum: Effectively another adaptation of track and trace, isn't it? Who's got Covid in the stadium? Where are they? Let's see them.

Moderator: So would you have an issue with sharing this kind of data, Callum?

Callum: Not at all. Not on Covid, no.

Louise: No.

Elizabeth: No.

Callum: Yeah, but that would seem to me to be a better application for this type of personal data than flicking the lights on and off.

Moderator: It's funny that you should say that because this is the next scenario that we have. This is the idea of using a personal data store as a data passport enabling you, for example, to scan your phone and very quickly sharing specific key, bits of information securely. If we use the example of the COVID pandemic, we imagine certain places, and again, hypothetical at the moment, but they've decided that you need to be vaccinated to be permitted entry. It might be a workplace, it might be a shop, it might be a restaurant. Do you think that this might be a good use of the personal data store, that it allows you to transfer that?

Group: \*Agreement\*

Roy: The only problem I see is it's against the people that don't have a smartphone.

Moderator: Okay, sure.

Roy: If you don't have a smartphone, you won't be able to get in.

Callum: The person's personal data doesn't have to be stored in a smartphone, it can be cloud-based so you don't have to carry it on a smartphone.

Roy: But how would they get the info?

Callum: Well, if they use a desktop or a laptop. If they don't access the internet altogether...

Moderator: Yeah. So as Callum is saying, you might store it locally or some of these services do so on the cloud, so you could log in. If they had a computer for you to log in, you could then provide that information, but-

Roy: It would slow down the entrances, wouldn't it?

Moderator: Yeah, absolutely.

Samuel: I think it's an excellent idea. The only problem would be the liberal ethical mob that would come in and throw it out.

Moderator: So can I ask, Samuel, could you expand on what sort of reasons they might give or what objections they might have?

Samuel: Well, for the same reason that they're now even having objections to a COVID passport. They feel that in the liberal world that you live in, you shouldn't have to prove that you've done this or you've done that. I totally agree. I think it'd be a first-class thing.

Moderator: Do you think there might be an advantage in the personal data store, I'll open this up to the group, based on that sort of argument, because it is so specific, so you wouldn't have to share other elements of data, it could just be yes/no COVID? Tina's nodding there.

Tina: Yeah, so I think that would be a good thing.

Louise: Yes.

Roy: It just comes back to the legal side of it.

Moderator: Yeah, and again this is a hypothetical situation. Can I ask if we look maybe specifically at the type of data, so it is health data, which we might consider sensitive. Are we all comfortable sharing that data?

Roy: It can be quite useful in case of emergencies.

Louise: Yeah. You could also have things like blood groups or whether you're an organ donor and things like that on it.

Roy: Yeah, exactly. For that sort of thing, I think that that could be quite useful. Interrogate the phone-

Allan: Blood group, allergies, things like that.

Roy: Yes.

Louise: Yes.

Samuel: Presumably, before you do that, that people would have to have these things. The problem, there's so many people in the country that shouldn't be in the country that are probably frightened to even go to a doctor because they would have to prove that they should be here and that runs into thousands.

Moderator: Again, this might be an advantage of the personal data store in that it can be very selective in what data it shares. If it was just sharing allergy or it was just sharing blood group that might possibly encourage people to use it or to share it securely.

Roy: You have to be careful here of not going back to the original, was it 20 years ago when they were talking about having a card for everybody, an ID card that would have all this information on it and that raised absolute chaos in the parliamentary area.

Samuel: Yeah, we'd have to have a national insurance number, which, if you're an illegal immigrant, then you won't have.

Roy: That's the only number you get for life, isn't it?

Samuel: Yes.

Moderator: I'm quite interested with that, because that goes back to something I asked before about government surveillance. I think everyone here was not too concerned about that but we're raising a few examples where people might be concerned. Again, with the personal data store, because you have more control over it, does that make it a better way of storing and sharing data? Or can you imagine why people might prefer to hold data in this way? Can I maybe ask Callum? How do you feel about that?

Callum: I think, again, I go back to one of the points I made earlier. Once you put information out there, it's available to anybody on the internet, it's a potential risk, and you've got to balance that risk against the benefits in this case to you personally. Some information I'd be happy to put out there, there's others that I wouldn't, because I would have no idea how secure that data is. I'd always go on the premise that it's not secure.

