WA Welcome. Thank you coming along to this event. We really appreciate your time for coming and sharing your thoughts with us about visualisations. I’m Will Allen and I’m a researcher with the Seeing Data project. And this is Rosey.

Rosey I’m also a researcher based at the University of Leeds. Will is from Oxford.

Will What we basically are looking at in this project is how do people perceive visualisations; what do they think of them; what kinds of feelings do they stir up in them – because we don’t really know a lot about that. So, what we’re aiming to do tonight is to get your perspective on some visualisations that we will show you and you’ll interact with. And then we’ll come back at the end and discuss as a group some of your thoughts on that.

Now, as part of this project we’ve given you a set of visualisations which are on the screen in front of you. And it’s important to emphasise that we did not make these, so your thoughts on them or your opinions about them won’t offend us because we didn’t make them. We’re genuinely interested in your thoughts, whether you think you love them or didn’t like them, or any sorts of things that come up as you look at them, we’re genuinely interested in hearing about that.

To help that along this event is confidential in the form that the form that you signed earlier, the confidentiality agreement, means that everything said in this event is confidential. It means that when we leave the room and we go back to our normal lives we shouldn’t talk about what was said in here or in ways that would identify who said what. But the positive side of that means that you can say whatever you like in here and you know it will be confidential. In fact at the end of the focus group we’ll ask for a pseudonym or false name that you want to be known as in the research, so when we go and talk about the research to other people or present it that way you won’t be identified individually. You’ll just make up your own name for that. Again to stress, we didn’t make any of these visualisations so we’re genuinely interested in what you think of them.

The way that the event will progress is we’ll give you a chance to look at thee visualisations a little bit, and then we’ll come back as a group and have discussion about them. So, there will be two parts to that.

Rosey We are aware that you didn’t receive the information about tonight in enough time to maybe do a diary. I don’t know if any of you have done a diary? Blank faces so probably not. That’s okay, because it was late notice so we expected that. But perhaps we could have a chat about that first.

Will Sure. First are there any questions about how the event will go?

Rosey ((Housekeeping comments))

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

Will What we’ll first start with before we look at the visualisations I wanted to just ask: how aware were you of visualisations before you came here tonight?

Rosey Or before you looked online? Aleksandra, were you aware?

Aleksandra No, I just came with my mum.

Rosey So, you haven’t looked on the website or anything like that?

Aleksandra No.

Rosey And you hadn’t either?

Maria No.

Rosey So, no one. So, you’re still not sure what you’re here for.

Will Well, when we say data visualisation what do you think of? What comes to mind?

Maria I don’t know what this is about.

Rosey No idea at all?

Maria No.

Rosey What about you, Marek?

Marek Visual data.

Rosey What do you think of that?

Marek News and stuff.

Will Stuff you might see in the news?

Marek Yeah.

Rosey What sort of thing do you think you might see in the news?

Marek I’m not sure. The weather or stuff like that.

Rosey Natalia?

Natalia I don’t know.

Rosey Okay. Just to explain very briefly what we’re thinking about is anywhere where data, usually numerical data, is displayed in a visual way. So, that might be a graph, bar chart, scatter plot or something like that.

Will Or a map; maps are great examples of that.

Rosey Including the weather map, as you mentioned. Does that help?

Will If we could go round just briefly so when we get the recording back, someone transcribes it, if they can associate a voice with a name, so if you could just say your name. I’m Will.

Rosey I’m Rosey.

Aleksandra I’m Aleksandra.

Maria I’m Maria.

Natalia I’m Natalia.

Marek I’m Marek.

Rosey Really the notion of data visualisation is a bit of a mystery to you all before now. That’s absolutely fine. In which case we should probably move straight on to the computer task.

Will In front of you on our website is a set of visualisations which we’d like for you to go through in order, starting from number one. You all have a packet on the side of your desk and in it it has several parts: the first has a form like this which is one sheet for each visualisation that you will look at. What we’d like you to do is write three sorts of topics: what happened, meaning what did you do as you looked at the visualisation; how did you feel, so what were some feelings or things that it brought up in your mind; and then what did you think or learn from the visualisation.

