P5 Exit Interview

**Researcher 1** 00:06

Thanks for joining us again. We just wanted to wanted to do some follow up interviews with everybody. Really just because lots of interesting stuff was coming out through the calls and we've had a chance now to go back and sort of get those transcribed and read through them and pick out the things that we you know, that was interesting, but but, you know, it passed by in the flow of the conversation and we didn't get to spend as much time on that as we wanted to. So we just got a few things. So a few things just for everybody and a couple of things that specifically from your experience and things you talked about that we just wanted to follow up on a bit of so Right, great. So first of all, I guess how just to start off, how did you find taking part in the project in general?

**P5** 00:53

I thought it was fun. I really liked and I wasn't always good about it. But I really liked taking it around and seeing what was going on. And especially seeing like how my home is and how it interacts with my home. That was quite nice.

**Researcher 1** 01:09

Was anything about it but that in the home say that leapt out at you as being particularly interesting?

**P5** 01:18

Yeah, I ended up being like, not really obsessed, but like super fascinated by the light cycle and what it picked up on that. The sound the sound stuff actually still confuses me. So I don't know if maybe you can kind of clarify what it means when certain bars are high and stuff. But, I mean, I have a bunch of plants and I like my plants. And so for me being aware of the light was really important, and I think highlighted to me like the importance of having the shade up versus down and like how that's going to impact them. And so from like a home management point, it was really cool. It also, you know, helped me see like, when my bedtime was because there's a point and I can show you, I have some screenshots that I think are really fun. There's like a point where, you know, there's the natural light cycle and then it kind of dips down and it gets dark for a while. And then there's this little blip right before I go to bed where I'm like cleaning up the flat and doing the dishes or like doing some drawing late at night and stuff. And so there's a little blip and then I see that pattern again and again. So like that and then like in the hot weather. I had it has a different pattern because I pulled down the shades all the way and so the light drops down quite a bit and I was realising that it was like kind of like an almost nighttime like, I thought that was really cool. So you see a hot weather versus cool weather. And then I have another one for a cloudy day where it's kind of rainy so you can see this like spotty on and off.

**Researcher 1** 02:59

That's interesting, I suppose almost counterintuitive, isn't it as well because you could imagine if you had to guess of what does a hot day look like in the data? You might imagine that it was you know, full sun but yeah, and that makes that makes sense. Did you do anything different with your plants as a result of you know, move anything or anything like that?

**P5** 03:18

Yeah. I did move a plant and I have a picture I can show I have a plant that it normally sits by when it charges and I got a bit worried even though you get the light cycle you don't get like full brightness and there's quite a bit of time in the morning and in the evening where its not very high. And so even though it's like a shade, a partial shade plant. I did move it a little bit further out where it would get a bit more light.

**Researcher 2** 03:44

Can we me seeing pictures?

**P5** 03:45

Oh, yes.

**Researcher 2** 03:47

I enjoy always

**P5** 03:49

Yeah,

**Researcher 1** 03:49

I don't know if you were I think its probably before you joined the study when on one of the earlier calls [Researcher 3] got really into the idea of sensors in a plant pot for a while but

**P5** 04:00

My dad has that for his garden where he's got... He dug up his entire backyard and he put in this like watering system with different sensors and so he can tell like the Ph of certain soil. He can go in and say how much water was used when it was watered for how long and like it takes some other like soil measurements but he's got this whole app for it. He's

**Researcher 2** 04:26

for vegetables?

**P5** 04:30

I mean, I think he just did it for fun cuz he's that kind of geek, but

**Researcher 1** 04:34

Recruit him for our next video.

**P5** 04:35

Oh man, he would. He would go and be like, Hi I fixed your code

**P5** 04:45

Sorry, I shouldn't swear on this. Okay. So here's this is like, evening time I wanted to share so like Sorry, it's quite messy. So you know when there's like the dip of the light that I said before bed that's me with this lamp, like doing some like doodling or if I need to, like I'm reading something and I twist it over or something. So that's just where it charges when it's resting. So that's also where it gets the light. Like if I'm working from home during the day, I just leave it there. There's one window here and then there's another one of the same proportions adjacent to it. And the site

**Researcher 2** 05:25

Its generally it's not it's not on the window sill in any sense.

**P5** 05:29

No, no, it's ambient and there's the sun is the sun would be seen if you were here so it's a south facing south east I mean it gets most of the nice sun. So yeah, so this little guy here I ended up moving to a bookshelf on the other side of the desk. Just because I noticed this and I was a bit concerned so you can see what what do I ... cooler day. So you see this is I, this is just an example but a lot of the days that are at home are like this. So it's not like uniform. You see there are breaks and lights which you can imagine clouds pass by and whatnot but you see this nice like, curve up and then down. And then you see I have this little habit. So this is probably like me sitting at the desk and that was probably me just having the overhead lights on which I'd never turn on because

**Researcher 2** 06:29

Yeah you've got two different levels. You've got this one then this is slightly brighter one.

**P5** 06:36

Yep. And then that's bed.

**Researcher 1** 06:40

I hadn't realised that as this interface gets bigger, the pixel size on that visualisation stays the same, doesn't it and the sort of it seems to be a much lower granularity. Higher granularity than then when you see it small. You know what I mean.

