Will Allen, Rosey Hill

Participants: Marianne, Harriet, Frederick, Flora, Jaydee Ishmael

RH We’re recording.

WA Welcome everyone to this focus group and obviously I’ve had email contact with all of you, but I appreciate you taking the time out of your evening to participate. Just as a recap, obviously I’m Will Allen, I’m a researcher on the Seeing Data Project. And do you want to introduce yourself as well Rosey?

RH I’m Rosey Hill; I’m the researcher on the project from the University of Leeds.

WA And together, along with some other team members, we are really interested in how visualisations of all types are communicated, how people perceive them, what sort of emotions or feelings do they elicit, as well as what elements of visualisations work well with different audiences, as well as what may pose challenges. So we’re interested in all aspects of the visual when it comes to how information is represented. And so what we’re doing is taking focus groups all around the country, [names places], to basically look at different types of people in different groups around the country and how they view visualisations, and so that’s why we’re here today.

Basically, what this focus group is going to do is over three parts. The first is we’re going to talk about your diary keeping experience, what you thought of that. Then we’ll present some visualisations for you on these laptops. And then we’ll come back at the end, in the third part, to talk about that experience and what you thought about these visualisations specifically, as well as about visualisation generally. What we’d like to emphasise is that everything you see tonight is not designed by us, so you will not offend us, you can tell us your honest opinion and what you liked, what you didn’t like, what you were confused by, what you really enjoyed, and all of that will be confidential for the purposes of this research, as you just signed. Just to reiterate, everything said within this room for the focus group will remain confidential and at the end we’ll ask for a pseudo name, so when we talk about the research in the future we can identify you through a pseudo name. And we’d also emphasise that after you leave this room that you don’t talk about how this person said this, basically don’t share what you talk about in here today. But the positive side of that is that you can share whatever you like about the visualisations and we are genuinely interested in hearing all about it, so any reactions you have, we are definitely interested in them.

RH And this isn’t a test of how you read visualisations. If you look at them and you think ‘I got a lot out of that’ then that’s great. If you looked at something and you thought, ‘I learnt nothing,’ then we want to hear that too. This isn’t a test at all of your ability to read the visualisations, so please be honest.

WA Exactly, and genuinely we are interested.

Marianne Are you being sponsored by advertising?

WA No, we’re funded through the UK government and that provides a grant for the Arts and Humanities Research Council, and that’s who is funding this project at the moment. No commercial background, and the visualisations you’ll see tonight, they are produced by other organisations, but they didn’t pay us to put them in front of you and these are ones that we chose, and again, that we didn’t design ourselves, so you won’t offend us. So any questions before we get started?

RH Toilets and fire exits!

WA Very important things, thanks Rosey. So the fire exit is exactly where you came in and the meeting point is just outside here in the car park. And the toilets are, as you exit this room, to your left in a little alcove there. So the focus group will proceed in basically three parts: in the first we will talk about your experiences with the diaries, and then we will look at the visualisations for a little bit, and then come back together at the end to talk about that experience. And also just to emphasise that there’s plenty of food and please help yourselves, and coffee and tea as well. I would ask you to be careful around the laptops.

RH So the first thing that we need to do is all of introduce ourselves for the transcriber – the imaginary transcriber at the other end! - so that she can identify who’s speaking.

WA And maybe just a little bit about what you do as well.

RH Do you want to start?

Harriet I’m Harriet and I work at [Charity 1]. I’m a buyer in their trading department so I do things like the Christmas cards and calendars and diaries and things that go into the shops, and that’s how I heard about this, it was put on to our internal message board as well.

Marianne My name is Marianne and I heard about it in our painting group society, and because I am very interested in visual things, I thought this was a wonderful opportunity. I wasn’t sure whether there was a vested interest behind this in a commercial sense, so I’m very pleased to be assured that it’s really a project to learn more. I used to be a teacher and I’ve retired, but I used to use a lot of imagery in my teaching and that’s particularly art. I taught religious education using the classic images of the biblical stories in art and to compare the contents of the stories they were reading and the visualisation by artists of the same stories or where they differed, and that opened up conversations. And I enjoyed that very, very much, so I had a big collection of traditional Christian imagery of bible stories.

Frederick My name’s Frederick and I work for the [District 1] Libraries in [City 1], I’m a computer programmer and the project we work on is entirely text-based! It’s transcriptions of letters from the 16th, 17th and 18th century, but one of the things we’re looking at doing is trying to find visual ways to represent the networks of the people and the places, the topics involved in the actual content that we work with.

Flora I’m Flora, also a member of the [District 1] Art Group, and I first heard about the project from Will because I was secretary, so he got in touch about that. And I just thought it would be something interesting and different to do and just see where it took me really.

Jaydee I’m Jaydee and I’m also in the [District 1] Art Group, so I met Will at the AGM and it just sounded a really interesting project. And I’m also a retired teacher and I used to teach nursery, so a lot of visual stuff there.

Ishmael My name is Ishmael and I’m sorry for being late. I work for [Charity 1] and I work as an ICT producer, and what that means is I’m looking to use participatory media in our work just to capture learning from communities and understanding how visualisation can play a part, and the role of my work is huge, so thank you for having me here and I’m looking forward to hearing from all of you.

## How aware of data visualisations were you prior to participating in the study?

RH So before you were in touch with Will and he told you about the project, how aware were you of data visualisations?

Jaydee Aware of it, yes.

Flora I obviously see some but I’ve never really thought about them very much, just looked at them and there they were!

RH What do you mean you looked at them and there they were?

Flora Well, I just looked at them and gleaned a little bit from them and didn’t ever think about who did them or how they were done or anything like that really, as we do with a lot of things in life! It’s just there, isn’t it?

Jaydee Exactly.

RH So they crossed your path but they didn’t make much of a dent?

Flora Yeah, and using them to a certain extent, but just thinking that they’re there, it’s normal.

WA How aware were you?

Frederick I’d say I go out of my way to try and find them normally! Because I’ve been trying to look at how we could use them in the project that I do at work. And trying to create visualisations, whether they just be simple things like bar charts and pie charts and things, and how misleading they can be very easily, especially with the content that we have. We don’t have, for example, every letter that Voltaire wrote, we have all the letters that have been found and edited and put into a publication and then digitised. So if you show certain things, people imply, without you even trying to show that in the charts or whatever, they try and imply something that isn’t there, and that’s something that I’ve really struggled with and I’m not sure how you can craft them in a way that stops people from trying to be able to make conclusions that shouldn’t be made, as it were.

WA What about outside of work, how aware were you outside of work?

Frederick I think once you start thinking about them, suddenly you notice how much more of them there are around. So as soon as you start becoming even slightly interested in them and you see them, almost everything starts and nearly all newspaper articles have some form of visualisation attached to them in non-form articles and things nowadays. I think it’s something that you get even in magazines, like a triathlon magazine or something, they’ll find some way of representing the different distances as a graphic rather than just giving you a table of numbers, which is what they would have done even just a few years ago.

WA So in your leisure reading as well.

Frederick Yeah.

Harriet I first started to think about it, so they did a rebrand of the [Charity 1] shops and a lot of that was based on this concept of the book *Information is Beautiful*, and they talked a lot about that in the brand meetings that we went to where they were selling us this vision of the new [Charity 1] shops. And ever since then I was like, ‘Oh yeah, a nice room!’ and so the concept of like infographics or something is something that since then I’ve been quite aware of and how people communicate it, I guess from a commercial basis more so than factual. What’s been in my mind, the perspective of it, but I think that’s just how I was introduced to the concept. Before then, I think I was quite passively just happily absorbing rather than being aware of what I was looking at!

RH So was it about the way the [Charity 1] shops were branded that started to use infographics?