Now, on the side here are some prompts. These are some ideas if you’re confused about what should I write. But you don’t have to write an answer to every single question if you don’t want to. This is just to get you thinking about what sorts of topics can go in that box. Now, you do one of these for each visualisation you look at. In addition you also have the very large sheet in the back which looks like this. What this is is a grid with two characteristics to look for. As you look at the visualisation we’d like you think about whether you liked it or if you didn’t like it, or if you learned something from it or if you didn’t learn something from it. So, this is a gut feeling and this is your opinion. So, if you really liked it you should put it somewhere over on this direction. If you really liked it put it far over; and if you liked it a little closer here. And then think about did you learn something from the visualisation. If so, if you liked it and learned something from it you would put it somewhere in here. These are roughly the further along means the strong you feel about it. So, if you hated it put it really far over in this direction.

I think Rosey has an example of this.

Rosey This is one Andy did on a previous occasion. He particularly liked this one and he also felt like he learned a lot as well, so he put it over here. Meanwhile this one he liked it but he didn’t learn a lot from it.

Will He liked it a little so it’s closer to the centre; but he really didn’t learn anything from it so it’s quite far down at the bottom.

In your packet you have smaller versions of all of the visualisations that are possible. We’d like you to take a bit of Bluetak, stick it on the back and then place it, as you saw in the example, where you think you’d like to put it. So, if you really didn’t like it stick it somewhere over here; and you learned something so you see it can go wherever you like. This is a gut feeling; it’s not meant to be over analysed. So, just pick where you think it should belong.

Rosey I think at this point we should say that when you look at these visualisations this isn’t a test of you or whether you can read them or understand them. This is a test of the visualisations and whether they make sense and what you think about them. It’s not a test of you.

Will Exactly. So, if you’re confused by something let us know; write it down on your form and say, I didn’t understand what this did or what this is saying. That’s interesting for us to know. So, this is not at all a test of you; we are genuinely interested in your experienced and what you felt as you looked at it. So, if you were confused, if you liked it, whatever it is write it down and let us know.

Rosey First of all, look at the visualisations in the order that they are listed; then make notes on the grid, on the sheet; then stick the little picture on the big grid. When you need to go back to this list you’ll see in the top left-hand corner there’s a little favourite, Seeing Data, and it will take you back to this list.

Will We’ll like you to do it in order, starting with number one, but you don’t need to do all of them. Go at your own pace, as fast as you want.

Rosey Have you got any questions? You look excited Aleksandra. ((Laughter)) That’s great to see.

Will If you have any questions, technology things, let us know. Number for is here on paper.

((Group does exercise))

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

Rosey I hope you found that interesting. By the looks of this we’ve certainly had some interesting responses to what you thought about them and what you learned about them. Quite a popular option here.

Natalia That was very interesting.

Rosey The migration and census. What was interesting about it?

Natalia It’s how many people. There are lots of people for me, migration, how many people living here, how many are born.

Will You put you liked it and you learned something, so why did you put it there? What did you like about it? What parts of it did you really enjoy?

Rosey Natalia, anything? That’s okay. Aleksandra, you also put it right up here.

Aleksandra I found it really interesting that there were moving parts, and not only were you clicking, you were learning stuff from it as well. That’s why I put it up there.

Rosey So, you liked the interactivity as well.

Will Can you tell us something you learned from it?

Aleksandra That there were loads of people in one country or one state.

Rosey Do you mean in the UK?

Aleksandra Yes.

Rosey But Maria you didn’t like it. Why not?

Maria Because I don’t understand too much and I think I don’t like it.

Rosey What didn’t you understand? Was it how to use it or where to click?

Maria Yeah. If I’m looking for information and I need this information for me it’s clear. If I don’t need this information I only check; there is nothing interesting for me.

Rosey So, if you were looking for something in particular then you might find it more interesting?

Maria Yeah. If I need something it’s interesting. Something now there is nothing interesting for me. I think like that.

Will Marek, you put it in a similar position, up in the upper right-hand corner; why did you put it there?

Marek Because I learnt quite a lot. I didn’t know so many people were immigrants in this country. It was pretty easy to use as well.

Will What did you find easy to use?

Marek You could just click what you wanted to find out and it came up straightaway.

Natalia It’s difficult, the different accents as well, so when he’s talking he’s got a different accent so I don’t understand what he’s saying. ((Laughter))

Rosey Because you usually talk Polish with each other?