Moderator: Yeah. That's really interesting. Is that a similar view for the rest of the group, it's the balance of risk and benefit?

Group: \*Agreement\*

Louise: I mean, theoretically, you don't mind things like your NHS number and your National Insurance number and things like that on there, but then think how somebody stole all the data, not so long ago.

Moderator: Yeah. Can I ask-

Samuel: How would it be validated as well? I mean, what's to stop you just making up that data and using it for your personal data?

Moderator: Yeah. That's quite interesting in terms of, we've talked about trust in terms of whether we trust sites and companies, but there has to be a degree of trust for ourselves as well that we're providing accurate data. Tina, sorry, did you want to...

Tina: No.

Moderator: Oh, sorry. That's really interesting. I'm just keeping an eye on time, so what I might do is move on to our next topic. That was really helpful. It's interesting seeing that it's this idea of risk/benefit as well. I'm just going to stop sharing my screen.

I'm now interested in terms of how comfortable people feel about being paid for their data. This is something that you might be able to do with the personal data store, is rather than, for example, Facebook or Google making money off your personal data, because you have control of it, because you can decide who can access it, you could make money off it. So, you could… say, a certain company wants to know how old I am and certain elements of my shopping habits and they're willing to pay X amount of pounds in order to have access to that. Just generally to the group, how do we feel about this idea of being paid for our personal data?

Roy: That comes down to doing surveys, doesn't it?

Tina: Yes. Yes.

Roy: Exactly what happens in a survey: you give some anonymized personal data, you hope, and you get paid for it.

Moderator: Yeah. So no one has any sort of real issue with that. Can I ask, do we all do surveys?

Group: \*Agreement\*

Moderator: Can anyone think of any reasons why it might be unethical or there might be moral issues with sharing personal data?

Elizabeth: Yeah. I've found because my mother had a breast off at 42 and one at 80, I have to be very careful. They won't do a test on me to see if, I'm too old now to worry about it, but whether I was at risk because the insurance companies then start asking for these details. If you've got to put a lot of stuff in this kind of thing you're offering, it could all bounce back in your face and you could be charged a fortune for all sorts of things.

Roy: Yeah, but they'd only get that information if you let them have it. That's what you're saying isn't it, Moderator?

Moderator: Yeah, but I mean, I am interested in Elizabeth's example with this idea of where it might be problematic to sell that kind of data because there're other contexts, wider implications, so that is a very interesting-

Elizabeth: Just going back for a minute to the previous one, we're thinking of taking our grandson to the Reichstag. He refused to be vaccinated this year. What's going to happen if a lot of companies have this kind of thing and my husband and I turn up and they say 'tough, Christopher, you can't go up." He'd be mortified. Too many people having too much knowledge of you.

Moderator: How did the rest of the group feel about that? So we've kind of got two opinions. One, it's kind of fine; two, we have to be a bit more aware of what data is out there and how that's being used. Maybe if I ask, is it Allan? How do you feel on this topic?

Allan: No, I'm fine sharing the data if you're getting paid for it. If you don't like what the survey is about, you just stop and don't finish it. Quite a lot of the surveys ask for… have you had acne, have you had this, have you had that, and if you actually don't feel comfortable sharing about your health, you just don't do it.

Roy: You are trusting the survey companies when they say it's anonymized, it actually is anonymized. Which I think we do at the moment because I do about three different survey companies and they all say this will be anonymized. You never give your name.

Moderator: Again, there's trust, what they're doing with the data, making sure that it's anonymized and that all will influence the decision whether you'd be happy to be paid for your data? Is that sort of fair to say?

Samuel: Yes.

Elizabeth?: Yes.

Roy: Yes, to continue with the survey, yeah.

Moderator: I just want to push you this point and, playing devil's advocate a little bit, in terms of whether it's ethical or not. Can anyone envisage a situation where it might be unethical because people feel like they have to sell their information because of their economic or financial situation, for example?

Roy: You mean like people getting paid for blood transfusions, that sort of thing?

Moderator: Yeah, absolut- that might be a similar analogy where they need money so they feel they have to do something. Would that be problematic, or?