Harriet Well, I’m not sure how much it actually came through into the practicality, but that was one of the starting points of how do we communicate information about the programme work, how do we take a massive organisation like [Charity 1] and show it through our retail outlets and say things in a really interesting way, and people are just in there to look at the shoes, so how to marry those two in an interesting and vibrant way, and that was a bit part of it, at least, like the concept, definitely.

Jaydee I was aware that every time I opened the newspaper they seemed to have a graph or some visualisation to explain data, and sometimes it didn’t really explain it at all, it was just a pretty picture! And sometimes it made the data crystal clear with the visualisation, but sometimes you just wondered why they had them.

RH Are you thinking about specific newspapers there?

Jaydee No, I only take one newspaper and that’s *The Eye*, so you would have thought they’d all be well thought out, but I did think sometimes, ‘I’m not quite sure what they were trying to show,’ and perhaps it was me, I don’t know.

Flora I think sometimes I look at the visualisation and that’s all I want to know and I don’t read the article.

Jaydee Yes, you don’t read the article. I did find that with a few things.

Flora Which would probably be better!

Jaydee They had a weird one today that I couldn’t work out what they were trying to prove and it was really quite bizarre and very strange.

Ishmael Ever since I went to a workshop on turning data into evidence and into visualisations, I’ve been really aware where you read the bottom, where you see the sources, because sometimes there is an awesome infographic and it’s really good and the material is spot on, but you look at the sources and it’s like Wikipedia, and what does that mean? So before that, I never looked at the source and before, when I saw a visualisation, it was like, ‘That’s a fact,’ but after that I was like, ‘Wait a second, where did you get this from?’

Flora I’ve never looked at the sources until this week and then I did look.

Jaydee No, I’ve never done that.

WA Until this week, you say?

Flora Yeah, until we were doing this.

Jaydee I don’t think I’ve ever looked at the source, I just presumed.

Flora The little tiny letters underneath.

Jaydee I’d never really thought about it.

WA How aware were you, Marianne?

Marianne Well, I get all my news these days orally, on the radio rather than visual, and I can do my housework at the same time. But I used to read certain magazines and newspapers more regularly when I was still in teaching. But I found this so fascinating, and because I hadn’t got anything to hand, I went to the library and I got two magazines, two German magazines, and just the one issue, I found all the examples that I could put in my diary. So it wasn’t like it wanted me to just be aware of what happened to come to me anyway, but being an old university student, I’m a good researcher, so I thought, ‘I’m going to sit down and find something because this is a task and I’m going to do it!’ and I enjoyed it, I really did. And I found some good ones and I found some pathetic ones.

## Which were particularly noteworthy?

WA That’s an interesting reaction, because I’m curious now to ask were there any visualisations that really stuck out at you as being really terrible or really grabbing your attention, and maybe if you could share an example from your diary.

Jaydee I can’t remember!

Harriet I watched a *Despatches* programme last night which was about the new benefits system, the Universal Benefit that they’re bringing in, and they did a couple of little infographics at the beginning and it was like an animated person who looked like, you know the one on *Catch Phrase*, there’s that little animal thing? And it would sort of show like, ‘Universal Credit means that this person gets given ...’ and it would have like a little thing with a pound sign in it, and it would say, ‘Housing benefit,’ and he would catch it, and it would go through all the different things that were included in Universal Credit, but it felt quite patronising really. All they needed to do was, ‘This is what it includes,’ and I wrote this in the diary, but I thought it was being set up for the agenda of the programme, because the whole thing was like, ‘This is a terrible system, it’s just not working!’ and it felt really biased against it, but only based on very anecdotal information and they would go and see worst case scenarios and they would tell their sob story. Well, not a sob story, obviously it’s very difficult when things go wrong with your benefits, but it was almost like they were setting the system up for a fall by being like, ‘This is how childishly simple it was meant to be and this is how wrong it went!’ So it felt that they were really tying it into the agenda of the programme.

WA What elements of the visualisation signalled to you, or caused you to feel patronised, for example?

Harriet I think the speed of it, it was quite slow, and just how all they had were pound signs in a circle and falling into this Mr Blobby shaped person!

WA Were there other visualisations that stuck out for you?

Jaydee I watched a programme on ITV called *Happiness* and it was about the government research into happiness, and how you measure it I have no idea! But I watched it because my daughter phoned me up and said, ‘You must watch this,’ because there was a bit in it that she thought was really interesting, I think it was about Buddhism, that was the bit that appealed to her. I went online afterwards, because it said, ‘You can go online and have a look at the research that we’ve done,’ and they had these visualisation graphs and things, and I hadn’t the foggiest what they were trying to prove. They were showing something about the amount of anxiety in different parts of the country and they had these bar charts. I mean I understood the programme, the programme was very simple but very clear and distinct, sort of money doesn’t give you happiness and there are other ways of being happy and things. It was a very simplistic programme and easy to understand, but the bits on the internet with these graphs were quite peculiar!

WA What specifically confused you?

Jaydee It was what they were trying to prove by the data.

WA So the message that they were trying to communicate wasn’t clear to you?

Jaydee No! The anxiety levels had dropped but it was really strange, and the percentage of people who felt anxiety, and perhaps it was me, but I just couldn’t work it out!

WA So when you looked at it you felt how?

Jaydee Lost! I couldn’t be bothered to look at it anymore.

WA So you lost interest?

Jaydee Yeah, I couldn’t be bothered because it didn’t really mean anything.

WA Any other examples you’d like to share?

Flora I don’t think there’s anything really that stuck out for me, to be honest.

Marianne I’m happy to share one that I was unhappy with. It was about the people who received the Nobel Peace Prize and it wanted to find out which countries, all over the world, produced most of these peace people. And they had shades of green that got so close together that it was very, very difficult to see the difference, but they had two very strong colours, one for the United States, which out of all of these had 21 people with the Nobel Peace Prize. And then they had the weakest colour, whole areas: most of Africa, most of South America, a lot of the Middle East, Greenland, and all of these had one. Now I found that very strange to put together various continents and say together they’ve produced one, and the United States produced 21. So to me, it seemed an exercise in saying, ‘We’re a great country, the United States, all these people,’ and I really resented that. And then, because it was a German paper, they put the little figures of four German people who received the Nobel Peace Prize, all men, and the woman who actually influenced Nobel to create, to give some of his money, Bertha von Suttner, wasn’t even mentioned. Okay, she’s Austrian, she’s not German, but I feel that if you want to have the headline, ‘Where are the Nobel Peace Prize recipients? Which countries do they come from?’ and not even to mention a single woman – we had women in Ireland – and I just felt this was very, very biased, in a sense, to praise the United States.

WA So you resented it, even?

Marianne I resented it, and I put that in my comments!

WA So it clearly generated very strong reactions!

Marianne Yes.

WA But that’s based on what was missing as well as what was in the visualisation.

Marianne Yes, what was missing, but also how can you take whole continents together and say there’s one? So you still ask, ‘Did this one person come from Africa or from South America, or from the Middle East or from Greenland?’ It just emphasised how unimportant these countries are compared to the US, and I didn’t like that.

WA That’s really interesting.

Jaydee I think sometimes, when you end up thinking about politics, when you’re looking at visualisations, you can have really strong reactions sometimes, can’t you?

RH Were there any that delighted you or made you giggle or that you liked or you found informative?

Ishmael I was looking at a visualisation on religions in different countries. I just found it on the Visualise Me, it was just a feed, and I just was able to pick up information really quickly. At first, I looked at the bottom, like, ‘Where did you get this information?’ and it said CIA, and I was like, I don’t know! But the way they used colours to represent each religion and the way they used a gradient, so if there is a large population with that religion, there’s a stronger colour, and if there isn’t, then it’s a lighter colour, within the same colour range. I was able to pick up information very quickly and I would have had to read a paragraph, maybe two paragraphs, to see what I could have picked up in five seconds, where I’m like, boom, South America is very religious and has lots of Christians, Catholics, and I was able to see that right away. And I appreciated that and it was like, ‘Okay, you did that well. I don’t know how accurate you are but you did that well!’ It was like, ‘You used the colours well, and you represented the different religions in different colours. Thank you, that helped.’