Natalia Yes, talking with me; but together they speak English. I think our children are more helpful for these things because they go to school, they learn and it’s actual for them. Sometimes I check if I need to find something it’s interesting and it’s correct, if not…

Will So, thinking about all of the visualisations you saw here which ones did you find really relevant or interesting to you personally?

## 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?

Rosey Which subject matters did you like?

Maria The first one.

Will The sports one?

Maria Yes. I put how tall, and kilograms, and some different men, it’s volleyball, something like that.

Will When that volleyball player came up how did it make you feel?

Maria Nice. ((Laughter)) I want to look like that.

Will So, you felt complimented. ((Laughter))

Rosey Natalia, you liked it too.

Natalia Yes, as well.

Maria Because we’ve got a complex. If I put how many kilograms I’ve got and how tall and somebody has got nice things, he’s playing and it makes you feel good.

Rosey So, it made you feel good about yourself?

Maria Yes if I see somebody, okay.

Will Natalia, what did you come up with?

Natalia The same taste. ((Laughter))

Maria We try, we gym, and for us it’s good things somebody is similar.

Rosey Did you feel the same?

Natalia It was very exciting.

Will What was exciting?

Natalia Because it was similar.

## Did any of the visualisations arouse particular feelings as you viewed or interacted with them (e.g. pleasure, delight, anxiety, confusion, sadness, anger, curiosity)? Which visualisations, & what feelings? How strong? Why do you think that was?

Rosey Strong reactions then. On the other hand Aleksandra you felt less happy about this one; you felt you liked it but you didn’t learn anything from it.

Aleksandra Yes. I was shocked that I was a gymnast.

Will Shocked?

Aleksandra Yes. But on the other hand we don’t do the same thing; we were just similar in height.

Rosey Why were you shocked?

Aleksandra Because I thought I would be closer to a higher person; not a higher person but someone who did football or basketball or something like that.

Rosey Are those the kinds of sport that you do at school?

Aleksandra Yes.

Rosey So, you don’t do gymnastics?

Aleksandra No. We did but we stopped.

Rosey What about you Marek? What did you find about it?

Marek I didn’t really find it that useful because it doesn’t matter how tall you are and how much you weigh to be as skilful as that person.

Will When you typed your details in what did you come up with?

Marek I didn’t type my details in because I didn’t check. I typed in random and an athlete came up that I would never do.

Will Do you do sports yourself?

Marek Yes.

Will What sorts of sports?

Marek I play sometimes football; I like rugby and stuff like that.

Maria When he plays rugby he comes back very messy sometimes. ((Laughter))

Will Think about this one, Shakira in the newspaper, the Metro.

Maria I think I put it wrong because I didn’t understand anything, so I put it wrong, this picture.

Rosey You mean you put it in the wrong place on here?

Maria Yes.

Rosey Where should it go? Left?

Maria Yes.

Will That means you didn’t like it?

Rosey Say when?

Maria Put it in the middle one.

Will So, everyone put it in the lower part which means they didn’t learn something from it. In fact Aleksandra you put it down – is that the lowest? No Marek. You both put it in the lowest; what didn’t you learn from it?

Aleksandra I just didn’t really understand it. People tweeting, most are girls or most are boys, it wasn’t really interesting because anyone could tweet that or go on Facebook and do that. So, it wasn’t really ((0:28:45?))

Will So, for you the source of the information wasn’t so good?

Aleksandra Yeah.

Rosey What about you, Marek?

Marek I didn’t find it useful. I don’t know why it’s in the newspaper even because it’s not really news; it’s just random information.

Rosey So, it seemed irrelevant to you?

Marek Yes.

Rosey On the other hand Maria you quite liked it.

Maria Yes, sometimes if I’m on the bus I check. Sometimes if something happens I read something. It’s normal. If I’m travelling on the bus I like; if I stay at home and reading no.

Rosey Right, so it’s that context again: travelling and reading books.

Maria Yes. And if something is about sport or something I check less if it’s good or not and that’s it.

Rosey So, when you were looking even within this setting, this university room, even then when you looked at the newspaper you were thinking oh, I read the Metro on the bus and this is how I think about it? No?

Maria No.

Rosey I misinterpreted then.

Maria Sorry.

Rosey So, when you looked at it today you said you liked it?

Maria Yes.

