Alan Chamberlain talks to Roma Patel and Rachel Ramchurm (Makers of Imaginary Worlds)

0:02
So today we're going to be talking to Rachel and Roma, who are part of a a well that they are the makers of imaginary things.

0:15
So we're going to be talking about their speculative design based on some previous work they've done as well. So people on the task project will be able to get an idea about how they might understand the different ways that people have engaged with these sorts of autonomous systems. And we're going to be talking about how these things.

0:39
Can can influence people's research once they're put into the use case library that we're developing at the moment. So without further ado, I'm going to pass over to Roma and Rachel to tell us about their their design.

0:56
Yes.

0:59
So the design we we're proposing really is called Close Encounters and it moves away from our previous work which sort of mirrored the encounters of of audiences. And we'd like to kind of embed AI as a kind of central feature to it combining, we want to combine control and a bit of improvisation movement. So we use robotic arms, so this would be a robotic arm and we'd like the data.

1:31
To come from choreograph movements of children and of dancers to kind of generate a sort of model to help us maybe interact with the robot. So we found when we when children followed the robot or the robot followed the children, they really liked following the robot or that the what followed them, they recognised that that was happening and so having this new.

2:04
This new model, we're not sure if it will affect trust in any way in terms of if, um, if the system is not only following them, but the system is thinking for itself. Yeah, really. Yeah. I think one of the things that we've done initially was to dress the robots.

2:24
So we've created a costume for it and this is something that we really want to develop and we think this is something that really enables and engages with that trust for audiences to.

2:36
To see more of a kind of anthropomorphic character than just the robotic arm.

2:43
Wow, that's great. So how?

2:47
I suppose is is. Is it the case that your speculative design is going to highlight some issues once once other researchers see this and once it's put into the use case library?

2:58
I'm just just thinking about what you've said about issues to do with anthropomorphization.

3:05
Um, I know, I know. Roma was talking about was was there an instant?

3:10
Umm.

3:12
Yeah. Did people trust the robot straight away when they saw it? Have you got any pictures that we can see?

3:18
Yes.

3:21
I can show you some some things. Um here.

3:29
Ohh, one minute.

3:34
Yeah, I think it was interesting because initially as people meet Ned.

3:39
That's when he wakes up and some music starts playing.

3:44
Um.

3:45
So you can see here, and we've had him as part of a fuller exhibition called Thingy Bobbers Include the person you see in this image here was actually a how would you describe them? Roma facilities, yeah.

4:02
So we kind of dressed them as this inventor who just built these weird machines and the audience had

to kind of guess what they were and give them names and interact with them. And so when they when they approach Ned, that's when he wakes up.

4:20
And umm, and then some music starts playing and the engagement begins and they'd follows their movements.

4:29
So we're looking at this interaction moving on from following to be more learning.

4:37
And leading.

4:40
Think as well.

4:43
Yes. And what we found, I don't in terms of the role of aesthetics and whether.

4:50
The way you umm, we approached the subject with fiction. So there was a story behind robot and there's a certain aesthetics and whether that allowed engagement or direct engagement with children. So in this picture, the children had just appeared and saw the robot, realised that they could, the robot would wake up and start interacting with them and then they started moving and dancing and that was sort of almost instant.

5:19
It there was no hesitation, hesitation with these kids. So there is a kind of question how you approach.

5:29
Umm, and the aesthetics of a piece, whether that affects trust, I think it's something it's something to think about and something to to look at. Because sometimes as human beings we approach a person and we almost make, we make assumptions or we we kind of decide on whether we could trust this and sometimes instantly when we look at that. I don't know if if a robot is costumed, whether that is the same thing.

5:58
No. I don't know if I find it fascinating though, because I suppose if if you were looking into into the use case library.

6:05
Then they're they're immediately.

6:08
I can't think of any use cases where.

6:12

People talk about scenography or talk about the performative aspects or what have you got happening here. It's you've got intergenerational interaction and you've got almost the immediacy of of trust.