**Researcher 2** 06:55

yeah, I mean, it's Yeah, yeah, I mean, yeah, you got quite a lot.

**Researcher 1** 07:01

Yeah, it's quite detailed

**Researcher 2** 07:03

per hour slot.

**Researcher 1** 07:06

Yeah, sorry.

**P5** 07:09

But I wanted to ask what what are these different bars? So this is the I cropped it off, but this is the sound?

**Researcher 2** 07:17

So the first so it's the bars are frequency bands, so it's not like and so these low frequencies on the on here on the left to my left. And then as you're going across the screen, these are higher frequencies that its seeing so I think that in general, and I its debatable how well this worked, right. Like let's, you know, shouldn't shouldn't frame this as this this this is kind of absolute I don't think this was quite what I was intending. So it's not quite as anyways, but it's still it's still still there, like, and so I think like these kinds of this would be really low frequency, this is probably like speech kind of frequencies and then they kind of like higher and higher so more may be sort of more musical. So the kind of intention was that you would see, like, Okay, so these are you kind of visually see oh, yeah, maybe maybe the radio was on or maybe I was talking or like or here I'm playing music. This is silent. Its presence of so when it does the summary like this, if you dig into it, if you click on that line, it's not that... Yeah. Yeah. So so actually the summary of this 6pm slot probably would have that bar, that bar, and that bar, it would kind of be the combination of all of those, which kind of makes it look like that our might have been really noisy, but when actually when you dig into it, you've got a couple of slots here where you've actually total silence within... is that at all... answer your question?

**P5** 09:06

Yeah, it is because I, I was always confused because I'm not I don't see quite a pattern so much, but it can be explained because I live right above a pub. And it is very loud. I live on a very loud street there's like ambulances going by all the time and stuff. So like I didn't know if it's that there's so much loudness in my flat which like it annoys me I'm maybe I'm sound sensitive or something but it annoys me but like when I look at this,

**Researcher 2** 09:39

Maybe if the sound is, a bit hypothetical, but if the sound had had you had spotted more patterns than you might have been, well I'm putting words in your mouth I'm a terrible interviewer. That comment about the pub noise is intriguing to me. It's like Oh, that's interesting. I can speculate that if the sound had been slightly different way of doing that you may have actually had quite a lot questions about how loud the sound was. Like when it when what time it was

**P5** 10:15

Yeah, but I think so, I got home. You know, I don't really think that this explains everything but the this is when I was out, wasn't it? I was gonna say if there's one of when I'm at home to 12345. So I would say if there's a time when I'm at home, and it's not hot out, I will shut the windows and I suspect that it's quieter and I think that's why we see these bars around dinnertime because that's me probably trying to get a bit of peace and quiet although this one I'm travelling so

**Researcher 1** 11:02

Would you say there was a noticeable difference between home and somewhere else in the sound

**P5** 11:11

I don't know.

**Researcher 2** 11:13

In the data?

**Researcher 1** 11:13

Yeah, so saying oh yeah, it's real noisy here and that's home and actually yeah, it appears less noisy when I'm not there.

**P5** 11:23

That's I hadn't looked at it but that would be something because if you if you look here so this is me at home with what I'm I'm assuming I usually try to open the windows at night because my my flight gets quite hot because it faces the sun. So we see these peaks. These high frequency peaks. But here when I'm at work, and I have it at work with me, there aren't really any of those. There's more like moderate levels. Does that make sense? And then that's when I'm at home. Yeah, this is the the evening probably when I might have had the window shut. And then you know, by 10 or 11 I would have gone to bed but yeah, that's something interesting. I hadn't thought about it. But yeah, I kind of would. cloudy, cool day. Oh yeah, you can see the rises and the drops, where it got dark for a little bit and then it was...

**Researcher 2** 12:26

So this is quite consistent, is this one of those days where that threw down and rained for, like

**P5** 12:33

maybe we'd have to go back and check. So it was the 19th but

**Researcher 2** 12:38

it's quite, it's a cool. Yes. Lots of lots of shape in that

**P5** 12:43

Yeah, that's why I think it was after one of these days. I'm like, Oh, maybe I ought to move my plant because if we're going to have a lot of cloudy days, it's probably not going to get enough light. But then again, you see I was up late this day day. You can see where there's these two different like peaks.

**Researcher 2** 12:58

Is that the same graph that we looked at before. So that is quite a characteristic like for you that's quite bright for a little bit and then dimmer for a little bit longer. But still, I always notice it and I have it here that the light is like on the desk says like, dead on whatever... super consistent

**P5** 13:30

so that's a cloudy, cool day. And then there this is what would be a normal day.

**Researcher 2** 13:36

You still got that same signature. That's cool.

**P5** 13:39

Yeah. And then can you see on this one you can you see a little bit oops Oh, that's because it's that's a weekend. That's a weekend day but you do see a little bit even though it's a bit different. I probably have the lights on for this because it seems...

**Researcher 2** 13:58

That's like 9am and then ... taken it out somewhere?

