

1 HUMANE focus group: eVACUATE #2 – computing students  
2 12 October 2016

3  
4 P1, P3, P2, P4 = participants  
5 M1, M2 = moderators

6  
7 < Welcome and outline of focus group >  
8

9 M1: Thank you for getting back to us and we really appreciate  
10 your participation. Now, I've given some information on this  
11 before but I thought I'd just put it up here. I want to  
12 introduce some things from a project called HUMANE that we're  
13 going to evaluate, so we're looking for feedback from you on  
14 some of these things. And there's a method that's been  
15 developed in a project, that we'll use as a way to facilitate  
16 this focus group. So we're going to go through various steps.  
17 And there will be specific tasks associated with the steps  
18 that we come up with. Some will be brainstorming, getting you  
19 guys to come up with some thoughts of your own for what we're  
20 doing in the various steps. There's some pen and paper  
21 exercises so when we get to that the paper is over here.  
22 There's an online tool that's been developed by one of the  
23 partners, SINTEF, based in Norway, that we will use as part of  
24 this as well. So, as I said, some of this is going to be  
25 specific questions, specific tasks, but if you have any  
26 observations throughout or comments to make, feel free to  
27 share them. It could be something that's not quite clear to  
28 you or you've got a suggestion about something that you think  
29 would be good for us to take onboard.

30  
31 < Introducing HUMANE >  
32

33 So HUMANE, just very briefly in a nutshell, is one of the  
34 collaborative research projects that IT Innovation does.  
35 Funded by the European Commission, the so called H2020  
36 program. Now, there's two key objectives of the project that  
37 we're focusing on here, one of which is that the project is  
38 creating what we call a typology of human-machine networks.  
39 The purpose of this typology is to be able to describe and  
40 analyse the human-machine network so we can give some support  
41 to system designers who are creating a new network, i.e. an  
42 ICT system. Or they might want to change something to improve  
43 it. And we're doing this to try and give some added value so  
44 that people can create more successful networks. And then the  
45 method is essentially a way in which they can apply this  
46 typology. Now, we'll talk about design patterns, throughout  
47 here. For your background, design patterns can have quite a  
48 specific meaning in software engineering. Within a project, if  
49 it causes confusion, you can think of it as design solutions.

50 So we think about challenges and problems that people might  
51 have as they're designing human-machine networks and we're  
52 offering solutions to that. So essentially we're here to  
53 evaluate the typology and the method and any feedback that you  
54 can give us in this focus group will be used to improve the  
55 next and final versions of both the typology and method.

56

57 < Introducing the HUMANE typology >

58

59 So a typology is a way in which you can structure and classify  
60 something in terms of types. And the type in this case is a  
61 human-machine network. We do that according to a set of  
62 dimensions to describe a human-machine network, which I'll get  
63 back to a bit later. But what we mean by human-machine network  
64 is essentially where you have an ICT based solution that will  
65 connect up different people and technology. So machines we see  
66 them as active participants. So a bit beyond let's say a  
67 platform that mediates social networks where you can have  
68 technology that's doing something more as well. So it can be  
69 anything from the hardware, services, platforms, sensors,  
70 robots, software agents. Things that have some involvement and  
71 role and purpose in the network. And here's an example of a  
72 network. I won't go into so much detail on this one, but here  
73 is a network based on one of the projects that IT Innovation  
74 is working on. It is dealing with emergency support. You'll  
75 see on the left side there are some human actors as part of  
76 this network. They are basically members of the public who  
77 might end up needing to be evacuated from venues such as  
78 football stadiums, cruise ships, airports and so on. And in  
79 these venues some of the machine actors that you can have,  
80 which are depicted here on the left, are sensors such as  
81 cameras, signage. Signage can be something that can be updated  
82 to provide information in real time about evacuation routes.  
83 So it's not always just here's an exit sign and that's a  
84 static thing. So looking a bit further than that. User devices  
85 as well such as phones and such. Now, in the middle, this is  
86 the innovation of the project that sits in this network, a  
87 decision support system which is meant to help the operational  
88 staff at these venues. Let's say if it's at the airport, to  
89 give them information collected through all the sensors about  
90 what's the status. What's going on. That could give some  
91 information that might lead to recommendations to the  
92 operational staff about evacuation routes, let's say, if  
93 there's an accident somewhere and evacuation routes are  
94 blocked and so on. So the operational staff would use this  
95 system. Now, there are other types of human actors that can be  
96 part of the network, not always, but if there's something  
97 really bad that happens, emergency services can get involved,  
98 Police, ambulance and so on. Or let's say there's a terrorist  
99 attack, special services could get involved as well. So we're  
100 reflecting this range of actors in the network. And this is

101 kind of a complex network and there's a lot of behavioural  
102 aspects that we can start to weed out as well. And we've done  
103 a few things on the left side here with evacuees in terms of,  
104 how they might form groups. If you had a football scenario,  
105 for example, there is typically, ..., the opposition are not  
106 friendly with them but if an evacuation takes place some of  
107 these dynamics will have to change. I won't go into so much  
108 there but if you have questions M2 knows a lot more about that  
109 than me.

110

111 M2: I was just going to make the observation. You're right.  
112 With football teams you have two opposing teams and therefore  
113 the assumption is that they're wrong. You introduce another  
114 set of players specifically with the emergency services and  
115 the police. Then they immediately shift and they become a  
116 single unit, which is why Hillsborough was such a disaster and  
117 the M11, etc. The Police decided that they were hooligans and  
118 they thought "hang on", and so grouped together. So there is  
119 some dynamicism.

120

121 M1: Yeah, so this is to give you an idea of a human-machine  
122 network. Now, we have the method, another aspect we're going  
123 to be talking about. This is based around supporting and  
124 enhancing a methodology, an ISO standard on human-centred  
125 design, which is green at the bottom here. Which is a cyclic  
126 methodology where if you're creating a new system and you're  
127 going through an initial stage of doing some context analysis  
128 and then collect user requirements and then work on some  
129 designs and then go to evaluating the designs. But then you  
130 want to go back and do any of these steps as you're iterating  
131 through. Now, for human-machine networks in particular we have  
132 broken down some of the steps of the method in HUMANE into  
133 five, and some of them have got two steps but they're part of  
134 the same purpose, if you like. So in the beginning, as you're  
135 establishing the context of the network it's to say things  
136 like what exactly is the purpose of the network? What are the  
137 objectives? Now, we need to have a good idea about that for  
138 some of the things that come later if we want to look at what  
139 are the implications of certain designs are? Are they going to  
140 meet the objectives, and so on? Now, using the typology, that  
141 I haven't said so much about already, we then at step two  
142 start to describe what the network might look like. Now, the  
143 typology, we'll talk about it in more generic terms. We're not  
144 drawing pictures of architectures and so on. What we're  
145 talking about is more the properties of the network. It's  
146 describing things about the types of agents that are there,  
147 the humans if you like, or the machines. The way in which they  
148 might behave and so on. But also you can start to draw up a  
149 diagram of what this might look like, like we saw in the  
150 previous slide, to get an idea of who they are, what's the  
151 relationships between them and so on. And that can, for

152 example, facilitate requirements elicitation with other  
153 people. If you've got cross-disciplinary teams, some of them  
154 are not technical. So going in with something a bit high level  
155 can be quite useful and that is easily understandable. Now, in  
156 step three in the project we're looking at trying to help  
157 people who are designing by learning from other networks that  
158 exist. They could be similar networks that try to do the same  
159 things and they have similar properties. Then we start to look  
160 at what are the implications of the designs that we have. And  
161 I've mentioned design patterns earlier to help or hear some  
162 possible solutions. And that could come from other existing  
163 networks through a tool that we'll talk about in a bit. And  
164 then finally it's a direct mapping with the methodology where  
165 you evaluate a design based on, say, what you're hoping to do.  
166 So a profile that you create in step two, if you're starting  
167 up with designing a completely new system, well here is what  
168 we're aiming for and you can evaluate that against that for  
169 example. Or if you have an existing network that you want to  
170 improve on, you might do a profile of here it is now but also  
171 here is where we want to get to. So the idea of the evaluation  
172 step is to use that. We won't do that in this group though,  
173 but just to give you an idea.

174

175 So for the purposes of this focus group we do need to agree on  
176 a network that we can use to discuss for doing some of these  
177 things. Some common examples that I've put up here, Facebook,  
178 Twitter, YouTube. You're all familiar with that. But I just  
179 wanted to open up to you if there are any particular networks  
180 that you are familiar with that we can agree on using for the  
181 purposes here. The idea is to have something that all four of  
182 you can know about in some detail in which you can at least  
183 identify the different actors, what their responsibilities  
184 are. So any thoughts?