6:29
And you've also, it looks like you've got a a human robot partnership because there's a person here who's acting as a.

6:38
I suppose a facilitator of some sort, so.

6:42
It's what? What? Why? Why do you think that this stuff would be interesting to to researchers on on the task project or or or other artists?

6:53
I think, as you said, it's this this idea of um.

6:58
Of that human computer interaction? Is there something in the design of robots that we need to look at?

7:05
In terms of making them more friendly.

7:09
Um, in terms of the way their their, uh their design or is it there's there are different you know what aspects?

7:20
Um, that caused this? Uh, almost is you know is there.

7:26
Issue of over trust if we do this, yeah.

7:30
I'm I'm yeah it's questions we have but I'm not quite sure if that if there is that sense of over trust if a system is made so friendly.

7:41
Yeah.

7:42
I like, I like the idea of friendliness being a part of a something that people look into when they look at trust. Because it's not.

7:51

You know you, you trust all kinds of people. Don't not trust, maybe trust, belief, faith, you, you trust all kinds of people to do things. And sometimes what you see on the outside is not the motivation.

8:03
Underneath.

8:05
So do you do you think that by making things?

8:09
Ohh, absolutely trustworthy. There's a sense that people are. Are you highlighting that people might get lured into something?

8:19
Yes, that could be a possibility. That could be a possibility. Ohh robot doesn't move anywhere. So he's stationed in that sense, I think in some way. I don't know if that's kind of, you know, whether there's that kind of.

8:36
Sense of trust I It's also a gun if you This robot is dependent on people's actions, yeah, so it repeats. It follows you and when it can't find your face.

8:50
It goes back to sleep basically in a kind and so you know instantly it's not seeing you or or you and you try to get its attention.

8:58
But if the robot has AI in it and it always has an attention, do you know that it gets how do you know when it gets your attention? I mean, I think it is a a lot more to do in that way if you know the independent or dependent.

9:17
Independence and dependence.

9:20
Yeah I I still like the the idea of over trust though because it's you know it's something that people often talk to younger people about isn't it be always be beware of what the system or people Yeah there's a certain so I and I've not I don't think I've seen any projects that that relate back to that So I think in terms of looking at this.

9:42
Umm.

9:43
And the East Case library it's. It's very different from.

9:49
What might be seen as traditional use cases?

9:52
So how, how, how are you hoping to expand on this thing? Because you were saying this stuff around robotic arms and dancing and I don't know, it was the facial recognition in there somewhere or movement recognition. Yeah, I think we tried to expand where we have one, including AI, but also expand in terms of maybe.

10:16
Larger costuming for example to see whether the presence of a small robot is larger than itself. So for example the feathers extend the interaction of the robot to the person.

10:30
It's as if the robot has more, uh, the arm has a more fun extension. The possibility, I suppose, of adding sensors into the costume and into the robot so that it maybe has more sense. It can sense.

10:46
Maybe a lot more things from the person where they can sense heart rate, where they can sense a lot more things so that the interaction is deeper.

11:02
Sorry, I'm muted. Could you scroll up so I could see the drawing again? Ohh yeah sure.

11:09
So what What is the have? Have you been experimenting with any of this stuff then in terms of trying to add a bit of AI to?

11:17
To to the system.

11:20
Um, currently, not yet.

11:22
So we're hoping to to do that.

11:25
Kind of in the future to kind of look at how that happened, but we haven't worked. And I think part of all I think also for the use case library is kind of we do things in the wild. So we go out to audiences. So everyday people see our our connected to the robot and interactions with the robot. And that's interesting I think in itself in terms that we are hoping to do a lot more research in the next two months or so looking.

11:58
Parts of people's into direct interaction with the robot.

12:03
So there would be.

12:05
With the PhD student on developing more research that would be available to think about how people interact directly with you, about what people think about it. And so we have more than just what we've seen and what we've notice.