**P5** 14:04

Yes. Yeah. So isn't that cool. So exactly. That's why I took the screenshot. So night. This is when the sun starts to rise. I get up. Then I pack it and this is a Saturday. I pack it I take it with me on the bus.

**Researcher 2** 14:06

Yeah, North East. Yeah, that's the bus.

**P5** 14:25

Yep. I take it to

**Researcher 2** 14:26

you get to the bus, the bus bus station.

**P5** 14:29

I switch buses. And then I get to the Rising Sun Countryside Park and this is me when I'm going around like the middle of

**Researcher 2** 14:37

The no Wi Fi part.

**Researcher 1** 14:39

Yeah, that's cool.

**P5** 14:40

And then this is when I was at the cafe and then I did some volunteer work there for a while. And it was in my bag. So you don't really I mean

**Researcher 1** 14:47

That'll be North Tyneside Council probably isn't it? Is it?

**P5** 14:50

Probably, oh yeah see.

**Researcher 2** 14:53

and then you're back on the bus.

**P5** 14:57

Yeah, yeah. So then I leave and then I'm walking to the bus stop. So

**Researcher 2** 15:01

Is that the same network that was here.

**P5** 15:04

Yeah. Yeah, going back to the bus stop. And then I took a different bus home but it was still a Go North East bus. And then I get home.

**Researcher 1** 15:15

But, that's a domestic network, isn't it Sky so it's almost like I wonder if that's the same house that you know the house that's next to the bus stop or something like that.

**P5** 15:24

Yep.

**Researcher 1** 15:27

That's interesting.

**P5** 15:28

Yep. And then I'm home and then you can see the natural life cycle and then you see my casual little

**Researcher 2** 15:33

Been in the bag that whole time there.

**P5** 15:36

Yeah.

**Researcher 1** 15:37

Yeah, that is that is especially evocative, isn't it?

**P5** 15:42

And then you'll know when I'm on actually this one, this one's quite easy going. But on the way back, you can tell this is different bus. So it really didn't like that.

**Researcher 2** 15:50

Did you get... at risk of spiralling this conversation into... Yeah. Does the movement make sense to you? Does that like intuitive sense to you?

**P5** 16:11

It didn't at first until we had a conversation about it, because I'm just like, I'm going places, and it's not rippling a lot. But then when I'm sitting on something that vibrates, it jitters quite a bit and then that makes more sense, like that kind of shaking. Yeah. And that's actually why I did this it so this was me going I had a work day at Cochrane Park. So this was me, walking to campus, getting picked up. As we drove through and we're caught in traffic. We picked up weird Wi Fi signals. I was at Cochrane Park got the shuttle bus back, was at uni for a bit walked home and you can kind of see this and this is like how it was a Cochrane Park like it was kind of sometimes like I was wandering around and stuff

**Researcher 1** 17:03

You've clearly sort of quite invested in this data and you've really engaged with it, which is fantastic. I guess I was wondering where that where that comes from, I suppose what what was it about this that that that sort of I don't know captured your imagination or whatever

**P5** 17:22

I think because it tells a story and it gives me patterns that I wouldn't necessarily have been aware of like, you know how I consistently do something right before bed. You know that kind of a thing. And I think for me, things like this is quite important because I I mean, I like getting natural light and stuff. And so I think about like oh when it's winter time I don't get a lot of that light. Like how does that affect my mood? And so for me, not only does this tell a story, but it also gives me information that I want to try to keep in my head and be like, hey, I need to be aware that I get this much light during the day when I'm like having a good time and it's summertime but when it's wintertime and it's going to be down here. How is that going to affect me? And what what do I need to do to make sure I'm getting more light like this so that I can you know sleep well at night or whatever? Or like if I noticed that I have a hard time sleeping. Maybe it's because I increased the light at bedtime to daytime levels. Nearly, you know this is like afternoon light kind of level. So, for me, I'm like trying to tie this in with my habits and my health and how I take care of myself and so I guess that's why I'm invested in just because you know like, like I mentioned with the sound thing like sometimes it drives me crazy. And I'm like, Well, is it that there's actually a lot of noise at night and this is something that I can manage somehow or or is it not? And I think I'm only so excited about this because it's also not being like traded away to someone else where I should be worried about it because I think in a commercial context I would be concerned especially with the these Wi Fi, things like that.

**Researcher 2** 19:26

GPS never kicked in for you did it you didn't get

**P5** 19:29

oh no. I thought it wasn't supposed to.

**Researcher 2** 19:32

It was supposed to.

**Researcher 1** 19:36

It worked pretty consistently when we were developing it and then not at all when we handed them out to people so we don't really know know what that was, but

**P5** 19:44

I can relate.

**Researcher 1** 19:51

Okay. And again, I mean, I suppose that's quite long term pattern that you know, summer and winter and light patterns, but have you have you changed anything in your own behaviour as a result of having reflected on on on things?