185

186 P1: Facebook.

187

188 <agreement among other participants>

189

190 M1: Yeah?

191

192 M2: Anything else?

193

194 P1: LinkedIn.

195

196 P2: Snapchat.

197

198 P1: WhatsApp.

199

200 P2: University email?

201

202 M2: Is that a network?

203 <laughter>  
204  
205 P2: I don't know...  
206  
207 M2: ... I don't know, maybe it is?  
208  
209 M1: Okay, if we take Facebook as a network. So what are the  
210 different actors? Just so that we can establish some common  
211 understanding. We'll start with some human actors in the  
212 network.  
213  
214 P3: The people who are actually on Facebook. That are actually  
215 communicating through it.  
216  
217 M2: When you say that, what do you mean, like friends?  
218  
219 P3: Yeah. So you've got friends and then friends of friends.  
220 There's also all the, I guess the organisation and stuff like  
221 that and then groups and stuff like that which are groups of  
222 people and groups of friends.  
223  
224 < silence while participants think >  
225  
226 M1: So are we satisfied that that's the human actors covered?  
227  
228 M2: What about Mark Zuckerberg?  
229  
230 P1: What perspective are we taking? Are we taking it from the  
231 users' perspective or in general top-down?  
232  
233 M1: In general to cover as much of the picture as you like.  
234 Let's say this is from the perspective of, you know, if Mark  
235 asks you to help improve Facebook.  
236  
237 P3: It depends whether Facebook, the people that work for  
238 Facebook that use the system. I don't know whether there's  
239 like a phone line, you can call up to reset your passwords and  
240 things like that. But there might be stuff like that. People  
241 that actually work for Facebook that actively, and then  
242 there's obviously developers and stuff like that.  
243  
244 M1: So what about machines then?  
245  
246 P2: Individual computers that everyone is on to connect to it.  
247  
248 M2: Is it just computers?  
249  
250 P2: Or other devices.  
251  
252 P3: There's probably different types of bots that they have  
253 and then there's advertising and all that sort of stuff they

254 have that goes through that. So all that stuff that links into  
255 different networks like Amazon and Google. It uses all that  
256 information to load adverts and stuff like that.

257  
258 M2: Bots is another machine?

259  
260 P3: Yes. As almost like an entity within it that's acting as a  
261 human as well. Like chat, there might be. I don't know if  
262 there is chat bots on Facebook actually but there is different  
263 things like that or in different networks anyway.

264  
265 P1: There is < reference to chat bots in Facebook >.

266  
267 M2: Your access devices, you got bots..

268  
269 P1: Servers. <agreement from others>

270  
271 M2: And are the servers different things, the databases or  
272 databanks.

273  
274 P3: Probably are separate. Then there's the entire frameworks  
275 of... With the servers obviously if they got them split over all  
276 different countries but the same instances running but in  
277 loads of different places. And I guess the networking  
278 structures for that as well.

279  
280 M2: And is it a private network or is it public?

281  
282 P2: It depends which bit you're looking at I guess.

283  
284 P3: Can you access Facebook and look at people without an  
285 account? I don't think you can. I don't know whether it forces  
286 you to log in.

287  
288 P1: You can look at organisations' pages and preview groups  
289 and view public profiles.

290  
291 P3: So there are public networks from when you're outside. For  
292 people that aren't your friends directly it would obviously be  
293 private I would guess because you can't see any of their  
294 information. But there is also the public aspect of all the  
295 people you can see of the people you are friends with.

296  
297 M2: I meant public and private in a different way, but that's  
298 okay.

299  
300 P1: It's probably mostly public.

301  
302 M1: OK, so where would you draw the boundary between the  
303 Facebook network, especially if you were talking about going  
304 into other products? You mentioned Amazon and so on.

305 P3: Probably very difficult.

306

307 P2: I don't understand what you mean, sorry.

308

309 M1: So Facebook, if you look at it as a network with bots it's  
310 not just a self-contained thing then? Because if it goes out  
311 to other networks, if you like. To scope it at one place. So I  
312 would suggest for what we do here really we could reflect the  
313 connection points to other networks, let's say, but not go in  
314 to how does the Amazon network look like. But it does mean  
315 that there's quite a lot of potential data or input or  
316 something like that from other networks, let's say, sources of  
317 information I think is the key thing that you mentioned and  
318 how it's used.

319

320 M2: And are there other people or agencies who are not  
321 specifically part of Facebook that are interested in Facebook?

322

323 P3: Analytics. All of the data you can get from people's  
324 profiles, what they're looking at, all that sort of stuff. So  
325 there's quite a lot of stuff linked, especially news sites and  
326 stuff like that. Because on the side of Facebook you can see  
327 what's trending and what new people are looking at. So there's  
328 all that sort of stuff as well. And even if you don't use  
329 Facebook you can go on to the BBC and click "share with  
330 Facebook". It's still linked in ways.

331

332 M1: Ok, that's good. I just wanted to discuss these things and  
333 to also get an appreciation for how extensive the network can  
334 actually be if you're using it just between your friends.  
335 That's one aspect of it. And as we move through these tasks  
336 that we're going to have as part of the method just try to  
337 bear those things in mind. The first thing is about  
338 establishing what is the purpose and objectives of Facebook as  
339 a network. So if we take the first, if you talk about a  
340 purpose, we can think of it as why does the network exist or  
341 should it exist? Why is it there?

342

343 M2: No it shouldn't.

344

345 < laughter >

346

347 < Step 1 of the method >

348

349 M1: So if you take the purpose just first and then we can get  
350 to objectives, any thoughts?

351

352 P4: It's to connect people. So, for example, by chat bots,  
353 hosts.

354

355 M2: Has that always been the case?

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P4: Chat has been there since the beginning.

M1: So why connect people?

P4: Well, Facebook, for example, you have access to the Internet you don't have to use your phone, you can, say, on your computer, just open up a tab on Chrome and send a message, but with your phone you can write a text message which costs. I think that's one thing, convenience will be one of the points.

P2: Is it instant messaging?

M1: <writing on whiteboard> To me this is communication and what we're talking about so far is social communication. Any other thoughts? It could be different things. I'll put it up as bullet points.

P3: Probably for information as well. So especially Facebook now. There's lots of events management and all that sort of stuff. And I use Facebook mostly for that now. So it's effectively managing. It just because everyone has got it now it's just an easy thing to do events and all that sort of stuff. So it's almost like, well I guess it's sharing information but not in the sense of you are communicating with one person you're doing it with as many people as they want to have.

P2: Adverts and stuff.

M2: Which is going away from the original just connected.

M1: So why would Facebook do advertising?

P4: To make money.

M1: So here's an interesting one. It's not necessarily part of this but useful to think about. So we started with this social networking, connection with people and so on. I don't know whether Mark had this thought in his mind already in the beginning or whether that was something that came as it evolved and seeing opportunities. But this is also why for us with HUMANE we're not talking about just designing a new network from scratch but they evolve, they change. And their purpose might change as well. You could have a core purpose that stays throughout but there could be other things. Just to pick up on the events stuff that you said. From your perspective is that more about the social aspects or are you thinking for the businesses as well?

407 P3: Yeah, it would work both ways really.

408

409 M1: Okay, I'll put it as two things. So if we then move on to  
410 objectives, how can we achieve any of these things. Let's take  
411 the latter just to start with that. About financial  
412 revenue/advertising. In a way that is a way of getting  
413 financial revenue. But if you were try to break it up into  
414 let's say some objectives for Facebook - how can we get as  
415 much money as we can, for example, whilst not compromising on  
416 the social networking side, which is why a lot of people are  
417 using it.

418

419 P3: It would be making it unobtrusive so it doesn't, you know,  
420 making it so it doesn't annoy people while there are adverts.  
421 So the adverts could be there down the side but it's in a  
422 space they don't use. So they don't really care that much.

423

424 P2: You could make them relevant to the user and then they're  
425 less likely to be annoyed.

426

427 P3: I guess there's also the case in Facebook whether they  
428 sell personal, not necessarily selling personal data but  
429 selling data about what they've posted and stuff. So the  
430 person wouldn't know that it's necessarily happened but  
431 Facebook could sell certain information about them. Who is  
432 looking at this and who is looking at that, and that sort of  
433 stuff. Whether they do is another point. So making it so they  
434 don't actually know it's happening.

