

Richard Bright: Can we begin with your background? You originally studied philosophy, what made you then turn to art and how has philosophy informed your artistic process?

Susan Aldworth: When I studied philosophy I was always interested in the philosophy of mind and in what makes us human. I was more surprised that it took me so long to get to neuroscience, because I studied philosophy at university when I was in my early twenties. I've only been working with the brain and consciousness in the last fifteen years. The catalyst for it was having a diagnostic brain scan myself. I had collapsed in my studio because it wasn't very well ventilated; I had breathed in too much white spirit. At the hospital, they scanned me for a possible brain haemorrhage - which luckily I didn't have - but it was a seminal moment. I was lying on an operating table, looking into my brain in real-time on a monitor during a brain scan, while conscious. I was watching myself think: the mind/body problem playing out in front of my eyes. It gave me a metaphysical jolt - that image on the hospital monitor of blood moving through the arteries of my brain were all that I am. On top of that, what I was seeing was extremely beautiful - the arteries in the brain looked like an ancient Chinese print. I soon realised that I had found a rich subject matter, the relationship between the physical brain and the Self, and it was there for me to pursue in this imagery. So, philosophy is central to my work, probably as important as the science. But I am always curious. What do neuroscientists and neurologist know about being human that I don't know? I had to find out. My work presents an alternative and more complete picture of someone by including the dimensions of self which reside inside the body rather than just the external surface.

RB: It was an unfortunate accident but a fruitful result, if you like!

SA: Yes, absolutely! I was very lucky that there was nothing wrong with me but, I think the imagery of neuroscience and scans is uniquely beautiful; it reveals a living internal landscape, which artists have never previously had access too. Before scans, the only way to see this inside of the brain, was by dissecting a cadaver. I use this new living landscape in my work exploring both the Self, and to challenge ideas of what can be thought of as portraiture. To me, neuroscience provides me with this cutting edge imagery which has such philosophical significance.

RB: Can you describe your working process? How does the imagery take form?

SA: As I've said, I have this philosophical side which is interested in questions about human identity. My first port of call in the last few years, is to start by working with neuroscience and neurology. I like to set myself up in hospitals or neuroscience departments at universities as an artist in residence; finding sympathetic practitioners, be they clinicians or basic scientists, who let me sit and work with them. I like to watch them, and find out what they do and what they know. I draw on location which helps me think. It is often in the pub afterwards that the "real stuff" happens, when we talk about their work, and its implications for people with brain conditions. Works starts with small drawings, and ideas happen when I am least expecting them. In terms of my processes as an artist, I'm mainly a drawer, a printmaker and a filmmaker. I am an artist who loves process – and it is often in the print processes that I discover my 'voice' for a particular piece of work. Finding the marriage of form (how I will make the work) and content (what it is about) is what I strive for in my studio. I am very experimental with materials, and I work very fast. In print, there are many 'happy accidents' – things that happen unexpectedly in the process of making the work. For my work on consciousness (Brainscapes), I drew brain scans in the hospital in the mornings, and rushed to the studio in the afternoon to turn the drawings into etchings. This frantic pace led to a series of happy accidents which led to me throw chemicals at the etching place. The result was an organic bubble of activity on the etching which was a visual equivalent of activity in a human brain.

RB: At the heart of your art is this exploration of the fragility of the human identity with works dealing with, for example, epilepsy and schizophrenia. Much of the scientific understanding of the mind, including a sense of self, identity, personality, involves the study of particular mental disorders. Is this also your intention as an artist? Using mental disorders as a way of understanding the mind?

SA: It is. In that sense I'm led by the methodology of scientists, because it is sometimes only by looking at what is happening in the brain when things have gone wrong that we can begin to understand how the brain works. For instance, I've done a project looking at Alzheimer's, where the self slowly dissolves due to deterioration of

the brain. I've also done projects about epilepsy and schizophrenia, both of which impact on identity and personality in a real way. But my work is also firmly rooted in individual human experiences – as well as seeking out scientists, I talk to people who can describe what it feels like to live with a condition like epilepsy or schizophrenia. My work does not in any way illustrate science. I incorporate the anatomical imagery of contemporary neuroscience in my work because it is uniquely beautiful and vital. This new imagery of a living brain also provides an exciting visual link between the external surface of the body and the subjective experience of being that person. I use it to signpost interiority, but hope that my work resonates not only with science, but more widely, in its aim to explore what it means to be human in the 21st century.

RB: The *Reassembling the Self* exhibition explored the condition of schizophrenia. How did this come about? And, what were its aims and outcomes?