**P5** 20:04

Um, well I mean, there was the moving of the plant. Um, I think if I do have like, trouble sleeping, I would try to switch that evening routine to earlier so that I don't end up turning on artificial lights and then wake myself back up. That, you know, if I had an animal that could really mess up their their cycle, so I'm kind of glad I don't, but at the same time, it's like, well, I'm still an animal, so that's gonna affect me. Oh, yeah, and here sorry. I never did I shut that one. This is not trading sun. workday. Where's the hot day? cooler day? cloudy, cool. Where's the hot day? Okay, so the hot day I don't know why it's not saved. But the hot day goes up like this and then just drops down to almost nothing. And then when I finally open up the curtains late in the evening, it goes up again. I'm just like, well, you know if I'm tired, it could be because it's hot but it could also be because I'm just making it like evening time darkness constantly.

**Researcher 1** 21:24

So there's there was you talked a little bit about this on the calls and about reflecting on your habits and things I suppose and you you refer to it one time as long as a truth keeper. Was was was the word you use as you know, the probe as as a I don't know, an objective truth and I suppose my question from that was... Is that how you feel about it? Do you feel that like this is this is true and accurate? You know, does it reflect, Does it reflect your experience, or does it diverge from your experience? And do you think that this is the truth rather than what you might have experienced, if that makes sense?

**P5** 22:08

Yeah, I think I think it's a I mean, I wouldn't trust it to be like 100% for all occasions or anything like that. Because obviously, it might not record like short bursts of information. But if I have a narrative in my head that says, Oh, I get up at this time I do this activity or I work X many hours. And you know, I'm at work X many hours, I should say, or like I go to bed at nine or something like, this would be really good to see if my habit shifts that I'm not aware of. And I think it's good for that kind of reflective practice because I know myself and I know I'm too lazy to write down in some logbook somewhere, started getting ready for bed at 9:12pm. Like for me because of the way that I use lights and sounds although I don't know that it's reflected here. You would see that distinction. So then it can be the log for me and as long as I know to take a moment and reflect back on my week. I can like,

**Researcher 2** 23:20

...do you mean like, what do you mean by that?

**P5** 23:24

Like I so if I were to take this with me in my bedroom, it would sound different and I have like I have an air filter. That's also kind of like a white noise machine sort of thing. And so there would be specific sounds there. You know, if I'm working at home, I'm going to have music on throughout the day. So that's going to look different than if I'm just at home chilling out. So or if I have people over that's going to also look different, but I do believe definitely that there's going to be a pattern of my like morning and evening routine in the sounds that I make. Because obviously it's gonna be quite quiet otherwise. But I don't know that that's fully reflected here. Although I think now that we've had this discussion, I do want to go back and compare like, my, you know, the sounds when like I have my window shut, open and all that.

**Researcher 2** 24:23

Yeah, and I think if you drill into the if you do that zoomed in view on it it'd probably be a bit more destructive than looking at it in this one.

**Researcher 1** 24:39

So something else you talked about was sort of social encounters around this because you talked about sort of night at the pub and showing it to your friends and things like that and I wanted to dig into that a little bit more, I suppose and ask kind of what kinds of conversations you talked a bit about how people reacted to it and the kind of concerns they had about oh, is it is it recording? Are you sure it's not going back to them and things like that. And what other kinds of conversations did that spark?

**P5** 25:13

Um, I think it was like, a curiosity thing because most I mean, I think everybody who I spoke with about it has some kind of affiliation with the university or some other kind of like technical interest. And so I think it was I, I think it would have been a very different conversation than if I was talking with my mom who just doesn't understand things she probably wouldn't be interested. But yeah, it was, is about about security and privacy. But also like, what does it do and how did you put it together and like showing off the 3D printing like the frame thing for which like, this is where I keep it when you see it in the backpack or when I'm travelling. This is where it live

**Researcher 1** 26:03

Kangaroo pouch

**P5** 26:04

It is quite nifty. I do pad it with with other stuff but so, you know, they you know, when we had it out people were like fumbling with it like this and they're like oh movement like that. Just like I do. And I think just like one person was looking at the chips and recognised some things and don't remember what I said about it, because I obviously that was a minute ago. So I think it was just kind of inspecting it from a more technical perspective. But then also from like a security and what you're doing with it and what I'm doing with it.

**Researcher 1** 26:46

Do you remember if that led on to say any conversations, sort of wider conversations about technology or data beyond the probe and the project itself?

**P5** 26:57

Um I don't remember because there have been multiple conversations so I don't remember at what

**Researcher 1** 27:03

Not necessarily just that conversation but when when talking about it with friends and is it just that you focus on the probe and what it is or does that ever lead you other places

**P5** 27:15

I don't remember if it was when the probe was out or not. But we have had a conversation about like, apps that record data because you know, like if you're in the Apple App Store, it says data that's linked to data that's not linked to you. And that kind of stuff. And we're talking about some of this is, is related to that. We were talking about what information is given away and how we feel we don't really have much choice in that because let's say, you know, for example, the university safezone app, it takes so much information from you even it sucks power from the devices I don't I'm supposed to but I don't really I shouldn't say this on recording. I don't have the app on because I do not agree to the terms and conditions. Especially before I got my new phone my phone's battery only lasts a couple hours and if I did have it on, my phone would have just died and then I would have been in an even worse position. So it's a little bit they make quite a few assumptions about who can use it and you're really putting a lot of trust in not the university. The university vouches for them but in a third party that you've never met and you don't know

**Researcher 2** 28:27

So what's the proposition? I think I joined Newcastle relatively recently. I think I remember seeing it when I worked here before. It's about sort of lone working and this kind of is that what the app is for?