RH So you appreciated the thought that had gone into it.

Ishmael The thought that had gone into it, because I usually have to make them, so when I see someone else that does it well, I’m like, ‘Good job, you did well!’ because it’s not easy!

Flora I only have a newspaper on a Saturday, I don’t have time to read it all week, and it’s *The Guardian*, and most of their visualisations seem to use the same two colours, it seems to me! There’s a bluish colour, a bit like that colour, and a grey colour! Apart from the weather, which is the one I always look at. And I agree with you there, sometimes you can’t distinguish between the shades, and whether that’s an imitation of newsprint I don’t know. There’s pink, pink, pink and it’s quite difficult sometimes to see which one. That’s for temperature usually.

RH Yes, newsprint is not quite an exact science sometimes.

Flora No, that’s right, but I think part of the weather was in those colours, but the other two I saw in there were the same two colours. One was about the EU and how much we’ve got to pay back and there was this huge great circle with Great Britain in it, and a little tiny one! That was quite easy to read.

WA And when you saw that one, what did you think, what did it mean?

Flora Well, I’d heard about it, so it wasn’t a shock to me really. I don’t think it took me any further, but obviously you could see all the countries then, whereas I think on the news they concentrated on, and obviously it’s British news so they’re going to concentrate on Great Britain and certain other countries, and they didn’t mention the whole lot of them, just a few. So that was a little bit more information, but I didn’t read the article that went with it, I have to say! I just don’t have time! I am retired but I’m just very busy and I’ve got other things I’d rather do!

WA That’s really interesting. It’s interesting hearing your insights or reactions to the visualisations you saw, and we’ll really enjoy looking through your diaries and seeing that more in detail, but thank you for sharing that. I think what we’d like to do now is move on to the second half where we’re going to have you look at some visualisations, so all of the visualisations are already preloaded when you open up the computer, and if you want to hand your diaries in to Rosey that will help clear stuff.

Marianne There are some that I haven’t commented on that I might take home. I thought I might write some things, but it has got my name on it, that’s the trouble.

WA We can just take it all together, that’s fine. So in this section what we’ll do is have you look at some visualisations on a website that we’ve prepared, and each of you has a pack like this on your computer, and what we’d like you to do is as you look at each visualisation is to make comments on it, on this one, which looks very similar to the one in your diary, because it’s exactly the same, except it has the word Notes on the top. And it has the same prompts to get your ideas going, but you don’t have to answer all of these, these are not all questions to answer. We are just giving you ideas in case you’re stuck for things to look at. So that’s one part of the packet. The other part of the packet involves this larger piece of paper, folded in half at the back, which is a 2 x 2 grey like this, and it’s divided along two dimensions. The first being left to right, whether you liked it, or you disliked it, and then from top to bottom, whether you learnt something from it, or you did not learn something from it. And also in your packet are little screen shots, little mini versions of the digitalisations, and what we’d like you to do, with a little bit of Bluetac, which is also in your packet, is to look at the visualisation and then give us your gut reaction to it: whether you learnt from it, did not learn from it, whether you liked it on a gut level, or you did not like it, and to place it in the appropriate part of the grid.

And as you can see, Rosey has a larger version of that, so in this case, Andy thinks that some of the visualisations he learnt quite a lot, so he put that up in the top-half, whereas some he did not like at all, so he put it along the left-hand side, because those are the ones he didn’t particularly like. And it’s just vaguely scaled, so if you really didn’t like it, put it really far over here, or even outside if you want, if you really didn’t like it. Equally, if you felt, ‘Well, I learnt a little bit from it,’ then you might want to put it somewhere maybe in the middle. So this is related to how much you feel one way or the other. So when you look at the set of visualisations, we also stress that you do it in order, but don’t feel like you have to get through all of them and if you want to look at one longer, that’s fine, or shorter, that’s fine, but do go in order, that’s the important thing.

So to summarise all of that: look at the visualisation, then write your notes, and then stick.

RH Look, write, stick.

Harriet So these are versions of what we’re going to see?

WA Exactly.

RH So use one note sheet for each new visualisation, use a new note sheet. So if you open up your laptops.

WA And you will just have to click on the User, there’s no password.

RH Yes, so where it says ITR Locked, just click on that.

Flora So the Home page, if you click that little button in the top right-hand corner, it will bring you back to this list.

Marianne There are a lot of the same ones.

WA Exactly.

Marianne Each gets one?

WA Exactly, so each visualisation you look at, you have one note sheet for that visualisation.

Flora Do you want us to put the name of it or just put number one?

RH Put the name, if you don’t mind, or just an abbreviated name will be fine. Bear in mind that number four is actually on paper, and that’s here, so we can pass that round, and if you have any questions whilst you’re looking, that’s fine, ask, and if you need any help, we’re on hand as well.

WA So if something goes wrong with the technology let us know.

Marianne So we just click on the images?

WA Yeah, so just go in order and when you click on the link it will take you to the web page that it actually is located on.

Jaydee And you want our name on here?

WA Yeah, and don’t forget to stick your little screen shot where you think it should go.

RH Okay, I’ll turn the recorder off for this bit. And we’re back? Yes, we are.

## Let’s start by looking at where you placed each visualisation on the grid.

WA Great, well here we have all of your grids that you completed, and most people got through three, it looks like, the first three, with Ishmael having a few more. But like I said, there’s no right or wrong way to do that.

Ishmael It’s also because ((0:34:17?)) that I went through it!

Flora I think if I hadn’t have been doing it here, I would have done what you did and forgotten most of them and moved on!

WA It seems like several people have the census one, the one with the map, up in the upper right-hand, which is, ‘Liked it and learnt something.’

RH Or at least learnt something, so even Flora, although you didn’t like it, you still felt you’d learnt something, and the same with you Ishmael, you learnt something from it.

WA Flora, what was the reason that you didn’t like it, necessarily? Well, you put it outside the box, actually.

Flora I didn’t like all the little bubbles, all these bubbles.

Jaydee It was a bubble graph.

Flora I just got very angry with it, I’m afraid, and you can’t really see my face!

RH Actually angry with the bubbles, or what was it about the bubbles that made you angry?

Flora The whole thing! Well, they started it. Up until then it was alright, and then I just thought, ‘All these bubbles,’ and I thought, ‘I’ll try and find Ox,’ and it was really difficult to get the right area, and there was a place to type it in, so why did they have to confuse it with all these bubbles? And you’d go over them, and obviously, eventually, you realised that the vast majority of them seemed to be London boroughs and you’d go up a bit! But it was quite difficult to actually find the right one, and I think it was more by accident than design that I did see it.

WA Whereas, Harriet, you put it up, very far up?

Harriet I really liked the bubbles! At first, when the bubbles appeared, I was like, ‘Why’s there no map? That’s silly,’ but then actually it felt a bit more abstract and I liked that they were being abstract and was something that’s been quite a heated topic. And I also just liked that against the navy, it just felt a bit like fire flies or stars in the sky! After I’d spent some time on it, it almost felt like an elevated thing, almost like you were an astronomer charting stars or something!

Flora I was angry and you were spaced out!

Harriet I was loving it, yeah! It felt very depersonalised and abstract and I really liked that treatment of that topic, I thought that was good.

Jaydee I found it very interesting, but even with the bubbles, and it just wrote the area that I wanted to look at in the space at the top. I couldn’t be bothered with the bubbles so I just dismissed them, but I found it quite interesting. So I wrote South Oxshire, where I live, and compared it with Ox City, which was no surprise and I could have told them the results of that! But then I sort of put random places in, Manchester, Peterborough, which keeps coming in the news, and all places like that, so it was quite interesting, but I did ignore the bubbles.