435

436 M1: Ok. It's an interesting one. I need to figure out how to  
437 phrase that. Because most of us probably don't know but do you  
438 think an organisation like Facebook would be able to just do  
439 things in a hidden way and get away with it. Or do you think  
440 they need to do some things to achieve it and if so what sort  
441 of things might you think they do. <silent pause while M1  
442 writes on whiteboard> So where I'm coming from is ethics.  
443 We've had to get ethics approval for doing this and we ask for  
444 your consent, typically, as a participant and so on. So as  
445 you're signing up for Facebook or any other service..

446

447 P1: Terms and conditions.

448

449 M1: Yeah, lots of T and Cs. Okay, so let's leave that for now.  
450 Let's go to the first one about the social aspects, connecting  
451 people. What sort of objectives, how would you achieve being  
452 able to connect people?

453

454 P3: Making it free.

455

456 M1: And then you kind of see this link between <reference to  
457 advertising> this is a way to allow it to be free for people.

458  
459 P2: Make it easy to use.  
460  
461 P3: And easy to find people as well.  
462  
463 P2: And it needs to be safe.  
464  
465 M1: Safe in what way?  
466  
467 P2: Well, you can't have like creepy people finding children  
468 online, stuff like that.  
469  
470 P1: Privacy control.  
471  
472 M1: Ok, so I've put privacy behind that <reference to  
473 whiteboard>, so that's where I think of it. Any other  
474 thoughts?  
475  
476 M2: It needs to be accessible from anywhere.  
477  
478 P2: It needs to be fast.  
479  
480 M1: Did anybody actually see the movie about Facebook? <heads  
481 shaking>. This made me think of something, because I did see  
482 it. Whether it's true or not, the character playing Mark  
483 Zuckerberg said it was important that it was fast with no down  
484 time, you know, people won't tolerate it. So that seemed to be  
485 quite key.  
486  
487 M2: So, reliable then.  
488  
489 M1: I think we have quite a good set of things there so let's  
490 move on so we don't spend so much time on that. So here are  
491 some specific questions about this activity. Now, was it  
492 obvious to you what the purpose of Facebook might be?  
493  
494 P3: I think initially when you think about it, it is, but  
495 there's also all the other ones, obviously like the  
496 advertising stuff, that you wouldn't necessarily think about  
497 when you're logging in and you're using it. So yes and no.  
498  
499 M1: And objectives, was that something that you found  
500 straightforward to think about?  
501  
502 P3: I would say so. Just because it's what we use and so we  
503 know what we want from it. It's what would annoy us if we were  
504 using it.  
505  
506 M1: So in general you found it fairly straightforward to do  
507 this sort of thing? Okay, there's nodding. Any other feedback  
508 on this part of what we've done so far? No. I'm going to leave

509 that up here because we might make references to that later  
510 on. But we'll move on to step two.

511

512 < Step 2 of method >

513

514 M1: So here is where we talk about creating a network profile  
515 and network diagrams and I'll introduce the HUMANE typology.  
516 So a bit of information that you've had so far, you will have  
517 at least seen the names of various dimensions. And there's  
518 eight dimensions as part of the typology. They can be grouped  
519 into layers, that you see on the left. So there's two  
520 dimensions per layer. The first one is a way to describe the  
521 actors, the agency of them, the humans and machines. And that  
522 you can view as the capacity for what they can do. So you can  
523 think about different types of roles that a human could have  
524 in a type of system that is a network. Some can do more than  
525 others, for example. And something for machines, you could  
526 have sensors that are a bit more passive, let's say, and you  
527 have others that are doing some analytics and might take  
528 actions. Some of it can be of a critical nature and so on. And  
529 when we talk about interactions, tie strength is really about  
530 the social connections between people. So this might be a term  
531 that some of you have come across. So here we're talking about  
532 four different things really, that have been described in some  
533 literature. There can be, for example, no ties between people  
534 in a network, i.e. they don't communicate and they don't  
535 necessarily see each other. In Facebook, clearly you do have  
536 connections; you have friends so that would be more towards  
537 the strong ties, on the right side of it. People that are  
538 close to you, you communicate often with. But you might also  
539 have some more loosely connected friends, let's say, like  
540 people they've met but don't communicate with that often. So  
541 for Facebook you might actually have a bit of a mixture. Now,  
542 for some networks no ties could be if you have Amazon  
543 Mechanical Turk, for example, where there are lots of people  
544 who are involved. It's a crowd approach to evaluating  
545 something or doing some tasks and they might do things  
546 completely independently and never see the other people. But  
547 they still form part of what we can call a network. Then we  
548 have a dimension on the interactions between people and  
549 machines. This one is a bit more on describing the nature of  
550 those in terms of whether people rely on the machines or even  
551 depend on them. So the distinction between those two terms  
552 that I used, and M2 please correct me if I'm not very accurate  
553 in this. If you're relying on a machine it could be the way  
554 that the machines help you do something but if the machines  
555 fail you can do it in another way. Whilst dependency would be,  
556 well, if the machines fail you can't necessarily do what you  
557 need to do. An example of that is if you're on life support  
558 you're depending on the machine to keep you alive and if the  
559 machine dies then you might die, essentially. Then we get on

560 to the network layer, perhaps a bit more straightforward. The  
561 network size. In the project we're talking about the human  
562 nodes, small, medium, large, huge, whatever. Facebook, you  
563 kind of say that's quite on the massive scale. Geographical  
564 space. Because you can have some networks that are very local  
565 in a small area or it could be national, international and so  
566 on. Workflow interdependence, that says something about the  
567 kind of behaviour between people in a network but it can also  
568 be with, let's say, the example I had with Amazon Mechanical  
569 Turk is that one person doing a task, that person doesn't  
570 depend on another person having done something first. It's all  
571 completely independent. So in that sense you can say it's  
572 quite a low interdependence. However, if you have networks  
573 where you need people to collaborate, perhaps do things in  
574 certain sequence, that's where there's a lot more  
575 interdependence between them for the network to do what it  
576 needs to do. Finally, about the organisation of the network.  
577 We're here talking about whether it's top-down or bottom-up.  
578 Top-down would imply there's quite a structure put in place  
579 whilst bottom-up, it's more self-organised. Wikipedia, for  
580 example, started off very bottom-up. You have a platform where  
581 people can create articles and write whatever really. Now,  
582 over time that has evolved a little bit to be more top-down in  
583 the sense of legislations and policies that they need to  
584 follow, providing some structure, and there are bots that go  
585 around to check things and that sort of thing. Another example  
586 about a top-down network is the Citizen Science portal called  
587 Zooniverse started off like that. There was a very specific  
588 project where they asked for help with classifying galaxies  
589 and so on. Now, that's been evolving to the other end where  
590 people can themselves propose new projects to be done. So  
591 based on these dimensions, and you see some indications of  
592 scales here, you can visualise the profile, this is why the  
593 term is being used, as a spider diagram. Where, if you say for  
594 Facebook, for example, the network size is big, well that  
595 would fall on the outer perimeters and so on. So what I'd like  
596 to do is go through an exercise of creating a profile for  
597 Facebook. I'm going to use the tool that has been created in  
598 the project to do so. So we'll have a play with this a bit  
599 more later on, but for now it's profiling Facebook. I hope  
600 we'll be able to see and read. Can everybody read what they  
601 see on the screen?

602

603 P1-4: Yeah.

604

605 M1: So, the approach that the project has taken in the second  
606 iteration of the typology with this tool is to help with  
607 figuring out what the values of each dimension should be. By  
608 creating a series of statements that you can say whether you  
609 strongly agree to it or on a scale towards strongly disagree  
610 for each of the dimensions. So for the network actors, I said

611 about human and machine agency, we have these statement below.  
612 I'd like to go through them and let's try collaboratively to  
613 agree some values. So for the first one about the activities,  
614 can people perform a diverse range of activities in Facebook?  
615 Would you say that you strongly disagree or disagree, on the  
616 fence, agree or strongly agree?

617  
618 P3: Well... They can do... <thinking out loud>

619  
620 P2: I'd say agree.

621  
622 P3: Yeah.

623  
624 P2: Because you can do things like play games and talk to  
625 people and set up events and stuff.

626  
627 P1: I would strongly agree.

628  
629 P3: There is quite a lot of stuff you can do. Even in the  
630 messaging you can do whatever you want more or less but it's  
631 not much.