**P5** 28:42

I so we were supposed to get it not just for lone working just for general security, kind of a thing. So even that's the thing even when you are off campus, you're supposed to use it for like emergency calls because they already had your information and stuff like that. One of my supervisors was very much like really into it, and was just like, oh, you use the app and make sure you check in when you're here at checkout when you leave and I was in a group I was working with other people. So it's not a lone worker thing. I think it was just like a workplace safety like instantly get hold of security or medical health, which again, sounds great. But reading through the privacy conditions, even though they're like no, we're secure, we don't sell it we do whatever, the amount of access they do have, like for me increases the risk and I call that app out but you know, Facebook, Instagram or something like that they

**Researcher 2** 29:40

It's kind of interesting in that app presents itself as as providing you with some, some safeguards, and it's a clearer is a clearer proposition. than maybe Facebook is like in terms of like, well you're gonna get this and you're gonna trade it for that. Yeah, that's interesting. I hadn't realised that that was. Yeah.

**P5** 30:12

I think because it what, what had so much controversy about it, at least with me, and my friends is that it uses like your Bluetooth and your GPS, it triangulates to fine granularity to know exactly where you are at any given moment. And that's what we're like

**Researcher 1** 30:30

Even inside a building.

**P5** 30:31

Yeah, yeah. And that's what we're just like, it's one thing if you like, open up Google Maps, and then you want it to find your location. It's another thing if it's constantly tracking your location. It's another thing altogether if it knows like, precisely where you are all your time, and it's linked to your personal information, and it's going to somebody else supposedly for your own health and safety, but also like, how, how much do we know of how well does this actually work? How long do we know that this is actually gonna stay secure? That kind of thing. So yeah, like tied into all of that. They're like, it's on the SD card you have to give, give it back how do you know the data is there? I'm like, No, you don't like I get I get to keep it. I'm gonna probably going to lose it so that's...

**P5** 31:23

Terrible. I'm usually organised like organised at work. No but it's, it's that kind of stuff where if you know, something's listening to you, you know, how do you how do you manage that and how, you know, because it's not like a conversation that has a start point and end point. And then you can walk away, this is something that's, you know, can be kept and maintained, and a conversation that other people can listen in on without you knowing or permitting it.

**Researcher 2** 31:57

I'm curious about whether you, so I noticed in your the view that you've done the full you put the new it has a new visualisation with the new dates on the side so you can do the full month view and all that kind of stuff. I just slightly curious whether you had any thoughts about Yeah, how that sort of, you know, the software I think maybe I've updated the software once or twice while you've been doing it. That's I don't know, it's again, very bad questioning, but do you know where I'm kind of going

**P5** 32:35

I do um, I think I feel safer because I know that it's not going to anyone else unless I lose it. And I was actually afraid there was a time where I was working at the library, and I didn't quite feel comfortable getting up because it's like, oh, my laptop's here and this is here and that was there. I'm like, there's like everything is just sitting out. I ended up using a locker from the library

**Researcher 2** 33:00

for fear of being stolen or lost.

**P5** 33:03

Well, yeah, this and those things, but like, these devices have passwords on them. This doesn't.

**Researcher 2** 33:08

Yeah, right.

**P5** 33:11

So that was in my mind. I wouldn't say that that was like alone the decision maker I think it was just like in general.

**Researcher 2** 33:19

Yeah I suppose it's sort of got the password on the visualisation, but in terms of its physical security. The card is just there, right.

**P5** 33:29

Yeah. Um, but I would say as far as looking back at the data over long term, I've yet to get that to really work. It will load a few days, but most of the days won't even show up. Cos I wanted to get screenshots of like the pub visit because you can see this trail of places that I went to and I thought that was really cool. But i like i i unpaired it and then re-paired it and I waited and I tried again another time and I never got it to work. So there's some stuff I don't Yeah. What I didn't try though I didn't try it on a different device. I always tried pairing it to my iPad. Maybe that's it?

**Researcher 2** 34:14

Maybe. I think there was still some technical bugs in it.

**P5** 34:19

Yeah. But it was quite nice. Like when I wanted to do those screenshots. It was quite nice. Like I could go back and I could select some days like oh, yeah, this was that cloudy day or like this is the hot day. So that was nice. And I'm you know, as I said, I I'm interested in like patterns longer term. So even if I don't want this like fine grained data, if there's a way to aggregate it and then I can like oh yeah, like, for January it looked like this in February looked like that. Or like, you know, you you had lights on until 10:30. And now you say you can't fall asleep until midnight. Whose fault is that?