12:22
And with this, I know, I know that of offline we were discussing this stuff about.

12:29
What was it? Was it relating to this or the development of a similar system that you were looking at with some facial recognition software?

12:36
Yeah, I mean, we have started looking at facial recognition.

12:42
And when we notice that it doesn't recognise all faces.

12:46
So the face is recognised in certain places.

12:51
So I think it's we trying to understand a little bit more.

12:56
About how facial recognition.

13:00
What we feed the computer or what is?

13:03
To understand how facial recognition works and how it works with all faces, including children and adults.

13:12
So did did it work with the children or did you?

13:16
Yeah. Did it work OK with children? Yeah. I mean, we've placed it at such a level that it picked up the children. Ohh, right. Yeah. Much faster or better, I guess, than the adults.

13:30

So we would have scenarios when we were testing where we'd be having to hunker down to try and get it on a child's level.

13:40
It's it's set slightly lower than your average adult.

13:45
So.

13:47
In in terms of the trust then I'm I this this has come up in another discussion with with some of the the artists that that I'm working with this.

13:56
Presumably it doesn't work all the time.

14:00
No, and we do have a Rachel laughing.

14:08
Payments you see. So he's called mad our never ending the answer so he's always trying to dance. So you really have to catch his attention. So I suppose with our pieces of work we kind of leave a story into it that you've got to catch his attention. He doesn't always find you so you really need to to to find his, you know to get his attention. And so you find adults spending down looking find his attention because.

14:40
There's a kind of novelty of playing with the robot. You know, it's it's about playing again as well. And so I don't know if you enter in the relationship with play, if trust is affected as well. Yeah, I was thinking about two things. Well, one of them is if you've got to instigate the play, does that make you?

15:02
Are you taking control? So does that make you trust the system more? Can you assess that?

15:08
Ohh yeah that's nice isn't it? That idea?

15:13
And and the other thing is that UM.

15:16
With with the facial recognition software that you've been kind of experimenting with.

15:22
Do does it make you as the practitioners trust it less?

15:28
If it doesn't work.

15:31
Yeah, for me, I I think it's.

15:35
It's more than trust, but I'm trying to understand it more. I really want to know behind the system, what's what's feeding the system in order to understand.

15:46
What it was So we worked with people at the Cobalt Makerspace at Nottingham and so we we know that it's a facial recognition system, but I don't know the data.

15:57
Or what is it recognising?

16:00
So modern trust is supposed, is are questioning, what is it recognising and is there something we can do to change that?

16:08
So that we have more success.

16:13
And.

16:14
Just what you were saying, Alan, about it not always working and you'd have audiences trying to get his attention and you know, because he's this character and we're able to say to people, well, he's a bit grumpy today, he's not include, you know, you have to tease him a little bit.

16:32
I love that. I love. I love the way that people are going up to something and the, you know, there's there's somebody there facilitating, you know, it's it's it's in a setting. So it's a performed piece, very theatrical and a bit like an installation. You've got the facilitator there sort of doing their bit. The robot kind of sort of it does work, but sometimes it doesn't. So they're able to engage and add this layer of mystique about it or, you know, give it this, give it a personality. So it's a little bit, you know, Ned.

17:05
Ned well presumes the robot is a bit grumpy today. And then they're thinking, ohh, well if you go down and look at Ned.

17:12
You know, hoping, but you might be in the background or the software developers. They're thinking, why isn't it working? Why isn't it the system intelligible in a way that I can?

17:23
Do you do you ever have to sort of get? Is there any way that you can manually take control of of the robot?

17:30
Not not currently, no. No. So it's fully automated then? Really. Yes. Wow. Yeah, I think that's quite interesting from a use case perspective because.

17:41
But I don't know whether this is true and and excuse me, all of the roboticist out there, the researchers, but but sometimes it feels like there's a lot of instances where somebody's controlling a robot.

17:54
And rather than the the autonomous, autonomous um.