Samuel: Well, there's examples just now, they're testing various different things in Covid, and some of them are getting four and a half thousand for mixing up the two things. I'm not sure they're being forced into it. They're wanting to do it, purely for the money. I don't think it's unethical to say you mustn't do this. It's up to the individual, I think, and most of them are probably students where they could certainly use the money.

Moderator: That's really interesting. Again, I'm just interested in this idea around whether privacy should be guaranteed or whether there might be situations where people feel like they have to sacrifice their privacy, for example. But the sense I'm getting from the group is that as long as there's a choice, then it's okay.

Samuel: Mm-hmm.

Louise: Yes.

Moderator: That's really useful to know. I'd quite like to get a sense of if there's different types of data and how comfortable you'd feel selling or being paid for different types of data. I've just got another poll that I'll just launch now. So there’s nine different options there, and then at the bottom, “none of the above” if you're not comfortable sharing any of this data for money, but you can choose as many options-

Callum: Sharing for money is the question, is it?

Moderator: Yeah, what data would you share for payment?

Callum: How much? \*Laughs\*

Moderator: Not life changing amounts, but-

Allan: You're not from Yorkshire, are you?

Moderator: Actually, Callum, that's a really interesting point that, is there a certain value or,

Callum: Yes.

Moderator: how much would you expect for this [to X-]

Callum: It goes back to the same thing as the risk benefit. What's the benefit to me?

Moderator: Yeah, okay, yeah.

Samuel: I've got no problems with any of them really. Nothing to be ashamed of and I've nothing to hide, so, it comes down to that really.

Moderator: That's quite interesting in terms of that "nothing to hide." Again, I talked about that in terms of marketing and ad tech and whether it should be a case of getting agreement rather than a marketer just taking your information, so would this be a better way of sharing it then?

Samuel: If you had to put your name to it, then I think that it would be slightly different because if you combine name and location, then it could follow to somebody: "Oh God, I didn't realize he was a Catholic" or they didn't realize he was, you know, for example.

Moderator: So anonymization becomes really important then.

Samuel: Yeah.

Moderator: That's really helpful to know. I'm just looking at the polls. So everyone's fine with age and gender, less so with location, ethnicity is fine, less so sexual orientation or political views, health becomes slightly more contested, social media people aren't keen on and most people are comfortable sharing mood and emotion. Maybe I could ask about that? Does anyone see any issues with sharing mood emotion? So one person's not happy sharing mood/emotion data. Can I ask who that was? Six people out of seven said they were happy sharing mood and emotion.

Roy: That would be me then I think.

Moderator: Oh okay. Can I ask why you wouldn't be happy sharing that?

Roy: Because it's a transient thing. I mean, I might be happy now, but tomorrow I might not be happier.

Samuel: And, what time of the day you fill that in, I suppose?

Roy: Yeah.

Moderator: Again, it's not necessarily that it needs to be accurate and up-to-date the whole time, but it might be your feeling at a particular moment. If it was accurate, you would be comfortable?

Roy: Yeah. It just seemed to be a transient thing not a permanent thing. I mean, my age is permanent every year, it changes with one but-

Elizabeth: Moderator, what use would that be to anybody?

Moderator: Okay, that's a really interesting point. For the people who use social media, like Facebook for example, they're very interested in this kind of data and, again, it's emotion quite broadly, but they're interested if you like something or if you post a little smiley face or even if you say that you're feeling sad today, that's all very useful data for them because they know that they can use it to advertise and target particular things.

Samuel: It might-

Moderator: Does that make-

Samuel: It might help if they knew that you're a half glass empty person or a half glass full, positive or negative.

Moderator: Again, is it the quality of the data? It's okay if it's accurate, or...

Samuel: That particular question, I don't think emotion would come into it, but I think the type of nature that you are would help a seller, I think.

Moderator: There's been reports in the news with the Cambridge Analytica and stuff, that Facebook were using this type of data to be able to sell advertising for political parties or particular movements. How sort of comfortable would you be in terms of selling emotion data for that purpose? Tina, you look concerned, would you not be happy?

Tina: Well, I don't really understand the question.

