

Invisible and the Performing data project

Our data tends to sit on servers, measurable but relatively lifeless. We may not have any emotional attachment to it, or gain a true sense of its meaning above a set of numbers that provides us with some information.

The artist/researcher Rachel Jacobs talks to us about [Invisible](#) and the *performing data* project - her work that aims to bring data to life in order to connect to the environment around us in new ways.

Firstly, what is performing data?

Performing data is about creating a performative experience that in some way brings the data to life - it becomes a lived experience and relates to our sense of the world as human beings.

I have previously carried out work with climate data which equates to hundreds of years of data, and have now started to talk to climate scientists who are working with data spread over billions of years of earth's history. How does a human being, standing in an exhibition or looking at a screen or a graph, get a sense of what that data really means to him or her?

Give us an example of a performing data project.

I have an ongoing collaboration with an artist, Silva Leal, who is based in Rio de Janeiro in Brazil. We developed '[A Conversation Between Trees](#)', a touring artwork that connected forests in the UK with the Mata Atlantica forest close to Rio de Janeiro, Brazil. The artwork involved a live performance of environmental data as an abstract visualization on a screen – one for each forest - alongside a Climate Machine that scorched annual global carbon dioxide levels onto rotating circular sheets of recycled paper to make drawings reminiscent of tree rings. This presented the present experience of the forest shown through the visualizations, within a more temporal scientific perspective of climate change.

'Relate' was a follow on project that developed sensor kits (for gathering data on temperature, humidity and carbon dioxide levels) and the "timestreams" platform – an online social platform supporting remote communities to reflect on the relationship between energy and climate change.

How did the Invisible project develop?

Sylvia and I discussed collaborating on a new project about bridging contested environments - environments that are facing increasing difficulties with industrialisation and climate change. This time we decided to move on from data and sensing to think of new ways to perceive our environment - locally and on the other side of the world - investigating different interactive technologies that would help us do this.

We started experimenting with an interactive mirror technology previously developed in the [Mixed Reality Lab](#), as we liked the idea of mirrors literally reflecting the environment. We tried various ways to use and sometimes even break the mirror technology to make it adaptive to this context.

How does the interactive mirror work?

When you look into the mirror a digital display appears as you look at your reflection. It has previously been designed to be set to give you instructions when you carry out a task, such as combing your hair. We want to use the mirror as a gateway to thinking about the world around you. We are interested in how you can have narrative experiences with your own reflection and the environment around you, distorting it and making it look ghostly, or superimposing things on your head. Normally

when you look in the mirror you just think about yourself, whereas we want you to think about yourself in relation to the environment around you, finding ways of fading your image out so you can see what is behind you through the mirror, and playing with perspectives.

Sylvia and I worked together and also with a group of participants at [Primary Studios](#) in Nottingham (where I have an artist studio) as part of their public engagement programme. We ran a series of experiments with them writing their own narratives for the mirror, and we put these into a template and played around with them.



Where are you now with the Invisible project?

We displayed a prototype of the artwork at a public event at Primary Studios in December 2016. There were around 250 people attending and there was a lot of interest in Invisible, with people playing with it and trying to break it, trying to understand it. Sylvia is working with Flor de Pequi, an arts organisation in an ex-mining community in Pirenópolis, Brazil – a cross generational group of elders and young children – where there is a rich historical background. Members of this community contributed stories and images to the interactive experience we presented at Primary. We built a narrative about being in Nottingham with sandstone caves underneath the ground, and what happens if you go through the caves and emerge in another part of the world where this community lives. You can see a mask in the mirror, from a mask festival that they have in the town.

We need more time to work with this community and build a stronger narrative, but this experiment was useful for demonstrating what we can do with Invisible. I will also be contacting communities in Nottinghamshire (where there may be fracking tests occurring) to see if they would be interested engaging with the project. We would like to create a dialogue between them and the community in Brazil, and use the mirror as a portal to share stories, representations of data and create an archive for storing experiences of our environments as they are changing.

We want Invisible to develop into an outdoor site-specific mobile ‘performance laboratory’ reflecting the people and environment around it, where people interact with the reflective surface within the space and interact with people in different locations. We may also link up the technology to the

performing data toolkit to use environmental and physiological sensor data as another way to control interaction.



What next?

We have used technology that was already available to us, but we have had technical issues with the prototype. We need to now make it more portable and build something more appropriate for the communities we are working with to play and perform with.

I am both a researcher and an artist, and there is an interesting interplay between both sides in the Invisible project. So far the work has focused on the research, developing the interactive mirror for a new application. But we are at a point where we need to pull back and focus on the art, as we do not want to limit the scope of the narratives and community contributions, or the ability to make artistic decisions on the way forward.

Initially we will carry on without any technology at all and then see how we can feed the technology back in again. We were leading with the technology and this normally proves to be the wrong way to go about it.

It's more about the performing data?

It is very much more about the performance of the data and the human experience. Interestingly I recently ran a training day for Environmental Scientists as part of a NERC training day on Art and

Science collaborations, with a focus on performing data. At the start many of them were quite sceptical about why they should consider turning environmental data into a performative, subjective or emotional interpretation to engage the public. However, by the end they admitted they found it difficult to explain information to non-experts about climate data and they could see that art could have a part to play. I hope to carry out more work with scientists about how we can collaborate to perform data in the future.