Rosey Just in general.

Maria Sometimes I check weather, if it’s okay for me. Sometimes it says if something is happening in town, it’s okay and I look for more information. I only check if it’s nice or not.

Rosey And this one you thought was nice?

Maria You mean now? Yes, it’s okay.

Rosey Let’s talk about this one that Natalia, Maria and Aleksandra got to about the fresh water.

Natalia I didn’t understand anything of this. I didn’t know what this is about; what information they’d got; what information they want to give me. I didn’t understand so that’s why… I think it’s maybe interesting, but if I understand what they mean. That’s the problem. Everything I think is interesting if I want this information, but for me…

Rosey Do you know what it was that was difficult about it? Was it the layout or the writing?

Natalia The writing.

Rosey So, was it the language?

Natalia Yes, the reading. Sorry.

Rosey What about the visual itself? How did you feel about that, the colours and the lines?

Natalia Yes, it’s nice.

Maria Clean; this information is clean.

Natalia It’s clean, but I don’t know what they want…

Maria If you’re looking for some information and you want to use this information it’s clean.

Will What do you mean clean?

Maria If you want to find some numbers you can find. I don’t need this information; I don’t like because I don’t need. If I want it it’s clean.

Natalia It’s easy to find. It’s very clear; it’s no problem to find something about this picture. It’s no problem to find it because it’s very easy to explain.

Rosey That’s really interesting actually, especially because in other focus groups people have found that more difficult than you have in terms of the lines. So, that’s really interesting so thank you.

Natalia In here in this country it’s really, really easy to find everything. For example, the people are very nice and explain. People try to understand and help. So, I think this country is really, really easy. For example the Polish country they do everything to make it hard. ((Laughter)) So, everything is easy to understand, to explain. That I think is very clear.

Rosey In what sense are you saying people try to explain? Are you thinking about signs or particular kinds of information? Or are you talking about when you talk to somebody in a shop, for example?

Natalia Anywhere. They are never making problems about this. They try all the time to understand. They try to explain very, very easily; they try different ways to explain. So, that’s why it’s nice.

Rosey I wonder how often people will use the visual to help you understand things. Do they draw pictures sometimes? Or do you find that visual signs help, that kind of thing?

Natalia Example, if I phone they explain by words; they find some different words. If I’m talking face to face they try as well to show something. I don’t know how to… they try different words, easy words.

Rosey So, it’s primarily words.

Natalia Yes.

Will We’ll collect these and compare these to what other people have said and see if there are similarities or differences. It’s really helpful.

We’d like to get some of your thoughts about when you were looking at these visualisations.

## How did you feel?

Will How did you feel when you were looking at these visualisations?

Maria If you’re looking for some information it’s nice because it’s nice colours, it’s clean, not too much information. Because one colour is dark and one is light and if you need something you will find it quickly. If you need this information you will find it very quickly.

Rosey Was there a particular one that you were thinking about when you said that? Was there a particular one that you found easy to use?

Maria If it’s about immigration, if I want to know probably Barnsley, how many born or something, it’s quick, quick and clean.

Will You clicked on Barnsley and you used that visualisation how did it make you feel?

Maria It’s good.

Will Were there any other ones that brought up not good feelings, or you were confused or angry even? Were there any that brought up negative feelings?

Aleksandra The ((ninth?)) I didn’t really understand it.

Will Which one, the last one?

Aleksandra Yes, the last one. I didn’t really get it because we don’t do that at school yet and it was tricky for me to understand.

Will What do you mean tricky?

Aleksandra Like hard to get the right information and that.

Will What was making it difficult for you?

Aleksandra The layout was really squashed and you difficult to get the right information.

Will What information were you looking for?

Aleksandra Like how many people in the UK or different information that you would look for that day or that evening, wherever you were.

Rosey So, it wasn’t anything in particular about the way that the American intelligence programme has been funded? There wasn’t any particular information you were looking for?

Aleksandra No.

Rosey Did you have any particular feelings Marek about any of these?

Marek Not really. I found most of them pretty useless because I’m not really looking for anything right now. The third one I was really confused.

Will This is migration in the news?

Marek Yes. Because of the layout. I understood the first half of it but the second half I didn’t really understand.

Will Are you talking about the third and fourth question?

Marek Yes.

