

FACT - Foundation for Art and Creative Technology.

Semiconductor solo show - Worlds in the Making, 2011.

Semiconductor Q&A:

Tell us a bit about this exhibition and what inspired it.

We'd spent half a decade immersed in space science after an incredible fellowship in a NASA lab, and during this time were thinking a lot about the tools that man creates to try and understand the physical world around him. We were making works which either directly utilised this technology or referenced it to reflect on the human as an observer of the natural world around him, what he sees with these tools he creates and what they say about man and how we experience the world. Are we really experiencing nature or is it always altered through the tools we use or the limits of our perceptions? For Worlds in the Making we wanted to come back down to Earth and take a few steps backwards to think about the simple tools we use to learn about the immediate world around us and align this with a primal phenomena; the forming of land and matter through volcanoes and mineral crystals. For Worlds in the Making we were interested in simple observation techniques and simple ways of collecting information, our research began with volcanologists who tend to be very hands on in the field.

How did you begin working as a duo, what are the challenges/ advantages of being an artist duo

We didn't plan it, it happened quite organically. We were straight out of art school where we had quite independent practices making large scale installations that both involved objects, video and sound and had similar interests and inspirations particularly musically. We had been collaborating on doing live film scores and playing around with sound together when we decided to make a short film that we built a model for and filmed, this was Retropolis which was completed in 1999. From there we got pulled into experimenting with the potential of digital technologies and trying to understand the medium we were working with and the language we were creating. After a few years we asked ourselves, is this what we do? And have never looked back since. It's been such a long time working together that it would seem strange any other way. It's meant that we have been able to give each other moral support which has allowed us to stay driven by the belief in what we do. We both pretty strong minded and independent and have particular views about how a work should be, sometimes we agree sometimes we have to work through it and a work evolves to somewhere you didn't anticipate which can be a good thing, but we have both had to learn the skills of compromise!

You work with lots of different types of media, why did you choose moving image to tell this story?

Moving image has mostly been our medium of choice as Semiconductor. Early on we realised that sculptures we would have loved to build in the real world on an epic scale we could do inside a computer which provided with infinite space. In early works we created and control vast landscapes inside the computer beyond a human physical scale. We

wanted sound to play an important role and as soon as you introduce sound you get something moving in time, you can't have a still of sound. Most of our works are also first person experiences, taking the viewer to a place to interpret it for themselves, a journey through space and time. *Worlds in the Making* plays with some traditions of film-making to draw the viewer in and play with these experiences.

Tell us a bit about the journey/process of creating the work?

As we come to the end of making the work we're realising how many collaborations have gone into its production. A couple of years ago, at the very beginning of the work's evolution we were brainstorming volcanoes to visit, it started as a dream list with the Galapagos Islands being at number one and very quickly getting crossed off as it seemed just that, a dream. Amazingly, through various serendipitous moments, we ended up going there as part of a residency programme, from there we contacted volcanologists and organised to spend additional time in mainland Ecuador where just as we left the UK, a volcano started erupting. We spent several weeks around this volcano hanging around with scientists in their observatory, sleeping in a little hut on an opposite hill and finding the best vantage points, the whole experience was quite exhilarating and so many people helped us on our way. Most of the work is filmed in Ecuador and Galapagos but additional filming was done during a fellowship at the Smithsonian Mineral Sciences laboratory in Washington DC. We met several volcanologists there whose work features in *Worlds in the Making*; Dick Fiske, who we see analysing his volcanic samples and narrating his field notes, we also use audio recordings Bill Melson who had a vast collection of volcanic eruptions on audio tape. There's lots more work to come from these experiences.

Here's a visual blog we kept during our fellowship at the Mineral Sciences Laboratory:
<http://semiconductorsmithsonian.blogspot.com/>

Who or what inspires your work? Other artists or cultural figures?