**Researcher 1** 34:58

So, well sticking with safety then for a moment and feel feel free if you want not to answer this but you have you'd spoken on the calls about having had sounds like a fairly horrible experience with with with personal data being being used against you and without necessarily wanting you to go into any more detail about that. We were curious about how that related to your, your decision to take part in the study. Like was it something were you aware of that link I suppose between between, you know, the experience you'd had and the sort of data that was being collected. Were you aware of that link as you signed up to the study? Did it have anything to do with that or was it something that emerged and became apparent as you were taking part

**P5** 35:54

To, I mean, first off, if I had been in this situation, or if I was even concerned that I was in that type of situation that I was before that I had mentioned, I wouldn't have taken part because that for me, it's just like that would be stupid. No matter how safe you said it was I still like would not have been interested. So I'm coming from a place of feeling quite secure and feeling like there are enough protections in place that it wouldn't be that big of a deal. And even if it was I don't think it would be any more concerning than me having, you know, some silly really unsecure app on on one of my devices. So I think from that standpoint, I wasn't too concerned. And I think part of the decision for signing up is because we you know, people in my lab have questions about security of their own devices, they're building and what does this look like and all of that so for me this was just research curiosity. And then I ended up being personally invested because I'm just like, look like light cycles. I don't know why that is just endlessly fascinating for me, but yeah.

**Researcher 1** 37:18

Okay. That's good. Yeah. That's my sort of when you shared that with us, my kind of gut reaction was, Oh, God, why did you choose to take part in this?

**P5** 37:27

Well, I so for part of it and part of the reason why I chose to mention that because I could have just not said anything at all. Part of why I said that is because I think I have talked about, you know, Security and Privacy and Technology with other people and they seem to kind of dismiss it. Like, oh, that's some [inaudible] or, oh, that doesn't usually happen. Or, you know, because most of the people in tech are men, especially white men who have a lot less the fear than other demographics. It's not often on the radar, and it's often dismissed and so I made a point to bring it up to be like, No, actually, this is like regular people's lived experiences. It's just not necessary, that demographic of the makers, and so I, I wanted to bring it up so that it was in everyone's awareness that yes, this is a real concern. This is something that happens to normal people. And it's, you know, there are some people who are much more at risk. And so it's a matter of, kind of maybe finding that balance between benefit and harm and what can be done to kind of make sure that a product is safe for everybody to use, not just the people who are like the creators of the product.

**P5** 37:29

So have you used this in conversation, have you used this and the data you've got from it in those kinds of conversations?

**P5** 38:33

I don't remember I think

**P5** 38:35

or in the discussions you've had in your research group.

**P5** 39:01

Yeah, I'm trying to think, um, I don't think that I, I have brought that up with my lab mates just because it is a little bit more of a personal thing. But we've talked like around that and like in general, and I don't know, it would be a good conversation point.

**Researcher 1** 39:28

Just closing out a little bit, then. Is there, do you feel any differently about any of the technologies that you use, apps or devices, having taken part in this study and having played with the kinds of data that they might be collecting the you feel differently about anything? Or do you feel you have a better sense of what they might be capable of as a result of having taken part?

**P5** 40:00

I definitely would never have thought about what tracking like Wi Fi connections means, that was something that I would never have even considered before. And now seeing that and seeing like the names of the routers, identify specific places and specific services. I think that that was really surprising. With with light I don't know that it tells much of a story. I think that's more of like a personally helpful but I don't know that that can be used to identify anything. Movement i i also find a bit hard to interpret as well, just because I feel like in the end, it kind of collapses to almost a binary where you're either sitting still, you're slightly moving around, or you're on some sort of like vibrating transportation, which alone maybe doesn't mean that much because I to be fair, I haven't taken it on bicycle so I don't know what that would look like. But I think maybe if if paired with movement, or paired with like the GPS or something like that. Together it can tell a story. And I don't think I gave that togetherness quite as much consideration as it deserves. I didn't think about oh, if you pair this in this it gives you a much more detailed picture than just one thing alone. So I think that's something that I hadn't given enough thought about.

**Researcher 1** 41:42

That was interesting. I think that's about everything I had, did you have anything?

**Researcher 2** 41:49

I guess the only question I had was kind of back to the sort of publics or pub experiences and that kind of thing. Just curious if at any, and you seem, from what you've said so far, it sounds like you were like, super confident to have it in public. And I just wondered if there's any, was there any, that was that always the case? Or was that did it ever cause any sort of anxiety in its presence or

**P5** 42:23

I think that there was a bit of concern at first when I showed it to people because of the sound pickup they thought it was kind of like like Alexa and stuff where it listens to what you say and listens to key words. And they're like, wait, great you've had this recorder on this like that kind of alarm. So I did have to very much specify that it was recording frequency and not anything else and that it wasn't trying to connect to their devices. I think yeah, so it was two things really but the big one was like clarifying that the sound thing is not it recording sounds not recording speech. That was literally the first thing that was brought up. So yeah.

**Researcher 1** 43:15

Okay, great. Um, was there anything else? Anything that you wanted to share with us or that that you know, springs to mind as being important to talk about or before we finish? Or questions for us.

**P5** 43:31

Questions, I think would be interesting. I liked the display. I liked that you could do the breakdown. You could like collapse it and expand it. I think it would have been it would be nice if there was like, maybe R code I had or something where I could put it in. I don't know how much work this would be because it's obviously it's not like perfect data. But it'd be really cool to like, kind of track it over time or look, you know, look at comparisons and stuff.

**Researcher 2** 43:58

Yeah, what do you mean sort of like side by side days, or Yeah, because at the moment we've got this sort of just infinitely long line.