SA: The *Reassembling the Self* exhibition – which is currently showing in Manchester at the Waterside Arts Centre until May 31st – was a really gorgeous project. It brought together art, science, psychiatry, philosophy and individual stories of schizophrenia, in an exhibition about the fragility of individual identity. The Institute of Neuroscience at Newcastle University appointed me as artist in residence in 2010, and what was lovely about this commission was that they gave me an open remit; they didn't want anything in particular, they just let me find the scientists who wanted to work with me. The great thing about the Institute of Neuroscience in Newcastle is that it's an umbrella organisation bringing together a number of disciplines which gave me access to both basic scientists, clinicians as well as to patients and students. So, it gave me the possibility of harvesting many different narratives. Two of the scientists I was working with were particularly interested in schizophrenia, and they were also very sensitive to art. We became very close – fellow travellers in this project. Not every scientist wants to work with an artist and you really have to find the right ones – those who are happy to talk about their work, and explore the implications of what they do. The conventional term “collaboration” does not come near to explaining the nuances of these dialogues. Finding the right scientists was important. It was one of those projects that sort of grew out of that. I wanted to pull together the narratives of neuroscience and of psychiatry alongside the

experiences of what it feels like to have the condition for the exhibition.

Through the Institute, I found two talented artists with schizophrenia who made work for the exhibition as well. Initially I had intended to make portraits of them, but I soon realised that their own self portraits were more revealing and powerful. Instead, I made a suite of lithographs (*Reassembling the Self* 1-7) which were, I suppose, portraits of schizophrenia itself. I reassembled body parts in a series of impossible anatomies to make the audience feel uncomfortable, and to question the fragility of their own identity. What is it to be an embodied Self?

The portraits of the artists that I did make, were constructed purely from their own words (*Dreaming Voices* 1 and 2). I wanted the work in the exhibition to speak for itself – I tried not to impose my thoughts of what schizophrenia might or might not be on the work. It is such a complicated and controversial diagnosis.

I also read a fantastic book called, *Memoirs of my Nervous Illness* by Daniel Paul Schreber, which is a very early account, written in 1903, of someone's descent into psychosis. I based my short film, *Memoirs*, on this poignant autobiography, working with composer Barney Quinton. It was shown at the ICA this year as part of the London Short Film Festival. You can see *Memoirs* on <https://vimeo.com/74374740>

Reassembling the Self was first shown at the Hatton Gallery in Newcastle in September 2012. Its aims were to give these narratives of schizophrenia a public voice and, if it's not too arrogant to say, to address the stigma around schizophrenia by bringing it into a public art arena. Even more so, to make people explore the sense of what a self might be, the fragility of being "someone". You know, 'He's got schizophrenia, but I'm fine!' Well, it's not like that is it? Being yourself is a very complex, difficult thing for everybody. It's a fragile thing; I think it's a bloody miracle that we wake up the same person, or nearly the same person, most mornings! It's an extraordinary thing, the self, and consciousness. In a sense, the exhibition is as much about what it is to have a self as it is to have schizophrenia.

RB: And, in a way, being an artist is about living on the borderline of psychosis.

SA: There's so much written about the relationship between art and psychosis; it's a spectrum. With every single mental condition that I've explored there's always bits of it where I think, 'I really understand that.' It's like with epilepsy, I find bright sunshine in my eyes really makes me feel strange and it's not very far from that to an epileptic fit; I haven't had one, but I think I understand the pathways; I also think that one has to be careful about any conditions of blanket labelling, because everybody's schizophrenia, everybody's epilepsy, is individual and particular to them. Which is why I was so thrilled to work with two artists who were generous enough, through their self-portraiture, to share their experience of schizophrenia.

RB: That brings us nicely on to the next question, which is, can you say something about the *Cogito Ergo Sum* sequence?

SA: The *Cogito Ergo Sum* sequence is a lot to do with brain scans; particularly MRI scans and fMRI scans, the imagery that is everywhere over the media. I think as artists we have to be very careful about using that imagery because its overuse has led to them becoming rather facile. One of the things I've learned from talking to doctors is that brain scans are very significant objects for patients. It is as if they signpost interiority. It is, of course, just anatomy we are looking at in these scans, but patients often ask to take their brain scans home with them as if they show something of the Self; and I understand that, I did as well! You think you're seeing right into your soul - and you both are and you aren't! They are hugely significant images because of that reference to interiority.

My piece, *Cogito Ergo Sum* plays with that idea. Each of the 20 pictures in the work is a frame from an fMRI scan. The brain scan sequence is blown up to 2.5 metres high to put it in an art, rather than medical, context. In the work I show an imagination at work; what a scan might look like if it really could visualise what is going on in your mind. Brain scans are beautiful, wonderful things, but we need to be cautious about what we claim about what they can show. Will we really be able to identify a murderer or a liar from such scans? We need to be very cautious not to create a new version of Victorian physiognomy.