632  
633 P1: There's a lot of stuff people do, do but there's a lot  
634 more stuff people don't do that they can do.

635  
636 P2: You couldn't do something like write a report or draw a  
637 picture, like you could in Paint or Word or anything.

638  
639 P3: There is probably plugins and methods to do that. You can  
640 draw pictures and stuff.

641  
642 P2: You can do that, I see my friends pictures.

643  
644 M1: Okay, so if I leave it here, there was some strongly agree  
645 to a bit of reservation or not completely there because  
646 there's some limitations. Let's move on. So can people  
647 interact freely and influence other participants in the  
648 network, whether they're humans or machines?

649  
650 P3: They interact freely more or less, for what they want to  
651 do. So they can publish stuff they want and stuff like that.  
652 But I'm not sure they would influence. Well, it's up to the  
653 people if they influence people.

654  
655 M1: But do they have the capacity to influence, let's say?

656  
657 P2: Yes, because they could give their opinion and do whatever  
658 they want. So, yeah.

659  
660 M2: That happened in the studies as well didn't it.

661

662 P3: Yeah, exactly.  
663  
664 P2: Yeah, it would influence people.  
665  
666 P3: I would say strongly agree.  
667  
668 P2: Because if you see a lot of your friends agree with  
669 something, like if you see it a lot it might.  
670  
671 P3: Also there's the entire trending stuff and things like  
672 that now which obviously influences people because that's what  
673 they see first. So that's what they're looking at rather than...  
674 so they're looking at what everyone else is looking at not  
675 what they necessarily want to look at, or they should be  
676 looking at.  
677  
678 M1: Yeah, so strongly agree on this?  
679  
680 P2: I would agree, yeah.  
681  
682 P3: Yeah.  
683  
684 M1: Now, this is about the openness of the activities. Whether  
685 people can do activities that allow them to express themselves  
686 freely, show their personalities, be creative and perhaps do  
687 unpredictable things with Facebook. Let's say Facebook created  
688 it thinking, well, this is what people are going to do but  
689 maybe people can do other things that they didn't think about.  
690  
691 P1: I would only slightly agree because it's very structured  
692 in Facebook. It's not like they expect you to post a status  
693 and you end up, I don't know, doing something else with it.  
694 You post a status.  
695  
696 P2: I don't think they get your personality across as like  
697 Skype or something that shows you. But I think it does convey  
698 a lot. But it's what you want to show rather than all of it.  
699  
700 P3: And I guess there is some controversy around "freely" as  
701 well. Because obviously Facebook has been removing posts and  
702 stuff like that which they necessarily shouldn't have been. So  
703 there's stuff around what they will allow you to show. Because  
704 there's obviously groups and stuff which are racist and all  
705 that sort of stuff on Facebook as well and they're not  
706 necessarily shut down but then they'll shut down other things.  
707 But I think it is still slightly agree. Because you can still  
708 do what you want within reason.  
709  
710 M1: Now, this <referring to achieving goals> is quite specific  
711 to traditional definitions of agency. People who use Facebook  
712 will use it for a purpose. They might have some goals for

713 themselves consciously. It might be a funny term to use here.  
714 And there could be things that they may not be able to do  
715 without Facebook. For example, for me, well I'm originally  
716 from Narnia. I've got friends and family all over the world.  
717 So for me it might allow me to connect with people in a way  
718 that I couldn't before. So what do you think about this in  
719 general then for Facebook?

720

721 P4: It can help to network, for example. As in a business  
722 setting you could use that. But also on the other hand, and  
723 this slightly depend on people I guess, it sometimes makes  
724 them not achieve goals actually, for example by  
725 procrastinating, which happens a lot. So you could view it  
726 that way. But it happens a lot. So, yeah.

727

728 P1: Yeah, but if you use Facebook to like ask how to do a  
729 maths problem to your friends and you wouldn't remember the  
730 specifics the next day you would have wasted an extra hour  
731 solving it. It would help you achieve your goal.

732

733 M1: So what you've just said there is a good point. So about  
734 agency it's a way in which you might achieve things through  
735 others. It's not just through the technology but the other  
736 people who are using it as well. So where on the scale would  
737 you think then? Is this towards the agreeing end then, at  
738 least, or in the middle?

739

740 P3: I would say it's slightly more towards the agree.

741

742 P2: Yeah.

743

744 M1: Similar to the one above maybe?

745

746 P3: Yeah.

747

748 M1: Ok, let's crack on. So about the machines, can they do a  
749 diverse range of things in Facebook do you think?

750

751 P3: Does machines include things like bots and stuff like that  
752 as well as servers?

753

754 M1: Yeah.

755

756 P3: Up to a point maybe. If they are doing data analytics and  
757 stuff like that they have to be able to pull a lot of data off  
758 those things and stuff that may necessarily be new or  
759 different to what they can do. But it is still just a set of  
760 activities that they can do. It's not necessarily diverse as  
761 in you could choose to... Well, I guess you could... You could  
762 look at any analytic you wanted to within Facebook. So if  
763 there were people looking at certain things or something else

764 you could switch and say, no, I want to look at this or look  
765 at that or an aggregate. So, maybe. I don't know.

766

767 M1: Thoughts from anybody else?

768

769 P1: Yes, they can. I mean, they've got bots, although they're  
770 programmed by a user, but they're programmed to respond to key  
771 words and that kind of thing. So the response is dynamic and I  
772 would say that counts as a diverse range of interactions, at  
773 least.

774

775 M1: Ok. So in a way what you're saying is that you have bots  
776 that can do what people can do on Facebook?

777

778 P1: Maybe, yeah.

779

780 P2: If you have things generating adverts and stuff, they're  
781 limited to like you don't get adverts if you go on to the  
782 messenger part of Facebook and stuff. So I think they are  
783 limited. So maybe not strongly agree.

784

785 M1: So we have a mixture of things. What do you guys feel in  
786 general? Is it more towards the agreeing end?

787

788 P1: Yeah.

789

790 P4: A bit, maybe, I would say it is.

791

792 M1: Now, can machines interact freely with and influence other  
793 participants in a network? Could they, for example, help  
794 people achieve things that they couldn't achieve on their own?

795

796 P3: I think they can influence other participants and  
797 especially the human element by just choosing which posts to  
798 post. So they can block news sites from some people and keep  
799 it from other places. So there's been quite a lot of stuff  
800 like that with the US elections and CNN blocking articles that  
801 are bad about Hilary or changing stuff like that. So I'm sure  
802 Facebook does something similar or it could do anyway. I'm not  
803 sure about achieving goals though. I guess, I don't know, if  
804 it's not broadening their horizons and forcing them down to a  
805 narrow view instead of giving them a wide range of information  
806 to chose from, I don't know whether that's achieving goals or  
807 not. I wouldn't have thought so.

808

809 M1: If you take the example given before, if you ask peers for  
810 help about something they can support. Is that possible on  
811 Facebook to be done by machines? Are there bots that help with  
812 that?

813

814 P1: The bots aren't great.

815  
816 P3: They need some interesting conversations.  
817  
818 P2: It's not like Google or anything.  
819  
820 M1: So in general this sounds like you might be...  
821  
822 P2: Disagree.  
823  
824 M1: Yeah, so there's a bit of it but not quite. How far down  
825 do you think? Is that about right?  
826  
827 P3: Probably, yeah.  
828  
829 M1: Ok. Now, the activities that the machine agents could do,  
830 would you consider them to be quite open and are they able to  
831 be quite dynamic and do creative things, let's say, be  
832 unpredictable? You've already described things for bots for  
833 advertising and so on. Now, for the advertising stuff I would  
834 imagine it's a bit more fixed, let's say, but for the bots  
835 maybe more open?  
836  
837 P1: Yeah. But it would change the advert depending on what  
838 you've recently searched for and what you're interested in. So  
839 that's quite dynamic.  
840  
841 < silence while people think >  
842  
843 M1: So where would you rate this?  
844  
845 P1: I'd say slightly disagree.  
846  
847 P4: I'd be in the middle.  
848  
849 P2: Yeah, I'd be in the middle.  
850  
851 P3: I'd probably go slightly disagree as well. Because I think  
852 there's a reasonable structure to what they can do and they  
853 can't necessarily perform outside of that. So the things for  
854 the advertising can't go and load an advertisement inside  
855 messenger. It can only do it in its specified box. So I would  
856 say slightly disagree.  
857  
858 P1: In the middle.  
859  
860 M1: So it's the middle of slightly disagree and neutral?  
861  
862 P3: Yeah.  
863

864 M1: Would you say that the behaviour of the machines in a  
865 human-machine network can be seen as intelligent and  
866 autonomous with perhaps human-like appearance of behaviour?  
867

868 P1: Yes, I would. When you load up Facebook it will say, Hi  
869 P1, it's clear weather in Rivendell today. Enjoy your day.  
870 That kind of thing. It's got the human interaction element.  
871

872 M2: How irritating is that?

873

874 < laughter >

875

876 M1: Right so there was an agreement there. Do you all agree  
877 with the agree?

878

879 P3: Yeah.

880

881 M1: So then we're on to the network interactions. Here we have  
882 the connections between people and people and then people and  
883 machines. So the first three questions here is about people to  
884 people. So are people in a network typically connected to one  
885 another by friendship or other close affiliation?