Will What made it hard to understand?

Marek It’s all squished together and stuff.

Will All those bubbles?

Marek Yes. I didn’t really know how to read it.

Will When you look at it what do you feel?

Natalia A mess. ((Laughter))

Marek Yeah, confused.

Aleksandra I found it fun to use because the first part was moving and the other parts would stay there and you’d just click on it. It was really fun to use.

Will What parts were fun?

Aleksandra The moving parts. There would be something like information more about it; it was all there but there would be more information about it, instead of loads of writing. The information you’d be looking for would be on the next paragraph. So, I found that one useful.

Will When you say fun what do you mean by that?

Aleksandra Like movement and kids could just go on and they might just be attracted to it. Not just say read this, read that; they could do it by themselves.

Rosey So, that element of fun might appeal to more people than if it was just text based?

Aleksandra Yeah.

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

Rosey Were there any of these visualisations that you particularly liked or disliked?

Marek I liked the second one, the census one, because I learned quite a lot from it. I didn’t know there were so many immigrants in the UK. I found out which country has the most and stuff like that. You could find that out and I found that useful.

Rosey So, you liked it because it told you some facts?

Marek Yeah.

Rosey Any other reason that you liked that one?

Marek It’s easy to use.

Rosey In what way is it easy to use?

Marek You can just click city and then it just tells you.

Will Did you look for a specific location first?

Natalia [City 2]. ((Laughter))

Maria Barnsley.

Will Are you from Barnsley?

Maria No, I’m from [City 2], but my new friends live in Barnsley and I checked Barnsley. I don’t know why.

Will When you found Barnsley, when you saw that, how did that make you feel? These were the first ones you looked at, right?

Maria Yes. Before I don’t need this information. Now it’s only how many born or something. If you study and you need lots of information; for me sometimes no. If I need something I’ll check; if not I don’t.

Rosey So, when you need information you look for it otherwise not so much.

Maria Yes.

Rosey What about you, Natalia, were there any that you particularly liked or didn’t like?

Natalia This one.

Will The census one.

Natalia Yes.

Maria Sometimes we check because we’re immigrants, we’re from a different country, and sometimes we like how many of us are in the UK or how many were born or something like that.

Will Could you tell us a bit more about that? Some of these the topic was immigration so how did that make you feel when you saw it? Because if you consider yourself an immigrant.

Maria I think now it’s a shock.

Will Shock? How do you mean?

Maria Sometimes we meet so many guys from Poland in the UK and if you check the numbers wow, it’s a lot of people.

Will What did you think?

Aleksandra I found it really useful because you know how many people are born, and how many immigrants came into this country and went out of this country to different countries. I found it really useful.

Will What might you use that information for?

Aleksandra I don’t know. Like an essay, but in history or geography.

## 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?

Will You raised this issue of the topic that helps you, that draws you into the visualisation. Were there any topics that these visualisations covered that you really enjoyed, or you found really boring actually?

Maria I think this first one is interesting for me because how many kilograms have I got, how many pounds. This was nice for me because sometimes I’m about the same weight as a sportsperson. He’s a nice person because he goes to the gym or something.

Rosey Do you particularly like sport?

Maria I like. ((Laughter)) Sometimes I like watching volleyball. I don’t like too much playing. I check this and hm, maybe if I practise, practise I could be the same. ((Laughs))

Will Did any of you watch the Olympics? ((Disagreement))

Aleksandra I was going to but I didn’t.

Marek I don’t like watching sports; I like doing them but.

Rosey What about the colours, the designs and the way things moved around, what did you think about those? Were there any of those that you particularly liked?

Aleksandra The ones that were really bright, and that’s what I really liked about them.

Rosey Which ones?

Aleksandra Like the first one and the number six.

Rosey Fresh water.

Aleksandra But the number five, the movie and follow up of the box office records, that was really boring because I didn’t need that information yet to use.

Rosey In the context of the design what was boring about it?

Aleksandra I really didn’t need it yet because I don’t need it like right now at this point, so I didn’t find it useful.

Rosey What did others think of things like the colours, the layout, the design? Were there any that stood out for you, in a good or a bad way?

Maria I don’t like it when it’s too dark.

Rosey You like bright colours?

Maria Yes.

Will Do you have an example of which ones were too dark for you?

Maria The second.