Moderator: So Facebook are looking at, seeing that people are liking particular news stories, for example, or they're saying they're not happy about something that's happened or a particular sort of social event or particular type of person. They're then able to create a profile of this person and then use that profile to sell to advertisers, essentially, so advertisers know who specifically to target, and that's based on this mood and emotion data.

Callum: Yeah.

Moderator: Does that-

Samuel: I think that's what they are using. They do use it. I'm not happy about that particular aspect of it.

Moderator: Yeah. I'm just interested because obviously most people said that they're fairly comfortable being paid for their mood or emotion data but actually if we think about how it might be used, does that make us less comfortable?

Samuel: Yes, Yes.

Louise: I don't know how Facebook would know. I mean, quite often when I do surveys, fairly recently they've been asking whether I'm anxious, whether I'm, about mood, whether I've been feeling lonely at all in the last so many weeks or whatever. I thought that was to do with information gathering because of COVID possibly for newspaper articles or something like that, which I'm fine with, but how Facebook would know I haven't got a clue.

Moderator: Again, different companies will use it differently. In terms of Facebook, every time you post something or interact with someone online, it's giving them little bits of data. Again, it might be just when you're online or how long you're spending online or it might be, "Oh you-

Louise: Well, I'm so rarely on Facebook, I don't think they'd get anything much from me.

Moderator: Yeah, absolutely.

Roy: You'll be going to the bottom of the pile for selling.

Moderator: That's quite interesting, that does go back again to this idea of what we do to preserve our privacy, and not using Facebook, for example, is one strategy-

Callum: Covering up your camera, while you're using your desktop or laptop, whatever, because some applications and companies do use eye-tracking.

Moderator: Absolutely, yeah. Not just-

Roy: [X X X XX XX]

Moderator: Sorry, I was just saying, not just eye tracking, but also very rudimental measurements of if you're smiling or if you’re frowning and things like that.

Callum: Yeah, yeah. Exactly, yeah.

Allan: Hard to tell when you've got a beard.

Louise: Or wearing glasses.

Moderator: Again, that's a bit of an issue, is the quality of the data that's being processed. I would love to keep this element of the discussion going, but I realize we're coming towards the end so I just had one very quick final question around... In order to use a personal data store, would people be happy to pay for it? I know Louise, you mentioned that right at the very start. Does it seem like something that's worth paying or would you rather, for example, share a percentage of any income that you made by sharing data or does anyone have a particular preference and how they might want to access this kind of app?

Elizabeth: How much would it cost?

Moderator: Probably in-line with other apps that are available. Roy was mentioning cloud storage, so if it was priced alongside that, either an upfront cost or a monthly subscription.

Samuel: It would probably have to see, sort of, visual benefits put up front. I'm sure that if people saw it was beneficial to them in the long run, yes, it would be a good idea. I think I would pay a modest fee for it if I saw the benefits from it, that accrued from it would be advantageous to me.

Louise: Or if you could get it perhaps by storing- by sharing some aspects of your storage data, you know, by being paid for some aspects that you're willing to share, you could get safe storage from the mix that you weren't willing to share.

Moderator: That's interesting. Would people be comfortable with that if the company was making money by sharing select bits of your data, as Louise was explaining?

Callum: I would expect the companies who access the data to pay for every time they access data.

Moderator: So would you be more comfortable paying up front rather than...

Callum: No, I don't expect to pay anything up front. I expect the companies to pay as they access my data.

Moderator: But what if they weren't accessing... Oh, sorry. Not the personal data company, but the company that you're sharing the data with.

Callum: Correct. I expect them to pay for it. They're getting free access at the moment to my data. They should be paying for it.

Moderator: Absolutely. We've kind of got three different models there. We've got paying up front, the companies who are accessing the data paying for it or the company providing the personal data store.

Samuel: I mean, it's fairly similar to someone playing a record in a shop. They've got to pay whoever recorded that record, so if a company wants to access your data, they pay you for it, you're the-

Roy: [X X X X.]

Samuel: Pardon?

Roy: Any music played in public places, they pay a certain fee to the performing rights society who then distribute the money to the artists. It doesn't go direct to the artist, it goes to a third party.

Samuel: Right right.

Moderator: If we connect that analogy, we might say that using the PDS, you cut out that third person and that you get paid for your data.

Roy: Alright then.