886

887 P1: Yeah.

888

889 P2: Yeah.

890

891 M1: How far up would you say?

892

893 P2: Agree.

894

895 P1: I would go in the middle. Because you also have external  
896 groups and organisations that you don't necessarily have a  
897 close affiliation with but you've had some interaction with  
898 them.

899

900 M1: So we can say in the middle. Are you thinking here?

901

902 P1: Slightly closer to the strongly agree.

903

904 M1: So what are the thoughts of the rest of you then?

905

906 P3: I agree, I think. I've got people in my friendship group  
907 and on Facebook that I don't talk to anymore. I might have  
908 once. Then there's all the things like group projects and  
909 stuff like that, that might add people.

910

911 P2: I think it's very clever. Like my dad hadn't used Facebook  
912 before and then he signed up a year ago. He was like all my  
913 old friends from school are just appearing. How does it know?  
914 He wasn't friends with any of them. It's quite good at working

915 out who you're friends with and people you've known without  
916 actually, like, even if you've not got mutual friends with  
917 them.

918  
919 M1: I would be intrigued as to how Facebook does that to that  
920 extent.

921  
922 P2: Yeah, we wondered that.

923  
924 M1: Okay, are people happy for me to leave it here then?

925  
926 P3: Yeah.

927  
928 M1: Because there's a mixture. Okay. Now, relationships  
929 between people typically last a long time, maybe let's  
930 emphasize typically. Because you've just described for some,  
931 yes, for some, no. So what do you think we should do about  
932 that?

933  
934 P3: I would say for the active connections they last a long  
935 time, probably.

936  
937 P2: I'd say Facebook alone doesn't make it last a long time.

938  
939 P3: Yeah, that's true.

940  
941 P4: I would say I slightly disagree. So, for example, in my  
942 case I have tried to limit the amount of friends I have on  
943 Facebook, which is right now 250 probably and I actively chat  
944 with 5 of them probably. And I would say that Facebook doesn't  
945 facilitate it by imposing a pretty high limit on the number of  
946 friends you can have. So you can literally randomly add people  
947 to friends and they're not even your friends, which happens.

948  
949 P2: Yeah, and there are a lot of people that if I was in the  
950 same room as them I'd talk to them but messaging them on  
951 Facebook would be weird because we're not that close. That  
952 would be strange. So now I just loose contact with them.

953  
954 M2: That's wonderful.

955  
956 M1: So again I'm getting a mixture of things here from  
957 agreement to disagreement. So based on these views where do  
958 you feel we should place the blue dot?

959  
960 P4: Leave it in the middle.

961  
962 P3: Yeah.

963  
964 P1: I think slightly on the disagree.

965

966 P4: I would probably say that as well, yeah.  
967  
968 P3: I'd say in the middle.  
969  
970 P1: When we used the word relationship what do we mean, like  
971 are we actively connected or in general just being connected?  
972 Because if it's like a passive thing then I would strong agree  
973 with it but if it's an active thing then I would strongly  
974 disagree. I guess in the middle.  
975  
976 M1: Indeed you're picking up on interesting aspects that make  
977 this a bit challenging. So we've got various in the middle to  
978 slightly disagree so if I just put it slightly off the middle.  
979 So reciprocation, would you say that people are mutually  
980 supportive in the network?  
981  
982 P1: I would slightly agree because there is a kind of mob  
983 mentality if you're trending. If someone likes something it  
984 becomes a top story and someone else sees it and so everyone  
985 is liking that post or commenting on it and it builds up like  
986 that.  
987  
988 P2: Yeah, you share things with your friends.  
989  
990 M1: So we're on the agreement spectrum. How far up?  
991  
992 P3: Reasonably far up.  
993  
994 M1: Right, so now we get on to the relationships between  
995 people and the machines. Now, would you say that people trust  
996 the machines?  
997  
998 P3: Yeah. When you say trust is that sort of every aspect? So  
999 does that mean downtime? So I wouldn't trust that when I log  
1000 on to the Facebook app it's going to load straight away and  
1001 work. Or does it mean protecting data and stuff like that? Or  
1002 does it mean all of it?  
1003  
1004 M1: I guess all of it really. I mean, do you trust in the  
1005 service that Facebook offers to you and what they say they  
1006 will do for you?  
1007  
1008 P3: I would say most aspects I probably do trust them.  
1009  
1010 P2: You can get some funny looking links in your news feed and  
1011 stuff and if you click them they're basically lots of ads and  
1012 stuff. I don't think there's much trust of some stuff.  
1013  
1014 M1: So in general you trust but not for everything?  
1015  
1016 P3: Yeah.

1017  
1018 M1: You sound a little bit more sceptical.  
1019  
1020 P4: I'd leave it in the middle. Personally, for example, there  
1021 are some... I've seen a couple of cases where a particular  
1022 friend's account, maybe he/she had logged out or their account  
1023 had been hacked and then they basically shared those weird  
1024 photos. You click on the link and then you, for example,  
1025 instantly like a page and then it is a bot. And I think that  
1026 content should be quickly filtered by the bots, so by the  
1027 machines. So in that sense I would either leave it in the  
1028 middle or slightly disagree. That's based on my experience.  
1029  
1030 P2: Yeah, there's a lot of click-bait.  
1031  
1032 P3: There is a lot. But that's just annoying.  
1033  
1034 P2: And I know people who have got viruses clicking links and  
1035 things.  
1036  
1037 M1: So there are some aspects that you don't trust but then  
1038 there's others that you do trust. Shall we leave it in the  
1039 middle? Does that reflect it OK for you?  
1040  
1041 P3: Yeah.  
1042  
1043 M1: Now, reliance, would you say that people tend to accept  
1044 what the machines do and would rarely intervene with it? I  
1045 think that's an interesting one to consider if you're  
1046 mentioning click-bait. Because that to me would imply that  
1047 people are just clicking without thinking about it.  
1048  
1049 P3: I think people probably do, do that. They do rely on  
1050 everything being secure and click on everything. They'll think  
1051 that their account will always be secure, no matter what  
1052 password they use. But then it's not necessarily the case. But  
1053 people do click on things they shouldn't and get things they  
1054 shouldn't. But then that might be down to the people who use  
1055 it rather than all the types of people.  
1056  
1057 < silence while thinking >  
1058  
1059 P2: I don't know if accept is the right word. Like if you  
1060 don't like the way Facebook is formatted you just won't use  
1061 it. It's more like I'll live with loads of adverts that come  
1062 up and the weird links that appear so I can look at what my  
1063 friends are posting and stuff. It's just part of what you sign  
1064 up for.  
1065  
1066 M1: Ok, so in a way you do accept it but reluctantly. You  
1067 prefer not to have it.