Will The migration census?

Maria Yes. Maybe because I’ve got glasses and I don’t like it if it’s…

Rosey Dark.

## 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)

Maria Yes. Six is better colours and it’s cleaner for me. If it’s dark blue or something I don’t like it.

Rosey You find it hard to read?

Maria Yes.

Natalia That is nice but I don’t know what it means. It explains how to live or what?

Will So, you’re looking at better life.

Natalia It’s nice. It’s very easy to see.

Rosey What makes it easy?

Natalia Better life index. They inform which country, I think the benefits, jobs, where they explain about the jobs, where there are lots of jobs. That is nice as well. ((Translated)) Because it explains lots of stuff and it’s colourful and easy to see.

Rosey Why do you say it’s easy to see? What is it about it that is easy to see?

Natalia ((Translated)) Because all the colours show how much each thing is. The flowers are bigger so you know which one is maybe better.

Will And you can see that pretty clearly from the image?

Natalia Yes. You see which one is maybe more jobs, more wage ((0:51:11?)).

Rosey Did you like that one?

Natalia Yes.

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

Will Another aspect that is important is trust. Did you trust these visualisations? Were there any that you didn’t trust or believe? Did you believe in them?

Maria Yes maybe.

Aleksandra I didn’t really believe the fourth one because there might be more men liking Shakira; there were less women doing it. So, I didn’t find that one true.

Rosey What makes you think that it might not be true?

Aleksandra A reporter might have lied about it, saying that might not be true. Someone might have said they prefer twice or something like that.

Rosey So, partly because you don’t trust the people who got the information together, and partly is because you don’t trust the information itself.

Aleksandra Yes.

Rosey I wonder why it is that you don’t trust the people who made the visualisation.

Aleksandra Because like on a film they might have made something that’s not true, like say if there was an earthquake somewhere else, they said there was an earthquake in that place, but in a different city or country and made that up.

Rosey So, thinking about film depictions or thinking about journalists?

Aleksandra The journalists and films and that culture with regard to it.

Will Were there other visualisations that you really believed, or opposite didn’t trust or believe? ((No response))

Rosey Does that mean you trusted them all?

Marek The most I probably believed is the census one. I don’t know why; I just did. It sounds true.

Will What sounds true?

Marek Like most people were born in the UK, and how many people just came.

Will So, the actual information they gave you sounds true to you?

Marek Yes.

Rosey Natalia, I noticed you were looking elsewhere on the migration website.

Natalia Yes, because I’d not spent lots of time before, but I can see now. I think maybe this is true as well.

Rosey Better life one?

Natalia Yes.

Rosey Why do you think it might be true?

Marek ((Translating)) Because why would they lie about stuff like that? It can be checked.

Natalia They give some information about the country.

Maria Sometimes if we are watching the news, and in the news they’ll say in this country there are many jobs, a good life, something like that. And if you check about these jobs you’ll see if it’s wrong or it is true.

Natalia I think it is true, serious.

Rosey So, the seriousness of the topic makes a difference?

Natalia Yes.

## 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)

Rosey Which of these was the easiest to understand if you had to pick one?

Aleksandra I would say the first one for me because you just put your height and weight.

Maria It’s very easy.

Rosey Do you feel the same?

Maria Yes.

Rosey What about you, Natalia?

Will You think the second one?

Marek Yes. I didn’t really go through them all, but…

Natalia The first and second one I think is very easy. But seven as well it’s very easy to check information anywhere if you want to; it’s really easy.

Will Which one did you find the hardest if you had to pick one that you looked at?

Natalia That one.

Will Migration in the news for you, Natalia, is the hardest.

Natalia Yes.

Aleksandra I’ve got two because I’ve got the eighth one and the ninth one because I didn’t really understand them. Actually I had three, the fifth one, eighth one and ninth one because they weren’t really clear to me. They weren’t in good detail to say the right more information. Not so much right information but not in detailed writing.

Natalia This one is very hard to understand.

Will You’re looking at the migration in the news.

Natalia Yes, I don’t understand it too much. When I see this picture it’s like…

Rosey You’ve got your arms in the air like no! ((Laughter))

Will When you look at those words do you know any of those names or any of those organisations?

Maria I don’t like it if you press and something moves. It’s not clear. If you’re looking for some information and I press and something moves I can’t really know.