18:00
Interactions that that can appear as something just does what it's supposed to do without any human intervention.

18:08
Umm.

18:10
Sorry about that, I was just just catching my thoughts a second there and it's one thing that.

18:16
That this come to mind is, is that so And that this might throw you. It might not so so when you when you initially started developing this.

18:25
What? What came to your mind when you thought, are we, are we doing something? Did you think about responsibility?

18:36
I suppose that's at an extent.

18:39
We we do in terms of we got a teaching robot.

18:44
In terms of the, the idea of responsibility, in terms of the.

18:50
Uh, so it's a a teaching robot. So it's a robot that is fine around. So it's more like which we use.

18:58
So it was useful that way. So we know that.

19:03
And you know there will not be an issue if you get really close to it. We did, we did put it on a big stage which is 2 metres.

19:11
So that you can't. Audiences can't get too close to it.

19:17
And as some way that that's in that sense we would we're thinking about that.

19:24
You're also thinking about bringing the world to a lot of people, so that has been in a library.

19:33
As well.

19:34
So we were, we were interested in bringing.

19:39
Computers and the work of.

19:43
Different different um technology to people in everyday situation.

19:49
That's that's that's great I mean I I just just going back to I think that.

19:55
Either Rachel or yourself discussed this a while ago at one of the tasks.

20:00
UM workshops about responsible.

20:03
Innovation.

20:05
Was, is there something in this work which is about highlighting the fact that you're using sustainable materials or second hand materials or?

20:16

I was just thinking about that Alan. So you know, a lot of the materials that we use are sustainable. They've come from recycled sources or second hand sources and that's something that's really important to us in our work and continues to be important in our work.

20:35
Um.

20:38
I think, yeah, there's some.

20:42
There's something that will continue in that for us.

20:46
Yeah, I think that's really interesting because I don't think I think again for in terms of the use case library for people that are going to be exploring this in the future, particularly in the responsible AI project which is going to be starting or or is starting up today. I think there's a town hall meeting in London is it's I think nowadays when you look at technologies people, there's a lot of values that people are aligned with services, digital services and digital technologies and whether that's aligning with a brand or.

21:19
Am I buying into an environmentally friendly service?

21:23
Or does this technology align with the policies, for example, that the University of Nottingham or other universities have got around? Sustainability is something that?

21:35
I don't know. Do you think it makes people want to trust?

21:39
Systems more if they are eco friendly for example.

21:45
I hope so.

21:48
OK, I don't know. I'm just throwing it out there because it's so simple. I don't know if it's the system or they will trust the the people, the organisers of the system.

21:59
And in doing trust the system, yeah, it's it's that is a very complex one, isn't it? Because it it.

22:06
It it, it, it does really sort of lend itself towards you know, you you can the, the technology can be designed.

22:14
And the software can be built and the hardware can be built.

22:19
But if it doesn't align with your core values as a human.

22:24
Then then you're not going to use it.

22:27
So it's all your organisational values or?

22:33
I, I, I, I think that's why this has has perfect. Sorry Rachel at provoke.

22:39
I was just going to say, I think, you know, using those sustainable materials.

22:45
It it's kind of promoting our ethics.

22:50
You know, which you would hope feeds into the final piece.

22:54
And the the ethics of that and and kind of how people can trust us and trust Ned. Yeah, Yeah. So it's this. This.

23:03
There seems to be a really nice provocation, particularly as you're expanding it with with a bit of AI and there are issues around. I don't know, some people call it explain ability or intelligibility. What? Why is something not working? How? How have you got humans in the loop?

23:22
To engage people, you've got into intergenerational interaction with children. Like you say some, some people and their parents.

23:33
Have you noticed any? Any difference in terms of?

23:37
Um, engagement that children have with this versus adults.

23:45
Well, that's strange enough. We were at the Green Hustle festival in Nottingham a couple of weeks ago and mostly adults came more than children.