Harriet I didn’t use them that much and once I got the comparison function up that’s all I was using.

Jaydee I hadn’t found that!

Flora And if I hadn’t found Ox, then yes, I would have then typed it in, I think. I would have given up fairly quickly.

Ishmael Because I’m not here, I’m not from the UK, I thought the visual was done really well, but I wasn’t interested, so I was, ‘Oh that’s cool, that’s nice,’ but then because I’m not from here, I didn’t engage as much with it, and otherwise I thought, ‘This is done well, aesthetically everything is beautiful,’ but I wasn’t curious because I’m not from here, so I couldn’t really find things to relate to it, because what does this place mean to me when I have nothing to associate with it? So that is why it was there.

Harriet I guess probably the first place we’d put in was our home towns.

Jaydee Yes, we all did that, didn’t we?

Flora We did.

Marianne I found it difficult that you have to click to the new image, and then you lose the comparison, because I like things to be visible in one, rather than checking one place and then the next and then the next. All the things I did at home, anyway, were just one visualisation, and here it was a lot of computer work and getting extra influence, and that’s fine if you look for something in particular, but to get an overall view, it’s easier if they’re all in one page. Or at least extremes, one could have had the extreme of the highest population of immigrants and the lowest, and one has a feeling anyway, but as it happened, every time a new image comes up, the other one goes down, and my memory. That’s the way I’d like, but I may be old-fashioned and I’m not computer literate like all of you, because I’m old

WA But you felt you wanted maybe key points or something like that?

Marianne Yeah.

Flora Yeah, I mean you’d just end up probably printing out loads of pages if you want to compare it, which you don’t necessarily want to do.

WA Turning our attention to the BBC one, the first one, and that also bounces around quite a lot.

RH What did you think of that one, Frederick? You haven’t said anything.

Frederick I actually quite liked it. It seemed to be lacking in that basically it did one thing and it did it quite well, which was, ‘I weigh this much, I’m this tall, is there somebody in the Olympic team that’s like me?’ is what it was basically doing! And it goes, ‘Yeah, you’re like this Australian swimmer chap,’ fair enough. And then that’s it, so now what?

Flora It was a bit of fun for a minute and then I thought, ‘What’s the point?’

Frederick I can’t remember what it said at the bottom, the orange dots said Extremes or something, and it made no sense at all, because they’re all orange. And the other thing was the range of orange to red was allegedly up to 12 people being in that particular dot, but I couldn’t tell the difference. But I still liked it because it just did one thing quite well. There were loads of things it could have done, but it didn’t pretend to, so I was okay with that!

RH Whereas Jaydee, you neither learnt anything from it nor liked it.

Jaydee No, it just left me completely blank. I thought, ‘So what?’

Flora I just thought it was pointless, to be honest!

Jaydee I’m the same physic as a Chinese diver, and I’m thinking, ‘So?’

Flora Maybe because we are older.

Ishmael I felt the same!

Flora I just couldn’t see the point. It made me smile, but it was an ironic smile!

Ishmael Yeah, I was just like, ‘Oh that’s nice!’

Harriet I wondered whether it’s really more of a male thing, potentially? Because The Olympics is probably the most I’ve ever felt engaged with sport, and I was still like, ‘I don’t care who I’m like!’

Flora I was this sort of East Asian eventer or something, and I thought well!

RH It’s interesting you say that, because within this room we are five women and one chap, and there’s a definite distinction between who liked that visualisation and who didn’t, and it is a gender split, although we haven’t seen that through our other focus groups.

Frederick The other thing was you could click near the one that it said was you, and then it didn’t really make any sense, so I think it was just the coincidence that it actually came up with one, ‘Oh okay, I’m happy with that!’ If it had been, as you said, there’s an equestrian chap, and I’d just be, ‘What?’

Jaydee I couldn’t be bothered with it anymore at that point!

Frederick Yes, so maybe it was because it engaged me initially and I was then prepared to click about.

RH Looking at the media and the news one, there’s ((0:43:20?)) We’ve got quite a big spread. We’ve got right outside from Flora, right on the edge of the dislike from Jaydee. Ishmael really liked it and learnt something from it. Marianne didn’t like it, didn’t learn a lot, but wasn’t quite an extreme a response as Flora’s. Harriet ...

Marianne The words were ridiculous. The words that appear in the paper, you’ve got the word woman or Iraqi all over. Ridiculous.

WA What do you think was ridiculous?

Marianne There were so many words and it doesn’t say anything about whether the broadsheets present things differently from the mass media, or depending on the political bias of the paper. You couldn’t, there were just too many words, and too many of the words were completely irrelevant, the word woman or the word refuge. No, I thought it was awful.

Flora Yeah, all these little rectangles popping up were really distracting and I couldn’t learn anything because they were so distracting. And then when I tried to look at some of the graphs, and I did try to scroll down, I couldn’t actually see the bottom of the graph, where it gave, for instance, the ages, it was behind the thing where Firefox was saying it was collecting data, so that may have been the problem, I don’t know.

RH It didn’t quite fit on the screen, so a bit of a computer issue there.

Jaydee So that that point I thought well! So that one annoyed me.

RH And you actually felt annoyance?

Jaydee I did feel annoyance.

RH And it sounds like you did as well, Marianne?

Marianne Yeah.

Jaydee I did feel annoyed with it, because it had the potential to be interesting but it was just so awful.

Marianne And I thought they are meant to replace reading a long article and give you a quick insight into what it is about, but you would spend far more time analysing these many, many lines of words rather than reading a decent article that somebody had done and researched properly.

Flora I agree.

WA But we see some differences as well, so Ishmael really liked it and really learnt something from it.

Ishmael It’s a subject that I’m actually very interested in, so that was the initial thing. And also, for me, I was associating with many different things, like, ‘Okay, when did 9/11 take place?’ Then ‘How many times did this show up? When did these different things happen? How bold is it? Why is this showing up? Why did they associate this person as illegal? Why did they associate it as that?’ So for me, I would have spent hours and hours and hours looking at it, just trying to associate and think when did that happen? How does that associate with the Labour Association? How does that associate with all these different things? And try to figure out a pattern, so for me it was fascinating and I thought it was really interesting.

RH So bringing in those other contextual bits and pieces, bits of historical knowledge.

Ishmael Yeah, and just trying to map it up, like, ‘So when in the news, why did it start appearing more, what started shifting?’ because the media really influences society, so I was really interested in this one.

Marianne It is interesting, but then it’s a research project on its own and not a visual help to give you a quick idea and saves you reading the article.

Ishmael That is true, yes, because I would have spent a day on it. Yeah, okay, I see what you mean.

Harriet But then you added so much of your own personal stuff to it, whereas an article is written by a person who then attributes all of that. I thought it was good that you could bring your own stuff to it and that’s what I liked about it.

Jaydee Yes, and perhaps those of that couldn’t thought we’d like something easier!

RH What kinds of things do you mean ‘bring your own stuff to it’?

Harriet Just what Ishmael was talking about, because reacting to media is quite a personal thing and everybody is different; we’re all formed by different experience and have different connotations to different words. So I remember the thing that stuck out for me was when one of those words popped up as really bold in the middle of broadsheet papers, the word refugee is most associated with failed. Was it asylum seekers?

Ishmael Yeah, asylum seekers was failed, and I was like, ‘Really?’

Harriet Of course!

Ishmael Of course it is!

Harriet But then that’s shaped by what I read and my family values and all that sort of stuff. So that’s what I thought was really interesting about it, to take almost the media out of the media and just have like a one-on-one facts and research in a way that is not being told to you but you can see for yourself. So that’s what I liked about it, but I also thought that in itself was very niche, so that’s why it went down and it’s not something I would spend a day on! I would spend a day on the other migration one, I thought that was much more my cup of tea, but I was like, ‘Oh yeah, this is great!’ but I thought it was very niche.