**P5** 44:08

Yeah, yeah, I think that will be fun. But again, that's not necessary. And I think that's because I get excited about this.

**Researcher 2** 44:15

Were you ever tempted to dig into the SD card and look at the data yourself?

**P5** 44:21

I was tempted one day and then I realised like, I have a million things on my plate. And I probably can't spend like several days doing this or like, all that. So it was a thought and then it was a realisation that that would be nice, but not right now. Yeah. I think if I kept this longer term, and we were to continue, I would like either want to do that or ask for it. Yeah, because I believe it's if it's stored as a JSON file... It's not that hard to work with but

**Researcher 2** 44:55

I made a converter so that you can get like a comma separated values and put it straight into Excel or whatever. Yeah, it's pretty, there are a couple of bits which are not entirely obvious. So the sound the way it the way it records sound in on the file is the way it's the way it has these, you know, frequency is a bit obscure, but it's not. It's not completely impenetrable.

**P5** 45:34

Yeah. And I think there was a bit I had to several times redownload the config file. Because it kept like...

**Researcher 2** 45:46

We never really quite close to bottom of that bug. So that was curious.

**P5** 45:53

Yeah. I don't know if like maybe if I accidentally kill the battery, like if I don't plug it in or something.

**Researcher 2** 46:02

I think it's a case in the code where it very occasionally decides to nuke that file

**P5** 46:12

Death to config! Alright. But yeah, I think that's it.

**Researcher 1** 46:19

Great. Thanks again for taking part in this and giving us kind of so much of your time and headspace as well. So no, that has been fantastic. Did you want to hand that back now or did you want to keep playing around with it is it's up to you really?

**P5** 46:39

Can I take it with me on holiday this week? And then we'll take a look and see how that goes.

**Researcher 1** 46:44

Yeah, for sure.

**P5** 46:44

Okay,

**Researcher 1** 46:45

yeah, we're not we're not got a few kicking around, so we're not in an urgent rush for any of them back.

**P5** 46:51

Okay. And then also, um, as far as pictures, like, I'm happy to send those screenshots over if that's helpful or the pics or... I didn't know what you're wanting or what would be helpful

**Researcher 2** 47:06

Yeah, we would. If we were to use them. I think we probably would pixelate those network names.

**Researcher 1** 47:14

Yeah. Yeah,

**Researcher 2** 47:18

I liked the thought the, the way we talked about maybe the most of those little little bits of the light level maybe. So maybe we might crop that, but

**P5** 47:29

I think there's where's the picture

**Researcher 2** 47:34

I mean I you know, absolutely only if you

**Researcher 1** 47:40

Yeah, really interesting to have. But I think we can. We can ask permission kind of contextually. I think if we were thinking of doing anything in particular. Yeah. Drop a line.

**Researcher 2** 47:50

Yeah, that's yes. That's a good idea.

**P5** 47:53

Yeah, I mean, I'm around you can always email so so like, this part or

**Researcher 2** 47:58

It is worth it's worth being a bit careful, because there are maybe not so much these uh, yeah, maybe. Yes. routers like this there there are maps of known Wi Fi networks and you can go and like, you can match up if they've been surveyed, then you can start matching it to GPS and stuff like that. So it isn't like,

**P5** 48:30

Completely Yeah. Can I ask you about something real quick, do you have time? Okay so I'm gonna connect it real quick. I didn't know if you had any tips for this ...

**Researcher 2** 48:54

it was really nice seeing it on the iPad as well. It was like, oh, yeah, that's what it was somehow secretly made for, is it not coming up?

**Researcher 1** 49:10

Yeah because we never really thought that we talked about using a laptop and except I never really thought about a tablet.

**P5** 49:17

I think it's a lot easier to to view. Okay, so Oh, it's on 60%. That's surprising. Usually it goes like a whole day. I wanted to ask. Oh, yeah, yeah. So So yeah, this is what I thought I took a screenshot of before but I didn't save it. So this is exactly what I mean about where it starts to get bright up. And then once it starts to get warm, that's when I shut down the flat. And so you can see it's like evening,

**Researcher 2** 49:49

but it's like it's been it's like a sort of Yeah, it's like those so the blinds have like literally like chopped off a very consistent amount of light, right? Because they still got the shape to it. It's just it's like shifted over to the left. It's like sort of been the light levels been sort of taken down by I don't know 20 or something. Like a fixed number.

**P5** 50:13

Yeah. Yeah. Isn't that cool? So and then you can see my little evening blip?

**Researcher 2** 50:18

Yeah, that's a really nice one. And you got similar. You can start to compare that's 9pm. There with this is the 9pm here. You've got a longer period of time with presumably that light on.

**P5** 50:29

Yep. Yeah. And you can see that this is so the light with the shades down as far as they were, you know, at its peak was the same as you know, 8:30pm light isn't that cool?

**Researcher 2** 50:45

I think we just do a study on the light levels.

**P5** 50:48

I would love that. So I'm, I'm interested in like, reptile keeping and the welfare of reptiles and we have you know, reptiles very much, I mean, they they require the light, they need it for vitamin D synthesis, kind of like we do. They need it for their heat. But also when you have artificial light, it the bulbs decreased in efficiency over time. So I think it'd be really interesting to see at what point it becomes ineffective and it's not helping them like when do you need to replace it and how important is that?