23:54
It was the first time we kind of opened up the installation to to non ticket holders. So if we just open anyone off the street can come and see it in the middle of Nottingham. And what was interesting was adults interaction with it. Somebody who is you know you know elderly person, older in you know late 60s, seventies trying to get meds attention.

24:21
Either taking their glasses off, looking at their faces and interaction and people smile when you tell them and ohh it recognises faces.

24:29
There was something intriguing about public being able to be in contact with the robot at this stage and and adults trying to to connect with it.

24:44
I It was an eye opener for us because we kind of looked at it as something for families and children, as if we were designed for as our company mostly worked with families and children, but when we had mostly adults coming to.

24:58
Umm, it was interesting to see how they engaged in play.

25:05
In this sweetie and engaging in play for adults is very interesting and I think this installation allowed them to do that and the robot as well, they were interested in that.

25:19
And how it works and and and everything about it.

25:23
So there's a kind of.

25:25
Exposing things to the public, I think is interesting.

25:30
Yeah, so. And do you think this?

25:34
You know, thinking about what you just said, it feels like this. Does. Does it map over into?

25:40
Um.

25:42
Other other research areas such as I'm I'm just thinking about the adults engaging with something is,

is there an element of you know you've got play, have you got well, is there a well-being thing? Could it be linked to a medical domain or could it be linked to entertainment or could it be linked to.

26:01
Driverless cars or?

26:07
Um.

26:09
I don't know. I I I would say it could link to play and because play helps with.

26:16
A sense of fun, sense of relaxation brings a smile on people's faces.

26:24
So in that sense, your health and well-being could be.

26:30
Something that comes into it.

26:32
Um, curiosity. That sense that people just suddenly see something quite novel.

26:40
In that way.

26:41
And they begin to explore it and and through that exploration, understanding it, there's a kind of sense of trust building up as well in that way. So it's a kind of, it's a.

26:54
Yeah, because trust doesn't have a. Sometimes it happens kind of instantly or happens overnight. It takes time, or it might be a series of layers.

27:03
Of introducing something and then seeing how it works so they kind of understand it and then engaging in it.

27:12
In that way. So I think there is that kind of level of of development in there.

27:20
And what What do you think, Rachel?

27:22

I'm just really quite excited by that idea of working with adults with a view of thinking about kind of mental health and well-being and that kind of.

27:36
If that robot was able to.

27:39
Kind of boost people, Yeah. I mean that would just be magic, wouldn't it? That would just be great. I do like, I mean I think what's interesting about this sort of practically doing these things does highlight and even these, this, this, these discussions about the, you know, the speculative design about how you're taking something forwards in this case is it really is interesting to lots of people and I think you know.

28:04
Sometimes you can discuss this stuff and we this video probably half an hour, but you know you can scan through this stuff and get so much out of it and you know this will be. There'll be a use case as well and the use case library that Rachel and Roma are working on. So people can go and look at some of the text and look look at some of the images in there.

28:23
But it's, you know, just getting people to think about nations. Like what is it to scaffold trust? You know, how do you encourage people to engage with something? How is that accomplished? Why is it important? How is it, you know, how is it made evident to people what something's doing? What, What are the processes that a robot is going through? What's happening in terms of the AI? What what happens when you know what one of the great things about this that I like is that, you know, you're taking it.

28:56
Out to encourage the public.

29:00
To engage with issues around trust and autonomous systems, and I I think that's a really important thing to do because so many times, you know, you get you design some software and you get a few people involved in that design.

29:14
Uh, and and I would say more often than not, you know this, we're not, we're not engaging with the general public.

29:21
In a way where we can understand what these issues are and I think that's what that's why this feels really important to me and I think will be of interest to lots of people.

29:31
Involved in responsible innovation and also in trustworthy autonomous systems.

29:38
It's you know what, what are your motivations behind that? Why, why are you taking it out And you

know, sticking it in a library, sticking it in the arts centre, community centre and I think you know you can put him in the studio with ourselves and see him.