People who push the boundaries of what they do inspire us, who are driven to thinking outside of the box or defying convention. We keep coming back to Richard Feynman who as a physicist had a unique way of asking questions about the universe that were often described as unorthodox, his writings and attitude are inspiring. We were both inspired early on by Land Art, artists who made works in landscapes that referenced the human scale, our experience of the natural world and challenged the context of art. We were also inspired by early visual music films that experimented with the relationship between sound and image and pushed the possibilities of the filmic medium. You can see elements of both these art movements in *Worlds in the Making*.

Over the years you've collaborated with a number of musicians and composers, why/how is sound important to your work?

The sound has always played a significant role in our work often being produced by the image you are seeing, or in reverse so the sound generates or controls the image. At the beginning of Semiconductor when we were making purely digitally generated works we were interested in the digital as a material, and intrigued that a piece of data which is sound can be turned into image and vice versa. We made several early works which played with this which we called process films. Since then we have gone on to produce custom scripting and developed unique processes which allow us to generate, manipulate and control the image or sound by the other. We see this as being a very sculptural process which involves us taking either field recordings of an environment or scientific data to sculpt a landscape. In *Worlds in the Making* we worked with volcanologists to access seismic data collected from under volcanoes, when turned into audio these sounds are very evocative of matter moving around under the earth, we have used them to generate and animate elaborate computer generated mineral crystal formations. Our collaborations with musicians have evolved to bring a suggestion of human interpretation to the work, emotional responses to these worlds in flux. This is certainly the role that Oren Ambarchi's sound has in *Worlds in the Making*, he brings this incredible energy.

Your names featured in the credits of the BBC series Wonders of the Solar System, how did that come about?

We have made a couple of pieces of work collaborating with space scientists and using visual data that has been collected by satellites looking at the Sun or at the space between the Sun and the Earth; *Brilliant Noise* and *Black Rain*. Commonly this material is heavily processed by scientists for their use and for public consumption by cleaning it up and colourising it for example. We saw one image of what is called the raw data and became intrigued by how much it suggested the presence of the human observer by all the various anomalies present in the image as a result of the technology man has developed, such as cosmic ray visual noise, light flares and pixel blow-outs. The BBC have been making some amazing science programmes which rely heavily on visual imagery and I guess they are under pressure to keep re-inventing how they portray the products of science. These processes do reveal the humbling power of nature in a new way and it seems to be something which they have adopted.

Do you believe that artists have a role/responsibility to science? What role can artists play in the world of science?

We don't see that we have a responsibility towards science to remain true to its interpretations, the products of art and science are two wildly different things even if some of the processes can be very similar. Our work has been confused in the past with being real science but this says something about man's desire for meaning and understanding and almost willingness to believe the seemingly most fantastical things, and also how much trust we have in science these days. We're not trying to accurately portray or teach science but re-interpret it, this often has the knock-on effect of demystifying it in some way, perhaps because we're looking for the human nature or signature in it. We're quite happy for our work to be used in this context, this is up to curators, but our intentions are for the works to be art. It's difficult for art to really impact in the world of science but we have enjoyed

being able to re-interpret scientists work and to see them enjoy experiencing their work in a new way.

You live in Brighton, how important is where you live to the artwork you create?

Sometimes where we live directly influences our work, we've done many residencies where we spend several months and make work specific to that place and enjoy the challenges that it brings. We have made a work using the landscapes around Brighton and can often be found on our bikes in the hills. In this way it is a remarkable place to be having an immediate connection and access to some incredible landscapes. It has also been a good place for us to focus and develop our own language and way of working.

What experience would you like audiences to have watching this artwork / what would you like them to take away with them?

Well there's some really playful and beautiful parts to the work but there's also a serious side too. The work is really questioning the underpinning of science versus the experience we have of the natural world. What happens if you take seismic data and re-apply that to the place it's been collected from – kind of turning science on its head? It's taking something we can't experience and re-creating an experience from it so you end up with a sort of clunky man-made version of nature. Some of the ways we do this are really obvious but there's many other subtle ways we play with this idea in this work. Ultimately we would like the audience to stand back from the world we think we know and ask themselves questions about how they experience the natural world, what do they perceive and what is influenced by what science has taught us about it.