Rosey You want things to stay still?

Maria Yes. If you press and you’ve got it it’s okay, it’s clean. If it moves, I find something and… no.

Rosey Moving elements on that page.

Natalia I don’t like it.

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

Rosey Tell us some of the things that you learned from looking at these particular visualisations. Any facts that you can remember? As they say in America, what’s the takeaway from this?

Maria Who is similar…

Natalia The first one is the best. ((Laughter))

Will Anything else that you learned?

Maria I think the second one as well, so how many people. I will try to remember. It’s about the seven million; this is easy to remember as well. Another one is too difficult to remember quickly.

Rosey So, that one fact will stay with you?

Maria Yes.

Natalia Yes.

Rosey Were there any other nuggets of information like that?

Marek I learned quite a lot about immigrants, like how many there were in the country and stuff.

## Did any of the visualisations change your mind about anything? How?

Rosey Did any of these visualisations change your mind about anything?

Will Or surprised you?

Aleksandra I think yes because on the third one the migration in the news, I didn’t know there were loads of people from different countries coming into the UK. I thought there were like ten, 15; now I know there are loads.

Will What told you that?

Aleksandra The countries in that one, the PowerPoint there were loads of countries like Poland, Africa, America and that.

Will Oh, the different words used to describe immigrants?

Aleksandra Yes.

Will So, what surprised you was the variety of those?

Aleksandra Yes.

Will Interesting.

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

Rosey When you were looking at them were there any points where you thought oh, I want to know this but I can’t find this information here in this visualisation; why doesn’t it tell me x? Were there any points like that where you wanted to know something but the visualisation didn’t tell you? Nothing?

Will Are there things that you wish the visualisation told you?

Marek No.

Aleksandra I wasn’t looking for one certain thing so it didn’t really bother me. But if I did and I couldn’t find it on that particular thing I would just carry on going down, or I might search a different website for that particular thing.

Will Do you have an example of that?

Aleksandra Like Wikipedia or Google.

Will I meant which of the visualisations made you think oh, I’ll Google this later?

Aleksandra The one with Shakira on it. That might not be true so I’d search it in a different place perhaps.

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

Rosey Thinking more generally about these kinds of visualisations, and you might have seen other examples, graphs or bar charts and things in the news or documentaries or papers, think about them generally, what do you think it is that helps you to be able to understand a data visualisation?

Will Put it another way: what helps you to understand a visualisation? When you look at a visualisation what characteristics or what qualities do you want it to have to make it easy for you to understand?

Natalia ((Translated)) I would like the layout to be easy to read, like you can press on things and it comes up straightaway, like links or something. I don’t want paragraph and paragraph of writing because I wouldn’t be bothered to read through.

Will So, you want more information in the visual rather than scroll down to read? ((Agreement))

Rosey But do you specifically want it to be interactive so you can click through? You mentioned about clicking.

Marek I don’t really mind if they just had that information.

Will So, it could be either a picture or a graphic or a thing you click through; either is fine for you?

Rosey Or was there anything that you struck you, things that you would want a visualisation to have, general things?

Maria No.

Rosey What about you, Natalia?

Natalia ((Translated)) She likes the flowers! I like flowers. But for me if the website looked like that it’s very easy: I put in there and they show me everything. So, I think what is in Germany, what jobs, income, education; so it’s everything I wanted.

Rosey So, there’s a lot of information there. Is that what you want?

Natalia Yes, it is. It’s very easy.

Rosey Would you like it if all that information was there on the front?

Natalia Yes. What about the front? This information or what?

Rosey If all the information about Germany was there as well on the page would that be okay?

Natalia Yes. I think this is very nice. It’s very easy. They explain everything; how many adults are living anywhere.

Will Do you think you feel like there is nothing missing from there?

Natalia I don’t know. Maybe no, maybe yes; I don’t know. It’s nice.

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

Will Generally do you think that visualisations are good ways of communicating information?

Maria Maybe.

Aleksandra I think yes.

Natalia I think yes.

Will Why do you think that?

Aleksandra Because you can see with your own eye; you’re not just trusting paragraphs of words.

Will So, there’s something in the visual, in the image that makes it more trustworthy for you?

Aleksandra Yes.

Rosey Rather than when it’s text based?