WA And Frederick, that was the highest one you had, you liked it the most, and learnt the most from it. Can you explain why?

Frederick I started, probably because I clicked on the first one, the amount of coverage mentioning the line graph one, and it just seemed to be a really elegant way of doing it.

WA How do you mean, elegant?

Frederick In terms of showing the way that people referred. The only thing it didn’t seem to do, which was a bit silly, was adding them all together.

WA Adding what all together?

Frederick So there are immigrants, migrants, refugees and asylum seekers, but actually overall coverage of that topic over the time, because about halfway through 2006, there’s a huge peak in mentioning immigrants, but then you can’t tell whether that is just the word, or is it actually overall in 2006 people were talking about this topic more? So it was like, ‘Now I’m going to have to have a bit of a fiddle with this to try and learn some more from it,’ so it was engaging in that way.

RH That’s really surprising. I’m still feeling quite surprised about the range and the strength of some of the feelings that you’ve talked about. Were there any other feelings that you had that we haven’t already talked about when you were looking at these?

Jaydee That final one, the third one that we’ve just been talking about, I just switched off because I just couldn’t make hear nor tail of it. Perhaps it’s because of age, but I just thought what is it trying to say? You obviously understood instantly what it was trying to say, but I just had no idea what it was going on about. I can’t even remember what it was about now!

Flora It may also depend on how used you are to looking at these kinds of sites, and you’re probably a lot more used to it than us older people who perhaps use our computers for different things and are not used to that. And all those boxes popping up, and you picked up words from them and I just tried to ignore them because I found them really annoying and trying to focus on the introductory sentence and go on from there. And I thought, ‘Why are they doing that? It’s just distracting.’

RH So a sense of confusion, and you mentioned the word annoyed.

Flora Yeah, I felt very confused and I got annoyed with it, because I thought they’d go away on the next page and they didn’t! I hoped they’d go away on another page!

Frederick I got annoyed with the second one because every time I clicked it did go away! As soon you found somewhere and it showed you something, it was like, ‘Oh, you can’t do anything otherwise it disappears!’

## Were there any visualisations that you particularly liked or disliked (in anyway)? Why? (e.g. aesthetic design overall, colours, fonts, visual style, appeal).

RH So we talked a bit about those that you liked and disliked, and were there any particular things about them that you liked or disliked, thinking about the colours or the fonts or the designs or the layouts, the interactivity, anything you particularly liked, to start with?

Jaydee The second one, I think I wrote that the colours and the fonts were perfect to read.

RH Migration census.

Jaydee Because you get some of these, I mean that one there, it’s got orange and pink together, and you just think that sometimes it’s really difficult to read it.

Harriet And it should suit the subject as well!

Jaydee I can’t even see! But it was white on dark navy and you could read it, so it was clear, easy to read.

Flora Yeah, that’s true.

Jaydee And sometimes they focus too much on making it look colourful and beautiful and you can’t read it. I’d have to read what that’s about.

WA What did other people think about the colour?

Frederick The first one, the BBC one, I thought the colour didn’t add anything or there wasn’t enough difference, but the second one, as you say, was really nice.

Flora Yeah, all those little orange squares were quite difficult.

Frederick Yeah, they just blurred into a lot of little orange squares!

Flora And some of them were supposed to have black.

Frederick Some more orange than others!

Flora Yes, that was quite difficult.

Harriet I liked how with the migration – I’ve still got it on my screen – the logo and brand, the circle with all the bubbles round, that was taken all the way through the website and I liked that, I felt it really tied it all together and felt quite streamlined.

WA How do you mean, taken through?

Harriet So like the colours and the font is not like a website where there are different distinct sections, it’s all one big block of navy in the background and it’s just kept very simple. I don’t know whether that’s specifically for these different programmes. And like just the white and navy are pretty much the only two colours that they used and it just feels really clean and professional, and that’s what it looks like to me.

Jaydee You really trust it!

Harriet Yeah, I was like, ‘You know what you’re doing!’

Frederick It’s very understated, whereas some of them feel like they’re trying to force something on you, whereas that’s just like, ‘We’re just going to tell you this and you can read it.’

Harriet ‘We’re going to calmly present you some facts,’ yeah.

## Trust is an important thing in visualisations. Did you ‘distrust’ any of them? Which ones? Why?

WA You raised an interesting point there about trust and how you believe things when you see it. And thinking about the visualisations you’ve seen today, did you trust some more than others, or, conversely, did you distrust any of them?

Flora I think the one that was based on census figures, that one I would trust, I think.

WA What about it makes you trust it?

Flora Well, because it is based on the census and I worked on the census some years ago so I know how the information is collected and I think that’s going to be pretty accurate.

RH When you say you know how the data is collected, how does that feed into your feelings of trust for that particular visualisation?

Flora Well, because it’s a good representation and when you do the census you have to collect, you’re allowed a certain amount of non-replies, if you like, but it’s very small, so everybody is supposed to do it, but it was quite a small percentage, I can’t remember now because it was a long time ago, that you could get away with people not giving it to you when you try to go round and collect it! And there were always people who didn’t submit their forms. I mean in those days, you took the forms round and went and actually physically collected them, and I don’t know how it works nowadays! So I think it’s probably a fair representation of the population.

RH So that makes you feel that the data that you see in the visualisation is trustworthy.

Flora I quite like that first screen where it had the bubbles to say where the people were born, but I was quite surprised they’d put Antarctica on it, I didn’t think anybody was born in Antarctica!

Jaydee That’s what I thought! I wrote that down!

Flora There’s only a few research stations there, aren’t there?

Frederick Yeah, that was the one where they put it in the bottom-left, but actually it was Australia as well.

Jaydee Oh, it was for Australia?

Frederick Yeah, but they put it in the left, which threw me.

Flora And I thought, ‘Why Antarctica?’

Jaydee Penguins, that’s all they have!

Marianne And what I would have liked is if they’d had some statistics about where British-born people live in the rest of the world.

Jaydee Migration.

Marianne I mean there are people who live elsewhere but they were born here.

Jaydee But that’s not what it was about, is it?

Marianne To get a feeling of whether these islands are actually overcrowded or not, or whether it evens itself out; that would have interested me.

Jaydee Yeah, it would be interesting.

Frederick Just how many people went the other way, for example.

Jaydee Yeah.

Marianne And that would be really, really interesting, and not just elderly people who want their retirement in the south, also working people.

WA Going back to trust, were there ones that you didn’t trust?

Jaydee I didn’t get on to looking at this one!

Flora This one being the *Metro* one?

RH Just a word, can we try and not talk over each other because it makes it really hard for the transcriber. Yeah, the *Metro* one you were going to mention?

Jaydee I haven’t seen it so I don’t know what it’s about!

Ishmael That’s why it didn’t take me very long. I looked at it and I was like, ‘Oh dear God, ignore!’ Because you said it was how much time you wanted to spend on it and it was just about how many fans Rihanna had and how many tweets. A pre-teen would probably have loved it.

RH So in terms of trust, what were you thinking?

Ishmael I couldn’t take it seriously!

Flora You didn’t care, did you?

Ishmael It was in the media!

Ishmael Yeah, it wasn’t!

Flora I think with the first one, does it matter really?

RH The BBC one.

Flora Yeah, because it’s not important and nothing hinges on it.

RH So you didn’t think about trust then either?

Flora Not really, no.

## Which subject matters interested you? Which did not? Did your level of interest in the subject matter affect your response to the visualisations? In what ways?

WA Thinking about the subject matters of these visualisations that you saw, which ones interested you in terms of the subject? Or, conversely, bored you stiff?

Flora I think I’d like the second one better, that would have interested me, but it was too difficult for me, I suppose you could say! If I really was interested in that subject, I might have tried to find another way to just ask the question and get an answer, rather than all this.

WA You’re talking the census one?