1068  
1069 P2/3: Yeah.  
1070  
1071 M1: So where would you put this slider?  
1072  
1073 P1: I would slightly agree. There are some cases but this is  
1074 accounting for rare intervention so I guess it's kind of true  
1075 in that respect.  
1076  
1077 M1: Ok, does that seem OK? <agreement from participants>  
1078 Right, final one for this layer. Would you say that people  
1079 depend on Facebook to do what they need to do with socialising  
1080 or networking for business purposes and so on?  
1081  
1082 P3: I would say they probably do, although they could find  
1083 alternatives. Like quite a lot of the events that goes on  
1084 around here are all on Facebook.  
1085  
1086 M1: So just bear in mind what I defined dependency as before  
1087 would be you won't be able to do it if it's away. Life  
1088 support, for example. What if Facebook is down? I'm not  
1089 talking about temporary down time but what if Facebook stops  
1090 existing and working? What would that mean for the people  
1091 using Facebook.  
1092  
1093 P3: They'd have to find an alternative which would probably be  
1094 more inconvenient. Because Facebook is set up really well to  
1095 do it. So for me, you'd probably find an alternative for  
1096 everyone to arrange and do stuff on but it would just be more  
1097 inconvenient I think.  
1098  
1099 M1: So it could, but inconvenient. Thoughts from anybody else?  
1100  
1101 P4: Some people like, for example, celebrities. Not even  
1102 celebrities, there are those like really weird ends that I  
1103 would say inexplicable popular accounts, to me, which rely on  
1104 putting videos and getting likes and then doing other things.  
1105 So sometimes it is a major social thing for those individuals  
1106 behind those accounts. In that case I would say that they do  
1107 depend on that. For example, for myself that wouldn't really  
1108 matter. So it strongly depends on what you want to achieve  
1109 with Facebook. What are your goals?  
1110  
1111 P3: There is probably the connecting with people aspect as  
1112 well. So people I have talked to previously and I added on  
1113 Facebook years and years ago, if Facebook went down I wouldn't  
1114 seek out and go and talk to them and find a new way to talk to  
1115 them. Because I don't talk to them. But then again on Facebook  
1116 if I saw they were doing something, like they'd gone to an  
1117 event in the area or something, then I might go and go and  
1118 meet up with them. So I guess there is the aspect of

1119 networking with people that you don't necessarily talk to that  
1120 much. So family might be miles a miles away or something like  
1121 that. So you might lose that aspect as well.

1122

1123 P4: Then I guess if you really wanted to connect with those  
1124 people you'd probably find a way. <P3 agreement> If you really  
1125 wanted to have that connection. That would probably not matter  
1126 to you that much if Facebook went down. If you had a friend  
1127 which you've known for 10 or so years you'd probably find him  
1128 either way I guess.

1129

1130 P2: I think it would make it harder for certain people to stay  
1131 in contact. <P3 agreement> Like if you have to go to a lot of  
1132 effort you might be like I just won't. Like I've got friends  
1133 who live, because they've all gone to uni so they're all over  
1134 the country and stuff. And it's like it would take me a whole  
1135 year and a lot of money to just go and visit them all. Whereas  
1136 we can have a nice group chat and just talk. It's much easier.  
1137 But, I don't think I'd personally seek them out, and like send  
1138 a letter or something or go and see them.

1139

1140 M2: Do you remember letters?

1141

1142 <laughter>

1143

1144 P2: I'd have to find a postbox first.

1145

1146 M1: So I'm not sure where we end up then because what I hear  
1147 is it depends a bit on the person using it and what their  
1148 goals are. I thought what you said in general was we were  
1149 leaning more towards agreeing spectrum.

1150

1151 P3: Yeah, I'd say so.

1152

1153 M1: Same as the one above or higher?

1154

1155 P2: Same as the third one down.

1156

1157 M1: In a way the aim of this isn't to get the perfect correct  
1158 thing. It's really interesting what we're capturing from the  
1159 discussions and what we need to consider to do this. Right, so  
1160 now on a network, workflow interdependence. Here we talked  
1161 about do people need to be coordinated, for example, to  
1162 achieve something using it or can people do stuff completely  
1163 independently. So the first one, do people have to interact in  
1164 a coordinated manner on Facebook? There's a shaking of a head.

1165

1166 P4: I don't think... You probably could use Facebook entirely on  
1167 your own and not have friends. Although surely not be the full  
1168 experience... <laughter> But that's kind of the point, to

1169 connect to people, as we discussed. If it's required then, no,  
1170 it doesn't.

1171

1172 P2: Yeah. I've seen people call their friends out-of-line  
1173 terms, which obviously they think it quite funny between them.

1174

1175 P3: It's free in what they want to do so they can act in a  
1176 highly coordinated manner or they can speak in a way that no  
1177 one can understand. It's their choice.

1178

1179 M1: But Facebook itself doesn't require it. So I guess we're  
1180 on a disagreement scale at some point but how far?

1181

1182 P3: I would say probably most would disagree.

1183

1184 P2: Yeah, I haven't seen any monitoring and I've seen some  
1185 very weird posts.

1186

1187 M1: How does that feel? <agreement> I'm just going to crack  
1188 on. So the actions and communication between people in human-  
1189 machine network depends on the actions and communications of  
1190 others. It's very similar to the above.

1191

1192 P3: There is that aspect of it of sharing things and things  
1193 trending and stuff like that. It will catch more and more  
1194 people looking. You're looking at things that other people  
1195 have suggested you should look at, which is quite a lot of the  
1196 emphasis. But you can also then completely ignore all of that  
1197 if you wanted to. It's your choice at the end of the day. So  
1198 it doesn't necessarily depend on it but it can cause it. It  
1199 does kind of depend on it as well though.

1200

1201 M1: Does that leave us in the middle?

1202

1203 P3: Yeah... I think so.

1204

1205 M1: Would you say there's extensive collaboration between  
1206 people in Facebook?

1207

1208 <agreement from participants>

1209

1210 P3: Yes. The entire point is to come together and grow groups  
1211 and stuff.

1212

1213 M1: So do you think we're all the way up?

1214

1215 P2: Between people they want to collaborate with.

1216

1217 P3: Yeah.

1218

1219 M1: So a little bit less then maybe for those then?

1220  
1221 P3: Yeah.  
1222  
1223 P2: Yeah.  
1224  
1225 M1: Would you say that Facebook is a centralised top-down type  
1226 of structure?  
1227  
1228 P2: Do you mean like does it have a hierarchy?  
1229  
1230 M1: Yeah, so does Facebook, let's say, govern what people can  
1231 and can't do quite explicitly and so on? So an example I gave  
1232 earlier was with Zooniverse, the Citizen Science project. It  
1233 was more top-down in a sense that they created a project and  
1234 assigned tasks to people to help and so on. Versus the bottom-  
1235 up would be self-organised. With Wikipedia people can create  
1236 all sorts of things themselves.  
1237  
1238 P3: It is much more self-organised then. Because I can go and  
1239 create an event if I wanted to now and I wouldn't have to ask  
1240 Facebook for permission I could just do it. So it's much more  
1241 self-organising.  
1242  
1243 P2: They don't give you things to do in Facebook.  
1244  
1245 P3: And there isn't a specification as to what you have to do.  
1246 There might be a few boxes you have to fill in but you don't  
1247 have to do anything you don't want.  
1248  
1249 M1: Okay so this would be towards the disagreement then?  
1250  
1251 P3: Yeah.  
1252  
1253 P1: Yeah.  
1254  
1255 M1: How far? Do you strongly disagree with that or is there  
1256 some element that you still feel like its...?  
1257  
1258 P2: It does come up with notifications being like you haven't  
1259 updated your profile picture in a while or something or you  
1260 just befriended this person and talked them, but other than  
1261 that no.  
1262  
1263 P3: You still have to follow a set of things. There's only a  
1264 set of things you can create. You can't create whatever you  
1265 want to. You can only create an event you can't create  
1266 whatever you wanted. But you can still do whatever you want  
1267 within that. So, yeah.  
1268  
1269 M1: Now, would you say that the way that Facebook is organised  
1270 is stable in the sense that if stuff happens it's not going to

1271 suddenly... if everything goes pear shaped the structure is  
1272 lost, or?  
1273  
1274 P3: It has to be easily adaptable really because it has  
1275 adapted. So it's adapted to what it needed to do and stuff  
1276 like that. So, yeah, I would say so.  
1277  
1278 M1: OK, other views?  
1279  
1280 P3: It does easily adapt so it would be disagree.  
1281  
1282 M1: Shall we leave it there?  
1283  
1284 <agreement from participants>  
1285  
1286 M1: Would you say that Facebook is regulated by thorough and  
1287 detailed policies?  
1288  
1289 P4: It probably is but no one reads them.  
1290  
1291 P3: Yeah. I can't say I've sat there and read through all the  
1292 policies that I have to, to post something, but I can still do  
1293 it. So it's not really regulated but they're there and  
1294 probably if it got big enough and it was violating policies  
1295 Facebook would take it down. But if I posted something now  
1296 which violated one of their policies they're not necessarily  
1297 going to find it straightaway.  
1298  
1299 M1: I just heard on the radio some days ago somebody put up a  
1300 picture of a cat and it got taken down for some reason.  
1301 <laughter> I don't know what it was about the cat but I think  
1302 it's used in some advertising.  
1303  
1304 P1: Yeah, but people know there's an age limit and people who  
1305 are under the age can still join. So it's not really that  
1306 regulated.  
1307  
1308 M1: But they don't have <inaudible> policies. They do check  
1309 though with those things. They do check for names as well. If  
1310 somebody used a fake name and they picked up on it they would  
1311 need to change it.  
1312  
1313 P2: I don't know. My friends changed my name a long time ago  
1314 and no one has pointed out that it's obviously not my real  
1315 name.  
1316  
1317 M1: So you feel it's more towards disagree?  
1318  
1319 P3: Yeah.  
1320  
1321 M1: You're not sure?