Aleksandra Yes.

Rosey What is it about when it’s text based that you find more worrying perhaps?

Aleksandra It might have happened in the past. Then right now you think that happened right now; and that happened ten, 15 years ago.

Rosey Are you thinking of anything in particular?

Aleksandra An earthquake or a volcano erupting.

Rosey So, there’s nothing you’re particularly thinking about when this has happened when you’ve read a piece of text, thought it was recent but actually it happened a long time ago?

Aleksandra Yes.

Rosey You also thought this was a good way, Natalia. Why do you think so? You said you think the visual is a good way to display data; why do you think so?

Natalia Because for example if somebody needs some information about how many people are born, how many people live in the UK, I think it’s helping to find and to learn. I think this is good because it’s got lots of information about anywhere, country, jobs for example. There’s the Olympics example. It’s important information, very important; examples for children as well and adult people.

Rosey For learning?

Natalia For learning, yes.

Will Do you think there are any times when you would not want a visualisation, maybe a visualisation would not be the thing to use?

Aleksandra ((Translates)) Natalia thinks that if she knew how to read more in the UK or English she would know how to…

Natalia If I knew how to read English, for me it’s better reading information, but for me I don’t know how to read from the picture.

Marek She can’t read from pictures.

Rosey You can’t read from pictures?

Natalia No, because I don’t understand what it means, the examples.

Rosey Because you don’t necessarily understand the English text?

Natalia No, from the picture. Because it’s better if I understand the English language anyway, it’s better to read a sentence like from the picture because for me it’s easier to understand. Because I don’t have this reading the picture.

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

Rosey That’s really interesting. That leads us onto our next question. What skills do you think you need to be able to read them?

Natalia For me it’s better reading sometimes.

Will It’s better; but what skills do you need?

Natalia What skills?

Rosey What skills do you think you don’t have?

Natalia English language. I never learned in Poland, so when I came here I started to work in a factory, but there were lots of Polish people that helped me all the time. When I worked two and a half years I never improved my English; it was the same as when I came here. But when I got made redundant from work I went to the Job Centre and then I went for ESOL. When I was happy the lady said oh, I’m happy because I’m going to learn. I’m very happy because I don’t have work, so it’s very good when I learn English and I improve a little bit my reading and writing. That was very, very good for me so I went. So, that’s why I have a little bit writing, reading and speaking English, so that has helped me. A few months later they were putting some benefits here so they put on this course. That’s why I’m not finished.

Will So, language is one.

Natalia Yes.

Will What other skills might you need?

Natalia Some courses examples. I don’t know what I want. I like work. I don’t like staying in front of the computer. That’s me; I don’t know what skills.

Rosey What do you think Maria?

Maria For me if I see some picture… ((Polish discussion)). It’s the same situation: if you need something it’s quick and it’s clear. If you don’t need information it’s for nothing.

Rosey But if you do it’s quick and clear?

Maria Yes. If you want something it’s clear. If it’s a nice colour and everything it’s correct. If you are looking for something, if you have some topic for science, some pictures, click I need this information, click and that’s it. If I don’t need science for me…

Will You won’t even look at it?

Maria Yeah. It’s black magic.

Rosey What do you mean it’s black magic.

Aleksandra You don’t need it now so what’s the point of it.

Rosey What about you, Marek, do you need any skills?

Marek Not really. Language. And you need to know what you’re looking for really.

Rosey? Why?

Marek Because for example if you’re looking for immigration sites like this really help. The fourth one, the Metro paper one, won’t really help you with that stuff. So, you need to know what websites you’re looking for.

Will So, say if you were looking for information on a topic you would go to that website.

Marek Yeah.

Will That visualisation would be helpful then?

Marek Yes.

Will Like you said, Maria, if there’s no reason for it.

Rosey Is there anything that you would like to tell us more about visualisations before we wrap up?

Will Or if you have any questions for us? What did you think of the whole experience?

Maria It’s new. I’ve never done something like that.

Aleksandra I found it really interesting. These are things you don’t really learn in school. Now you know how to do different things. It’s really useful.

Will Well, if there is nothing else that you need or questions for us, Rosey has some last minute things.

Rosey First of all to say a big thank you for coming tonight. Thank you so much for all your thoughts and ideas; they are really interesting and really useful for us.