Flora Yeah, you might be able to put in how many immigrants were there in Britain in whatever, and maybe you could get the answer in a different way, I don’t know. I didn’t mind that first screen because I thought, ‘Oh yes, seven out of 56,’ and I could work out the proportion, which quite interested me.

WA What about other subject matters? Was there any subject matter that really grabbed you?

Jaydee Amongst these three?

WA The ones you saw, yes.

Harriet I really liked the second one.

Jaydee ((1:00:42?))

Harriet Yeah.

Ishmael ((1:00:47?))

WA Because of your previous interest in that, okay. Do we have anyone sporty here?

Frederick Yes, the first one I think was probably why I tolerated the fact that you couldn’t tell what the orange was on about!

Harriet As I was doing that I was thinking, ‘I can think of a few people who would enjoy doing this more so than me,’ and they were all guys. I think with that one, I think I was just a bit turned off by it, because I’m of the opinion that body weight and body shape is maybe a bit more of a fiery topic for women, fat is a feminist issue kind of thing. I feel like all I’ve talked about is gender tonight! But I came at it from a bit of a different point of view, of like, ‘Are you going to try and tell me something else about my body type?’ the media, that’s my approach. Whereas I think guys would not have that immediate place that they would go to, of like, ‘Oh let’s talk about my body – again.’

RH And what are your feelings around that then?

Harriet What do you mean?

RH You were saying, ‘Oh let’s talk about my body – again,’ as if it’s a frustration.

Harriet Yeah, just that there’s so much in the media about the way that women should look. Like in the *Metro*, I’m sure there are a lot of pictures of this Beyoncé or Rhianna, I don’t know.

RH ((1:02:38?))

Harriet Yeah, just that there’s a lot of focus that’s particularly in the media that I absorb. I do read magazines, but I still get annoyed, I guess is what I’m trying to say.

RH And that affected how you approached that particular thing?

Harriet Yes, I would say definitely shaped how I approached that, absolutely.

Marianne And in the introductory material that we had to look at when we were first contacted, there was something about Jack Horrocks on the road. I didn’t even understand what that was about and it looked like a ((flaura 1:03:16?)). What on earth was that trying to do?

Jaydee God knows.

RH That one’s a representation of the book and all the different themes in the book displayed visually.

Marianne Extraordinary! I just didn’t know what to make of it and I thought we might learn it tonight, but time is short.

RH Yes, unfortunately, and we can chat about that afterwards if you want.

Marianne Yeah.

## Which visualisations were easiest to understand? Which were hardest? Why do you think that is? (chart type; colours; interaction design; annotation (is more or less info needed?); layout)

RH So which were the easiest to understand of those that you looked at?

Jaydee The census one for me was the easiest to understand. And the migration, I found that very easy to understand and navigate my way through.

Harriet Yes.

Flora ((The census one 1:04:05?)) almost definitely.

Frederick Yeah, that was a nice one. The only thing is I didn’t realise it was actually a map. I tend to be quite bad at that. I didn’t see the left-hand text at all the first time, so I clicked around a bit and went, ‘Oh, okay, I’m never going to find Ox like this!’ and clicked on the search box and typed it! I didn’t actually realise that was a map until I’d gone to the statistics about Ox, and then come back, and then tried somewhere else, and thought, ‘Oh, okay, that’s a little bit further north. Oh!’ Because there wasn’t an outline, there were quite a few bits that were very under-represented, so they didn’t form part of the outline, so I just didn’t see it as being a map of the UK, and then I noticed that the text in the side actually said, ‘This is map of the UK.’ But I tend to find with things like that, where they put the visual stuff smack in the middle of the screen, that actually you don’t tend to, unless you need to, in terms of if there hadn’t been the search box, I would probably have got frustrated, and then I’d have had to read the text, and then it would have explained what I was doing wrong. But because there was a search box, I thought, ‘Okay, I’ll use that, that’s obviously what they’re trying to get me to do.’

RH Right, so you were nodding when Jaydee said, ‘I thought it was the easiest to understand,’ but actually there was a little bit of work to do before you got to that.

Frederick It could have been even easier! But because of the fact that they had the search box in the middle, that was really easy to understand, and I thought, ‘Okay, they’re places, and there’s a box where it says,’ and I can’t remember whether it says search name or location, or whatever the title, I just skipped through. Yeah, ‘Type here to search,’ so it was like if you didn’t get that that was the map, then okay, I can cope with it, but as I say, I didn’t see that box in the corner. I’ve just noticed it actually has a slightly different background colour but you can hardly tell, so it didn’t really stand out very much.

RH Which were the more difficult to understand?

Flora The third one.

Frederick The third one was a lot more complicated. I mean they varied, because there were four different ones within one website, and the first one, I can’t remember, the one with the disks, was a bit too much to it! It wasn’t very easy to just look at.

Harriet It was too long.

Frederick Yeah, because you couldn’t hold that in your mind when you looked at something down here, because, ‘Well, what was that?’

Harriet You couldn’t see it.

Frederick And then later they were all completely giant, so it was all filled, and like, ‘Is that significant? I don’t really know!’ Because all of the others seemed to be fairly evenly distributed and there was just one row where they were absolutely solid. It was like, ‘Okay, is that supposed to be like that?’ because there’s no explanation to why they look like they look. It’s not obvious that there’s obviously a reason. I’m sure there is, but you couldn’t tell what that reason was.

RH So it was partly problems with this interactiveness rather than the ((1:07:22?))

Frederick Yeah, whereas the second one with the line graph made a lot of sense and it was very easy to understand and to slide the time slider across the bottom and the words changed size and so on, that’s really easy to grasp. But yes, that first one wasn’t particularly.

Harriet Being able to see it all in one go.

Frederick Yeah, if you can just picture it you kind of go, ‘Oh, okay.’

Harriet To be able to zoom in is one thing, but to have to scroll down. Like you had to zoom in for more information, you’re like, ‘That’s what it needs you to do,’ and that feels like a natural thing to progress on to, but to be scrolling and trying to compare, I think those disk ones were the hardest to understand of all of the different slides and different screens that I saw, just because there was no sense of comparison, which is what it feels like all these data visualisations should be about, like a sense of scale that you get of different things.

Marianne What I learned in these examples, these visualisations are not a short cut or an exemplification of a complicated piece of information that might be in an article, but they are, in themselves, something that you have to work at and it’s a process. It’s possibly, in some ways, even harder than reading an article, because somebody who writes a good article has done it for you. So I’ve learnt this evening that visualisations are not trying to help understand written information but are in themselves almost like a crossword puzzle. That’s what I’m taking away from this evening.

RH Can you explain what you mean by comparing them to a crossword please?

Marianne Well, you’ll have to do a lot of thinking to assemble details that you can’t grasp at one point, because it comes with clicking and then something else, and clicking and clicking. And as you’re doing this, you’re also asking more questions, because the new image suggests something else. It’s silly to call it a crossword, but I mean it’s thinking work rather than immediate help through an image. And when I first thought of that, I thought the image, if there’s no language, if people haven’t got language. For example, if you have a school where 170 languages are spoken and you could put an image, it would help various people to understand in their own languages what is being said. But this is not it, this is in itself the task. So I misunderstood from my work at home what it was about, but it’s more complicated.

Jaydee Which brings perfectly round to one of the visualisations that I wrote about, which isn’t really relevant, but it is in a way, thinking of you! I said to Flora, last week I was in [Village 1] Church, and [Village 1] Church is filled with old wall paintings - and these are 13th century so they’re quite old! – but that was the original visualisation of the bible story.

Marianne Yes, that’s right.

Jaydee And there are no words, it’s pure visual, but unfortunately nowadays, we need something to guide our way through, but when it was done it was pure, pure visualisation, no words needed and very, very simple.

Marianne Yeah, so computer visualisations are also very different from just printed paper, because all the data I’ve looked at for today was just a page, and like them or dislike them, but this is ongoing and you need to click and you need to remember why you’re clicking, so it’s a task rather than a quick help. And that’s something I’ve learnt, I didn’t know that beforehand.