1322  
1323 P1: I would say that I slightly agree. There is a huge  
1324 knowledge base, from the machine side. It is really regulated.  
1325 From the user side each member would only have the same  
1326 capacity for monitoring every day anyway. So I would put it on  
1327 slightly agree.  
1328  
1329 M1: So what's interesting is that within the group we have to  
1330 come up with one number. <laughter> So what you've said now,  
1331 you brought in the machine aspect as well which we haven't  
1332 discussed.  
1333  
1334 P3: There probably is quite a lot of the machine stuff like  
1335 that and all of the stuff that they go through obviously to  
1336 filter out those posts. But I don't know whether we  
1337 necessarily see it that much. Because you're not friends with  
1338 people that are posting stuff that's probably going to get  
1339 deleted.  
1340  
1341 P2: I don't think it filters the machine stuff that much, to  
1342 be honest.  
1343  
1344 P3: Well, you don't know because we don't know if it has  
1345 filtered it or not. There probably is huge <inaudible> behind  
1346 doing it.  
1347  
1348 M1: Shall we just leave it in the middle then?  
1349  
1350 P3: Yeah.  
1351  
1352 M1: The network. The size of the geographical distribution.  
1353 Would you say that Facebook has got a broad range of users?  
1354  
1355 P3: Yeah.  
1356  
1357 M1: Strongly agree?  
1358  
1359 P3: Yeah.  
1360  
1361 P2: Yeah.  
1362  
1363 M1: A large number of users?  
1364  
1365 P2: Yeah.  
1366  
1367 <laughter>  
1368  
1369 M1: Yes, I was expecting this would go fairly quickly <in  
1370 response to very quick and unanimous answers>. Would you say  
1371 that it's growing or is expected to grow very rapidly?  
1372

1373 P1: Yeah.  
1374  
1375 P3: Yeah.  
1376  
1377 M1: It includes members and sites of many countries or states?  
1378  
1379 P3: Yeah.  
1380  
1381 P1: Yeah.  
1382  
1383 M2: There are other Facebooks out there. They currently don't  
1384 have the Chinese on it. Russia has its own. Brazil has its  
1385 own.  
1386  
1387 M1: But yet people also find a way to use Facebook in places  
1388 like that so it's interesting. But in general, so they're  
1389 exceptions. Probably still leave it in the middle. Cultural  
1390 diversity, would you say that includes members across  
1391 different cultural groups?  
1392  
1393 P3: Yeah.  
1394  
1395 M1: And expanding large geographical areas is quite similar to  
1396 this. Okay, that's the end of it. Well done. We successfully  
1397 created a profile. Now we have this spider diagram where we  
1398 ended up with each of the dimensions here, high, intermediate...  
1399 Network size, geographical space very high as we agreed. In  
1400 the end we got intermediate on a couple of them. And a lot of  
1401 that reflected in a way that different people and different  
1402 machines do different things and we kind of have to find a  
1403 middle point in some cases.  
1404  
1405 < Step 2 of the method - drawing network diagrams >  
1406  
1407 M1: So I'm going to leave that for now and we'll get back to  
1408 the tool a bit later. So just have half an hour left so I  
1409 wonder if we need to cut something a little bit short or at  
1410 least let's do this task and not spend so much time on it. So  
1411 a couple of minutes on each of you to draw a network diagram  
1412 and the connections between them. I've got pens.  
1413  
1414 P2: Is it like the one on there? <referring to example on  
1415 slide of network discussed earlier>  
1416  
1417 M1: Yeah, similar to this. It's just to have an idea of what  
1418 we're drawing up. What are the different human actors that are  
1419 there, the different machine actors and how are they connected  
1420 in terms of the way in which they interact. So it's a bit  
1421 different to an architecture diagram.  
1422  
1423 <participants drawing network diagrams>

1424 M1: We're not looking for that same detailed structure, if you  
1425 like. So, how you label things is up to you. We have labelled  
1426 things here with things like strong and weak to reflect the  
1427 social ties. There's weak links between certain people or they  
1428 can be strong. You don't have to do it to that level but if  
1429 you can do something that describes it in your own words  
1430 that's useful.

1431

1432 <participants continue to draw network diagrams>

1433

1434 M1: OK? Before we discuss this there was one important I  
1435 wanted to ask about the profiling exercise that we just did.  
1436 Because when I tried to get back to where we were in the  
1437 slides, I accidentally skipped it. Were there any particular  
1438 challenges that you found in trying to do that exercise? Any  
1439 other feedback that you have?

1440

1441 P2: The ones with the machine were difficult. The ones where  
1442 we were talking about how the machine relates to the thing.  
1443 Because I've never seen bots on Facebook.

1444

1445 P3: I think it's probably quite hard on Facebook because it's  
1446 got so much. Just the machine counts for so much of the stuff  
1447 that Facebook does. Because we then do the averages or we use  
1448 the averages because we're not sure what sort of machines you  
1449 want or we're talking about anyway. You sort of take a general  
1450 guess as to that... With Facebook it's just because it's so big  
1451 and there's so much stuff going on and so much different stuff  
1452 that it does that it ends up being... I'm not sure.

1453

1454 M1: Any thoughts?

1455

1456 P1: I think the only issue is that we were all thinking of  
1457 perhaps different scopes for the network. This is why we  
1458 disagreed on some things.

1459

1460 M1: Ok, thank you. So about the exercise that we just did now,  
1461 drawing up network diagrams. Did you find that straightforward  
1462 to do?

1463

1464 P2: No, not network diagrams.

1465

1466 M1: So what were the challenges that you found in doing this?

1467

1468 P3: Just thinking of how everything connects together.  
1469 Although that's relatively simple because we know how it  
1470 works. It's thinking about all the other extra aspects as  
1471 well.

1472

1473 M1: Such as?

1474

1475 P3: All the other ones. We talked about advertisements and all  
1476 that other sort of stuff, personal data, the external data  
1477 sources and all that sort of stuff and how they interact with  
1478 people, or the end users anyway. But I guess most of that is  
1479 through the Facebook network. That sort of Cloud anyway that  
1480 you'd have.

1481  
1482 M1: So the other question I had on this is doing this kind of  
1483 diagram are there any particular insights that you see getting  
1484 from it. Although you're already been using Facebook  
1485 presumably for years.

1486  
1487 P1: You can pick up interaction patterns so you can see. For  
1488 example, a user is not just using a website they're  
1489 interacting with data banks through some pattern in the  
1490 network.

1491  
1492 M2: So would you have seen that without the diagram?

1493  
1494 P1: It's not something you really think about when you're  
1495 using a website. You don't think I'm changing this field in  
1496 this database you think I'm posting something on Facebook. But  
1497 if you're looking at the diagram you're looking at I'm posting  
1498 this status on Facebook, where is it going and what's being  
1499 done with it? So, yeah, I'd say you wouldn't see that without  
1500 a diagram.

1501  
1502 M1: Any other thoughts?

1503  
1504 P1: When you think about how much like where the data will go,  
1505 like the adverts and things. You rarely think about that when  
1506 you're like randomly scrolling through things and clicking  
1507 stuff and things. Then when you draw a diagram you're like, oh  
1508 yeah.

1509  
1510 M1: So I did have an aim but because of time I think it will  
1511 be a bit too much now to try and really compare what the  
1512 diagrams look like, and I don't think we need to converge on  
1513 anything for the next bit. I'm going to hand over to M2  
1514 because we're now going to talk about how we can use the  
1515 diagrams to do some implication analysis. I think we can still  
1516 open up and do that by looking at your own diagrams.