**Researcher 1** 51:20

Are the products of that because you can buy like I had a, they don't make them anymore, but like a soil sensor thing that had like a light sensor in it and and gave you all that stuff. Do those products exist for animals?

**P5** 51:32

They're hard to get, and they're often expensive. So it's cost prohibitive. It's not something that somebody would normally get, but it could be something that's got this cute little display on the front that says like new bulb like my air filter, it's got a little light that turns on when I new replace the filter. Like that's something that could be really simple

**Researcher 2** 51:49

I quite like the idea though you could like my lizard is from here. What, what are the what are the cycles of this time of the year for...

**P5** 52:04

So here's another one. I don't know what happened to 8am but this what is going on here I'm at home that's when I leave the house. Let's see oh, here we go. Here we go. Here's one that's there. So you it's just like before where you see this curve up, and then it just drops off and then you know the height of it is the same as with this even later. Eight or 9pm so maybe I had the shades down a bit further or maybe something was different but you see that?

**Researcher 2** 52:39

Yeah, I really like those shapes

**P5** 52:46

so I don't know what's going on

**Researcher 2** 52:47

This is pretty complete set of data we're getting out of this but

**P5** 52:57

I don't know what's going on. I wonder if like maybe I had the window cracked it was windy and like extra light and or something. Yeah, there's a blip there are no that was about maybe it did I move it? Yeah, I moved it. Look I'm Oh yeah. So it was from no it was so I took it to work with me. So it must have been in my bag. I took it out of the bag. It's bright. This is probably when I packed it up and carted it at home. And then at home it was as bright as being at uni. Oh yeah, yeah. Okay. Yep, yep. So that's travel time. Oops. Sorry if I'm trying to

**Researcher 2** 53:44

go upside down.

**P5** 53:47

There we go. There. Sorry. That's what I was trying to do.

**Researcher 2** 53:51

Oh, yeah. So this is all for half an hour. It's and then getting quite a lot of different

**P5** 53:58

this is what I meant in the interview were alone, it means nothing but once you pair it up like we have, it's not just here, but it's that I was moving. And that you know, you can see there's this like scattering of light I poked it again. But what I wanted to ask about was like, Is there a way because like, if I tried getting down here, maybe some of these will eventually load but a lot of them won't. Do you have any tips?

**Researcher 2** 54:33

Well, it might be that you just have to do it very slowly. So I think there might be a problem. So basically what happens is every time you scroll to a new day that it hasn't seen it, it will attempt to get the data off from there to push it to here. And I'm not sure how good a job I did at the if you scroll like crazy.

**Researcher 1** 55:07

It was working pretty consistently as you were scrolling slowly, wasn't it?

**P5** 55:12

Yeah, but even even when I had this open for a while and then I started to scroll. It hasn't see it'll eventually.

**Researcher 2** 55:22

But I think sometimes it convinces itself that its... it's it's loaded loaded when it hasn't been

**P5** 55:35

What was the thing with the sound so we were going to look at so here's trying to pick it

**Researcher 2** 55:45

Yes, but even then like that, so that's the one you had before. Yeah, this one. So when it's when it's in this view, well actually it isn't too noisy, but at 3am at least looks like it's quite a lot of activity there but when you dig into it... what's going on?

**P5** 56:11

We can we can do a different day if you want

**Researcher 2** 56:13

Oh though that is 3am isn't it... still quite sporadic. Some of the

**P5** 56:23

Yeah, but I was going to show you Friday because that would be the Tuesday Wednesday Thursday. This Friday's, this Friday hasn't loaded... so yeah, so it is actually rather quiet. And my windows would have been open so when is it loud? At five is when I'm at home probably doing something.

**Researcher 2** 56:56

It's not. I mean that's that's that's I think a slightly confusing on this. It's not really measuring loudness, its more just those presence of those frequencies, which might be quite quiet.

**P5** 57:14

I get what you mean. But like 7am There's a sharp noise. Was that today? Should that would have been when I was getting ready

**P5** 57:31

I don't know why it showed the wiggle. But this events 5:45 or 6:45. Would that have been 5:45?

**Researcher 2** 57:42

Its like 10 to six or something. That's five that's half past five there that's 5:40, 5:50

**P5** 57:50

I wouldn't have moved it

**Researcher 2** 57:53

It's mysterious.

**P5** 57:54

Another one, it's a ghost. At 10pm I might have moved it. I would have probably checked that it was on the charter but either way. So

**Researcher 2** 58:06

There's something else... sort of an interesting little that one. Would you have be awake at 6:50 or something?

**P5** 58:16

Oh yeah, definitely there I might have been leaving the house. No, no, I wouldn't. See this is why it's cool. It's like I can be like, Oh, I left the house and I'm like no, no you didn't. Alright, thank you for clarifying that. So I will take with me on holiday. We'll see what it does. Looking at the data really eats its battery. I'll give it a charge.

**Researcher 2** 58:40

Yeah, it does. The Wi Fi. The Wi Fi is really expensive like that.