WA Interesting.

## Tell us some things that you learnt from looking at the visualisations.

RH That’s a big learn, isn’t it? What are some of the smaller things that you learnt? What about the fact or ideas that you learnt from these visualisations that you looked at today, are there any particular things that stuck out that you can remember?

Harriet I thought it was interesting that on the migration one I typed in places, I compared Chichester, which is where my sister lived for a little while, and she was like, ‘Oh it was very posh!’ and compared that in terms of the population to Bradford, where my friend went to university and was like, ‘There’s a lot of diversity here,’ and saw that in percentages. And it was pretty well reflected to what I thought it would be, so yes, I learnt that. Sorry, I’m not sure if you’re asking for facts.

WA That’s certainly something we can learn from them.

RH Yeah, and is there anything else?

Ishmael Very similarly with the media thing, just checking how the different words change over time, and I was like, ‘Okay, so this is when this happened,’ and then I looked at the words, ‘Yes, so this has increased,’ and it was kind of proving certain things. And in other ways, like learning different ways that the media and the different media presented the same subjects and the same words, and I was like, ‘Yes, the tabloid is going to say this,’ and a lot of times it was just confirming, and other times it was like, ‘Oh? Interesting!’

RH So what surprised you?

Ishmael I think what surprised me was, not really surprised me, but that there was a difference between immigrant and migrant, and some of the words were the same, but the one word that separate them from immigrant and migrant was skilled, in migrant. I was like, ‘I see the value in everything,’ and that just stuck to me. There was skilled there, but then the rest of the words were the same, so it was the value that the media put in the word migrant.

Harriet And that was a really useful function of those words, like I found it quite overwhelming to have all the different words on the screen, but when you did see how they changed from different publications it felt like that was the value they were trying to get across and that did do it, but it was almost just a bit too much and you could have spent ages on it to really feel like you’d understood it.

Ishmael Yeah, you had to take some time and you couldn’t have just a quick.

Marianne But would you not, because you knew so much, read it with a very knowledgeable approach? Somebody who hasn’t got a clue, from the moon, coming down and seeing what is the population here, would this particular programme help them to understand? My feeling is, because you have such a knowledge, and you mentioned 9/11, and if you hadn’t had that, so, in a way, certain visualisations can only be read properly by people who already know quite a bit!

Harriet That’s true.

Ishmael Yeah.

## Did you feel there were things you wanted to know that the visualisations didn’t tell you? Can you give examples?

WA When you were looking at these visualisations, was there anything you wished were included in the visualisation that wasn’t there?

Frederick Yeah, the second one, the census data one, you could compare two places, but actually you did the compare yourself, it didn’t. You had to look at them and then go, ‘Well, that one is 26.2% and that one is 17%,’ or whatever. And in that case, it’s quite easy, one’s a lot bigger than the other, but when they were like 23 and it’s two decimal places, or whatever, and you look at the two and you just think, ‘Well, is that a lot more, a little bit more?’ and you had to click, you had to try a few before it was obvious what made a big difference and what was a small difference. And I think it would have been nice to be able to select not just two to compare, but actually to be able to add them together, so to be able to select a whole bunch of places. Because like London, it’s split into so many little tiny boroughs, and actually being able to treat it as one, or to be able to say, ‘If you took the first 50 miles from the coast, and then the next 50 miles,’ and do it as stripes across the country, for example, how would that show? That would take you a week with that, because you’d end up having to basically click on each one, write down the numbers and add them together yourself! You wouldn’t be able to use that to do that.

WA So you would have liked more of a function to go at different scales, so maybe a regional.

Frederick Yeah, I think the fact that you had to know specifically, it’s a bit like the horrible thing in Ox is, ‘Are you in the southeast, the southwest, the south, the midlands, the north of the midlands?’ depending on which website you go to and actually where is Ox? Like, ‘Oh, I’m here! Oh no, I’m not here today.’ Or it’s like one of those ones where it says, ‘Which is your local store?’ or whatever, is the region that they put you into is different every time, near enough! And it’s that kind of thing and that actually having a slightly less granular view would have been really useful I think.

WA What other things?

Marianne I’ve already mentioned that I would like to know how many British born people live elsewhere, really because I think this thing about us being swamped, which has been on the news, it would be interesting. And this is a small island, in a way, so at least if it was give and take it would be interesting to know.

WA So that’s a question that wasn’t answered by the visualisation?

Marianne Yeah.

Harriet I would like to be shown some extremes in the comparison, to not be hunting them out for myself, for them to be like, ‘This was the most extreme of one set of data and this was another.’ Like some easy points, like, ‘Here are some interesting things that we found‘, and not necessarily presenting it with extra info or data, but just, ‘Have a look at these.’ And also I thought splitting it out into different nationalities was interesting and I would have liked to have seen an overall data box of what percentage of American migrants versus Australian migrants are in work, or something like that, just like in one of the standard boxes but across the whole nationalities. I thought that would have been interesting.

Marianne And taking the Americas together is absolute rubbish.

Harriet It feels like they’re very dispirit, doesn’t it?

Marianne The United States is not the south. The Americas, I put that, and I really think that’s absurd. One ought to differentiate how many US Americans live here and how many Spanish or Portuguese speaking people. That was weird.

## What do you think helps you to be able to understand a visualisation?

RH Thank you for your reflections on these particular visualisations and I’d like to just move on. I’m aware that we’re running over, so is everybody okay for another five or ten minutes? So if we think about visualisations in general, what do you think helps you to be able to understand a visualisation, is there anything particular?

Harriet I really like scale and the use of scale and it’s bigger if it’s more important or larger and smaller!

Jaydee Or longer or shorter.

Frederick Yeah, I think that’s much more important than the colour, or at least much easier to discern, that you can see something that is a small dot or a big dot, whereas if it’s purple or green or, it just seems a bit too abstract.

Harriet Even length I would say is harder than, say, like a circle, for instance. I like circles!

Jaydee I find bar charts.

Ishmael I quite like height!

Harriet Yeah.

WA Sorry, you were saying?

Jaydee Bar charts I find much easier to understand than circles. I suppose we all see things differently, but you can easily see. I think there’s one that I pulled out of the paper about the results of the by-election with UKIP up here and the Liberal Democrats down here, and that was easy to see. To me that’s easier than the circles.

Flora Well, they’re in a row so you can see.

WA What are some other things that you think help you understand a visualisation?

Frederick I think, as you said, the example is a good one when they highlight either the extremes, or here’s the pre-selected one. A bit like the BBC one, if you hadn’t been able to put your own height/weight in and just clicked about, it wouldn’t have made any sense, but because it gives you something as a suggestion and then you can explore from there, it seemed to work. Whereas I think if you were just presented with the orange scatter plot, you’d kind of go, ‘Well, okay, I can click on dot and it tells me who’s in that dot.’ So I think that was the problem I had a bit with the census one, was if even if it had just highlighted one of the circles to start with and shown, as an example, ‘That’s how that behaves,’ rather than just assuming that you’re going to click on something, and not really know what you’re going to get.

Marianne It took me a long time to realise that they wanted my weight, that it was a question of where would I fit in. I thought, ‘Oh this is a sports thing. Right, I’m not interested in sport,’ so I had to ask you what I was supposed to do!

Ishmael I like it when they contextualise it, so when infographic is contextualised into something that you can relate to. So, for instance, this many things can fit into Italy and this country,’ because otherwise you’re like, ‘This is big, so what?’ When you start to contextualise different things, you’re like, ‘Okay, I see what you mean and you bring it home for me. Do some of that work for me! That’s what you’re there for!’ I like that.

Flora And a little bit of storytelling perhaps.

Ishmael So, for example, in [Charity 1], what we do is, ‘This many people are unfed and they can fit in, and think of New York that’s packed,’ so how do you bring it home to someone? Something like that.