1517  
1518 < Step 3 of HUMANE method - implication analysis >

1519  
1520 M2: So as M1 said, part of the thing on the back of this is to  
1521 think about the implications as you go forward. So if you  
1522 think about..., we mentioned reliable as far as Facebook is  
1523 concerned so it has to be reliable. It has to be there  
1524 otherwise you're not going to be so satisfied with the  
1525 service. So that has implications in the sense that you need

1526 to have multiple servers that are mirrored and you have to a  
1527 fail-over and failsafe installations. So what we're looking at  
1528 now are some of the implications that you can now derive from  
1529 the network diagram. And if we think of the different areas  
1530 that that may cover, so the motivation and experience, again  
1531 going back to reliability, if it's not reliable then that will  
1532 affect people's willingness to participate. If it's not safe  
1533 it will affect how they perceive it and it will affect their  
1534 experience. Because they may be very upset. They may find that  
1535 they've ... And user behaviour and collaboration is really about  
1536 what they do in the network. So as we saw before we moved,  
1537 originally Zuckerberg's set up of Facebook on campus for a  
1538 specific university, it was a private community, and then as  
1539 it grew this has different effects, different implications on  
1540 the way people behave and the way that they interact with each  
1541 other. Because now they can, you know, the point that you made  
1542 before that you may not actually be too willing to talk to  
1543 somebody in a room where you are much happier to share  
1544 information via Facebook via the network. Innovation and  
1545 improvement. Is it possible that you would do things in a  
1546 different way? That you would start to collaborate in a  
1547 different way. That you would start to have new ideas. Privacy  
1548 and trust I think is fairly obvious. Obviously Facebook needs  
1549 to be seen to be looking after your data otherwise that will  
1550 have implications. But from a design point of view that means  
1551 that it does need services which are looking after ... and are  
1552 monitoring potential attacks. And then underneath it all of  
1553 course you have the infrastructure. Again, the reliability  
1554 piece means that you have to have this vast network with  
1555 stable connections and does that mean we actually need  
1556 dedicated connections. So if we think of the implications for  
1557 how the network needs to be designed and implemented and there  
1558 are different ways that we can look at it. If we go back to  
1559 the objectives and the purpose of the network, to think about  
1560 what that means in achieving those objectives. And there are  
1561 two different ways we can do that. The profile which you  
1562 generated for Facebook, so the spider diagram, you might look  
1563 at some of those dimensions like size, like geographical  
1564 coverage and say that has an implication in the way that I  
1565 need to connect up the machines. Or you can use the diagram  
1566 and look at the diagram and look for something you mentioned  
1567 before, this thing about all of sudden you start to be more  
1568 aware of the interactions that are going on in the system, in  
1569 the network. And so if we go back to our hideously complicated  
1570 man-machine network that we talked about before, so evacuate  
1571 with the evacuees but also the people who are responsible for  
1572 them, the sensors, the access devices and the decision support  
1573 system. There are a whole bunch of interactions going on there  
1574 and if we think specifically about trust, which in the  
1575 psychological literature around technology is defined as a  
1576 willingness to be able to accept vulnerability, then there are

1577 a whole bunch of areas. There are a whole set of different  
1578 types of trust implications for all of the connections in the  
1579 interactions across the network. This is what I was talking  
1580 about before. So if the emergency services don't react  
1581 appropriately to the evacuees then they won't trust them. They  
1582 won't do what they do. If the information that's been passed  
1583 on by the signage is inappropriate, you know, exit this way  
1584 and then there are flames coming towards you, that will affect  
1585 the way that you interact. So the idea is to look at your  
1586 network diagrams and identify some of the implications. These  
1587 areas are just there for your convenience. But you don't need  
1588 to worry about those because we can categorise them later on.  
1589 But we're really interested in looking at one particular  
1590 interaction or any of the interactions across your network and  
1591 identifying some implications. That will lead on to what we  
1592 have to do but specifically what would we do as far as design  
1593 is concerned. For those of you, and thank you very much, who  
1594 took time to respond to the incredibly interesting survey. I  
1595 have this problem for this design solution, that's what it was  
1596 all about. Okay.

1597

1598 M1: Yes, if you each have a look at what you have, there will  
1599 be certain commonalities I hope. If you just have a look at  
1600 what you have, take a connection between what you think is a  
1601 key area, for example, and just if you can each take a turn  
1602 and say which bit of your diagram you're talking about that  
1603 you might think has some implications here and what they are  
1604 and so on. Anybody have something in mind already?

1605

1606 P3: I think for the user data one, especially there's  
1607 obviously implications as to whether you store the data  
1608 securely or not and stuff like that. So obviously people, if  
1609 there is leaks and stuff like that, especially within  
1610 Facebook, and all the private information they have is on  
1611 people there's obviously implications in the media and stuff  
1612 like that. And you can see diagram... Mine has it in anyway...  
1613 But, I guess the consequences would be that it affects  
1614 Facebook because people have less trust in it and I think  
1615 trust in especially Facebook is reasonably key because you're  
1616 putting in your private data and stuff like that. And you're  
1617 using it to talk to people so if it wanted to monitor messages  
1618 and stuff like that it could. So obviously you have to secure  
1619 the data more. Or something like that... To have more security  
1620 for it.

1621

1622 M1: So secure the machine aspects in particular and  
1623 restricting access and that sort of thing. Thank you.

1624

1625 P1: You could also take the physical aspect of that, that data  
1626 actually has to be stored somewhere and someone physically  
1627 needs access to that. So you've got privacy and trust issues

1628 built in there. You need to be able to vet who has that  
1629 physical access to those hard drives. Who can interact with  
1630 those hard drives on the internet or whatever. That kind of  
1631 thing. There's a whole area surrounding that of who is allowed  
1632 to access it? How many people are allowed to access it? What  
1633 permissions they have, what can they do with the data, how  
1634 long can they keep it? All of that sort of stuff. As far as  
1635 designing for it goes, you'd probably have to think about  
1636 delegating it and having more people but data anonymity  
1637 basically. So some people can see some of the data and other  
1638 people can see other data. Together they can build an image  
1639 but it doesn't reveal someone's personal details, for example.

1640  
1641 P2: I've got Facebook admin control content for operations.  
1642 Which might be under either user experiences or <inaudible>  
1643 interest, maybe.

1644  
1645 M1: So this is between admins of Facebook accessing parts of  
1646 the Facebook system?

1647  
1648 P2: It's from operations that users can do.

1649  
1650 M1: So what are the consequences that you might have in mind  
1651 for any implications surrounding that?

1652  
1653 P2: Well, things like bullying and things online they can look  
1654 out for and then delete posts which are controversial,  
1655 offensive. Just control things.

1656  
1657 P4: My conclusion was that the network is highly  
1658 interconnected. So, for example, as far as the technical  
1659 infrastructure goes obviously we know that it is like that. It  
1660 needs to be massive and it needs to be well-thought. And this  
1661 kind of implies that since the technical infrastructure is  
1662 huge there needs to be a large number of employees, which  
1663 again brings issues of privacy and trust. Who do we trust? For  
1664 example, how do we screen the employees so that we know that  
1665 we can trust them. Since there is a large number of employees  
1666 there is, I would guess, a higher probability that maybe there  
1667 will be one or two, for example, employees that shouldn't be  
1668 there. Shouldn't be doing that job. And that is my conclusion,  
1669 at least on my diagram.

1670  
1671 M1: So we've kind of come back to what M1 talked about in  
1672 terms of privacy, so what we can do about it and what that  
1673 means for the design. Any other thoughts?

1674  
1675 P3: I guess if you really wanted to stretch it, carrying on  
1676 from what I was saying, the end user needs to have some trust  
1677 in the person that's hiring these people. Because the person  
1678 that's hiring could be opening that data to everyone anyway.

1679 So when you're signing up to it you're saying, okay, I have  
1680 some trust that this service is operating as it should as  
1681 opposed to selling your data to governments, for example.

1682

1683 M1: That's great that you're taking it quite deep. Brilliant.  
1684 Right, we only have two minutes left so I think we can leave  
1685 it at that. I was hoping that we'd have time to go and further  
1686 look at the tool itself. If you're interested I can just send  
1687 you a link in an email and you can have a look. There's more  
1688 functionality there that we didn't have a chance to go through  
1689 here. So if you created your profile, the tool does some  
1690 matching with other networks that are in the library and then  
1691 through that you can see if people are saying we use this  
1692 design pattern and then you can access that information. So  
1693 it's part of sharing, if you like. Thank you very much for  
1694 your time and your participation in this focus group.

1695

1696 M2: I'd like to add to that. As the discussion got going there  
1697 was an awful lot of useful information. So thank you very  
1698 much.

1699