29:54
Doing what he should be doing and then when we put him in a theatre space and that, you know, our focus has been on children and a a family came in when we had it at Lakeside Arts and there was children, there was their parents and there was their grandparents.

30:09
And the whole group danced with Neds.

30:13
And it was just so exciting to see. Everybody was on the same level of engagement with Ned.

30:21
Having this lovely experience as a family.

30:25
And it just, you know, it's just so exciting. I think it's, you know, it doesn't get much better than that for me.

30:34
And if when you if you started this process again and I said to you, you know, hi everybody, you know here's here's this library of use case and you can dip into it to find out how people have been engaging with robots and children and the stuff in there about facial recognition would would you use our use case library?

30:57
Yes, definitely.

31:00
And.

31:01
That was that was a bit of a yes, no question wasn't it? Sorry about that at all. But I I should know better by now. No, I mean I I think it would be really interesting to see you know what areas people have been looking at. Is there something that we haven't considered?

31:15
Other areas that we're looking to to start thinking about that people have already explored the answer a lot of questions that we already have.

31:26
You know, I think it it's it would be a brilliant resource, wouldn't it, Roman?

31:32
Also because we are.

31:34
We thinking about kind of robot audition kind of and he listened to music so if if you if he's going to be a dancer. If the robot is speculative design we're looking at is going to be.

31:50
In the place of a dancer. And as a dancer, you listen to music and you move with the music.

31:58
Can the robot also move?

32:02
With the music, candle rythmically and respond to music as well as respond to a partner and can it do all of these things and.

32:15
Yeah. So, I think so finding out whether there's been things already done in certain areas when we're looking at expanding into new areas would make our job much easier.

32:29
Yeah, I think that robot auditioning or robot listening or something might call it as well, you know, it's that there's a really interesting areas as well. And also that raises A ginormous amount of trust, trust issues. If you've got a system that is, you know, always on, always listening.

32:50
Yeah, I mean I I don't know whether how that relates to autonomous systems, but if it's part of that then you know there's there's lots of discussion happening in that area. So before we go I've, I've, I've got.

33:04
Only question is, is there anything that you've that you've seen or that you've experienced that you'd like to see?

33:12

33:14
Go into the use case library. So is is there a gap?

33:17
That that you've seen that you think you know what what why Why aren't we doing this or can can researchers please put some material in the use case library based around autonomous systems and.

33:30
I don't know. I'm just thinking of something that that's not been discussed a lot, you know, like sustainability. Is there anything around?

33:39

Personal belief or faith or.

33:43

Uh, performance or I don't know, you the the the world, the world you're oyster when it comes to picking something that you you'd like to see people put in there because now you're now your opportunity to say please put something in the use case library.

33:59

I suppose in some way I would like more things on understanding how children interact with robots. Yeah, yeah, because that will directly help us.

34:08

In trying to understand how children interact, a lot of.

34:13

The thing is, a lot of work right now with children and robots are in education.

34:18

Yeah. Um, so it's teaching.

34:21

We'd like to see more with trying to understand how robots are used outside of education or children.

34:28

And anything you can think of, Rachel.

34:31

Well, I feel a bit put on the spot. Talent. I can't think that's what I'm doing. Ohh.

34:40

Yeah. That's robots and pets. That's that's that's, yeah.

34:45

Right.

34:46

I mean, I think just having the library there is so exciting, yeah.

34:51

It's a great resource.

34:53

Well, that's great. I'm gonna wrap up now, but I'm just gonna say a huge thanks to Roma and Rachel. You know, the makers of of imaginary worlds, Sometimes they get it wrong and say imaginary things, but you know, imaginary things are really imaginary worlds.

35:11
And.

35:12
And yeah, fascinating. I I'm just just also to say that when when people do go and look at the use case library, they'll also be an entry there.

35:23
From Roma and Rachel. So we hopefully we'll have a collection of images and some text there and yeah, thanks again.

35:33
Thank you very much.