RH Were there any other things that struck you as useful?

Jaydee It’s nice to know what the visualisation is about, which with the third one I was completely at a loss. It needs to have a proper title, in a way, saying ‘This is what this graph shows.’ And that was lacking in the third, and the first one, I wasn’t quite sure what that was supposed to be showing!

WA So just even knowing what we’re looking at is important?

Jaydee Yes, just a simple title at the top. ‘This graph shows ...’

## Do you think visualisations are an effective way to understand data?

WA Do you think visualisations in general are good ways of communicating information or communicating about data?

Jaydee Yeah.

Frederick Yeah, I think they definitely make a difference than the traditional sort of, ‘Here’s a table of figures,’ or something. As you say, especially if they’re contextualised, I don’t know whether it’s an actual distinction, but I always think of an infographic as being a static snap shot type thing, versus the sort of visualisation where you can play with and explore. And I think with infographics things like that, where it’s ‘Ten swimming pools of water is wasted a year,’ something you can’t really grasp any other way. There was one a couple of weeks ago about the amount of radiation absorbed by a person, and I can’t remember what but they used, a little pretend person, and they stacked them up to represent, ‘If you eat a banana it’s the equivalent of four lots of travelling to the moon,’ or something, or flying from the UK to the US is actually the same as 4000 bananas or whatever, in terms of the amount of radiation you get exposed to. And those sorts of things, if you just said the numbers, would mean absolutely nothing, but actually it scales it into something you can understand and I think that makes a big difference.

WA So it enhances your ability to understand information?

Frederick Yeah, and especially if it’s a domain that you don’t really know something about. Because I struggled with the census one with the percentage, you just think, ‘Is that good or bad?’ I have no idea and I have nothing to base that on. So getting there was quite clever, but that particular figure didn’t actually really mean anything to me, because you could say, ‘18% of the population of Ox are migrants. Okay, is that a lot more than average or a lot less?’ It’s just a number, whereas if it was shown as a static graph, where they’d actually worked it out, ‘Here’s Ox, here’s London, the average,’ you’d be able to do something with that I think.

WA What do other people think about how visualisations are effective, if they’re effective, as a way to communicate information?

Jaydee They make it easier to absorb information when they’re done well!

WA So what in your mind would be the perfect visualisation or an effective one?

Jaydee A clear title! I like a clear title and I like linear things rather than these circles. I don’t really know. It’s just got to be clear and the writing has to be clear to read as well.

RH Flora, you were going to say something?

Flora I’ve forgotten now! I just think those of us who are older, and we’ve perhaps not grown up computers but come to them later in life, so particularly the sort of visualisations we’ve looked at online today, the one that Ishmael got so much from, okay, I’d probably have to look at it for a month before I got enough out of it! And that’s maybe an exaggeration, but I would like something clear, and probably a lot of what’s been said about how you can do comparisons, for example. Maybe even just a linear comparison, if there was a link that you could do that. Some basic information to get me into it rather than going into terribly complicated things straightaway.

RH What kind of basic info were you thinking of?

Flora A sort of summary, and then you could branch out and see the details.

Harriet I felt that one, you know how you click and it would go back to the beginning, so you could click round forever, I felt like I wanted a bit of a summary at the end, like an ending, ‘This is what you’ve learnt!,’ well, not learnt, but some kind of end point.

Flora And for me, if there’s anything I don’t understand, I tend to print it out so I can look at it, and I say properly, but you know what I mean! I’m not sitting in front of a screen doing it. And you probably feel like that, do you?

Marianne Absolutely.

Flora We’re used to it being on the page and looking at it that way.

Marianne Are you actually doing your project with computer programs in mind rather than simple one page images?

WA This is partly why we include the paper one.

## Are there any skills that you feel you might need to help you understand visualisations?

RH We didn’t get round to that link. But that does lead us on to the final question. Are there any skills that you feel you might need to help you understand visualisations?

Jaydee Most probably a better brain!

Marianne Better computer skills. I write my letters on the computer and things like that, but for this, it’s new, it’s new to me. I’m very traditional, I read an article and I get the information. And golly, in the old days we did exerts by hand for books we read. Different times.

Jaydee Different times.

WA What are some other skills you think you need to help make sense of these visualisations?

Jaydee You need to be quite mathematically biased, I think.

WA How do you mean, mathematically minded?

Jaydee Virtually all of them are based on data, which is numerical, apart from the last one, which I have no idea what that was about! So you have to know about percentages, you have to understand what 5% means as opposed to 20%. I think you have to be very mathematically minded. Well, I feel you do anyway, which I don’t really have a problem with but other people do.

Flora Which I guess is why they do it graphically in some.

Jaydee Yeah.

Ishmael Mine is the flipside of that. Mine is what if people don’t understand what you’re trying to represent using these images? What if these images make no sense to them? If I’m trying to create something and I think of it and I see this as a representation, what if nobody else sees that? And that’s one thing that you have to really think about quite a bit.

Jaydee Because we all look at things with different heads.

Flora And I think I could get to where they perhaps want me to be, but I don’t always want to make the effort, to be honest! It gets too much and life’s too short, especially when your job doesn’t depend on it, your life doesn’t depend on it.

Marianne I enjoyed it because I feel I’ve learnt a lot, and in a way I’m sad the time’s up. I wouldn’t mind doing the rest of them!

RH We can talk about that afterwards because we do have some extended diary keeping.

Marianne I liked that and it’s been a great evening.

Harriet I’d be interested in doing that.

WA Like I said, you all have a website obviously for the Seeing Data Project and we update that, we have a blog as we go through the project, but also more information we’ll be posting to the website and you can read more there. We have extra reading if you want to go and learn more as well.

RH And you can go back and look at these that you didn’t have a chance to look at if you want to. The website is written on the front of the sheet there, so if you want to copy that down if you do want to go and have another look.

Jaydee So you can actually go and look at the rest of them. That’s interesting.

RH Yeah, that website’s on the internet, but don’t pass it round, though! In case we need to speak to other people for the project, but it is there if you wanted to go and look at it.

WA Do you have any questions for us or any last opinions that you are burning to get out before we wrap up for tonight?

Flora I know you said that you’re not sponsored, but do you see it in the future, having money-earning commercial possibilities?

RH Not for us!

WA Not for us, but it raises a good point, which is how do we see the search going forward? And one aspect that we’re interested in is not only how do people across the country, of lots of different backgrounds, perceive these visualisations, what channels do they encounter in looking at these, but we’re also interviewing the people who make these kinds of visualisations, so designers or consultants who actually do this for a living. And we’re sharing the results with them as well to communicate what sort of issues come up when different audiences look at these, what challenges do they encounter? Equally, what do they find helpful when they look at a visualisation, what helps them understand it? And so that way, designers can start building this into their future work and their future projects to make visualisations more accessible and easier to understand.

RH And that’s underpinned, and not just on our part but on the part of the visualizers that we’ve spoken to, a desire to make data more accessible so that people feel more informed and engaged with it.

WA And confident.

RH Yeah, with some of the issues that are cropping up, and in particular, migration, the one that we talked lot about today, so that people feel more like they know about what’s going on in the country.

Marianne Why did you approach us in an artistic setting, when really this is so much advanced politics and mathematics and computer knowledge?

RH We wanted to talk to people who are particularly interested in the visual and to see how your interest in art and aesthetic qualities informs your readings of the visualisations. That was why particularly.

WA And equally, the reason why we approached [Charity 1] was because a lot of voluntary organisations and civil society organisations, particularly working on social and environmental issues, they communicate using visualisations, or they come across visualisations in a different way than, say, someone who doesn’t work in that section. Equally, people working on library science or in universities come across visualisations in a different way as well. So there was a logic behind bringing these different groups together!

RH I’m going to switch the tape off and then I’m going to ask you to tell me your pseudo names.