RB: Your work explores the human identity in portraiture and you often make work printing directly from the human body. Portraiture makes the assumption that our inner selves are somehow revealed in

the outer, and you've taken that a step further in *The Portrait Atomised*. You play with this assumption, and you use modern neurosciences to reveal the inner self more directly. Can you say something about this work?

SA: *The Portrait Atomised* was a series of portraits of three people with epilepsy. I'd been artist in residence at St Thomas' Hospital in London, in the epilepsy unit, working on a commission for the corridor. During my time there, I met three extraordinary people with epilepsy and, although it was outside of the remit of the original commission, it struck me that portraits of them would be a very interesting and challenging thing to do. Through them, they gave me access to their EEG's, their brain scans, and I got to know them very well. I began to understand how their epilepsy impacted on their individual lives. And it was this I wanted to make the portraits about. Previously, I had been approached by a curator from the National Portrait Gallery who was interested in showing my work, and this seemed the perfect opportunity.

I made three very particular portraits which explored the idea of interiority and outside surface. I used photography, alongside EEG scans, and drawn marks to build these complex portraits. I played around with the anatomy as well to represent their individual narratives. For example, the first portrait was of a young policewoman called Elisabeth who was desperately worried about having children, because the medication that she was on for her epilepsy is very brutal and can damage the foetus. She had to make a pact with the devil – to come off the medication, and therefore to suffer the full force of epileptic seizures during pregnancy, or to put your baby at risk. So, I put her face in her womb. The portrait also contained other biographical and anatomical information about her to suggest the complicated nature of what it is to be this particular person. The portrait revealed both her outer surface, but also delved into her internal landscape and her psychology and personality.

Each of the portraits was made up of nine different prints, which tiled together like building blocks of the person. This reflected the complexity of making a portrait of someone – how multi faceted we are. They were each 2 metres high. What was exciting about those portraits, for me, was breaking down this idea that the outside surface is the only thing that you can possibly show about a person. I was really thrilled that they were shown by the National Portrait

Gallery because they are radical portraits which explore the nature of the Self by referencing both philosophy and science. Art which uses science in this way is gradually getting show mainstream public art galleries. They were exhibited there for six months, with a good audience, and people understood them! It was thrilling!

RB: And they understood them directly, rather than having a descriptive text?

SA: I don't know exactly what the audience made of the work, and there was a documentary film to go with them. The catalogue almost sold out, so that is a great thing and reviewers seemed to understand the work; that's the only thing you can measure it by. I had two people who did some market research for my funders, which showed that young people in particular really responded to them and understood the challenges I was making to conventional portraiture.

Since then, I have become increasingly interested in pushing the boundaries of portraiture. After seeing a brain dissection at Hammersmith hospital in 2013, I wanted to make some experimental portraits by printing directly from human brain tissue. What could be a more complete visual description of who *you are* than a direct print of your brain?

There were obviously serious ethical issues around making such work, and I worked closely with the Brain Bank to get the permissions. I was allowed to make prints from the tissue of 3 human brains – the tissue was not damaged at all in the process. For me they were ultimate sort of portraits – using the authentic marks of a human brain with only minimal intervention from the etching process. I had just two days to work with the tissue. It was very emotional working with human brains, made more intense by the short time we had to make the work. The tissue revealed unexpected and extraordinary marks through the etching process, producing the 7 prints of the *Transience* suite, and, through a happy accident, we also created the 15 digital prints of the *Passing Thoughts* suite. The prints had a simple authenticity and potency - the marks were largely unmediated. They are a very intimate and special series of works.

RB: Are they being exhibited soon?

SA: Yes, they are being exhibited in 2016 at the Fitzwilliam Museum in Cambridge as part of the exhibition *Revelations*.

RB: It leads me onto my next question which is to do with the issue on consciousness and how it relates to your work. Do you think that personality can be physically located? Or, to put it another way, is your brain all that you are?

SA: I think we are embodied in our whole bodies. I'm not religious, I don't believe in a soul, I believe that our physical body, with particular emphasis on the brain, is all we are. To me this is witnessed by the fact that Alzheimer's, or anything that attacks the brain, like a stroke, can change your personality. The brain is crucial to who we are and to our sense of self but it's also embodied in a body. Scientists are finding evidence that there are all sorts of inter-neurons in the stomach and things like that, so there's a lot to be investigated in what it is to be a self. It's also a profoundly philosophical question, and like art, philosophy has to look to neuroscience too. To me, it's definitely an embodied self and it's contained completely within. I have no notion of anything more spiritual than that.

But I am fascinated by the relationship between the physical brain and our sense of Self, and a great deal of my work - including the *Brainscape* suite of etchings, and my film *Going Native* - explores this. Consciousness is such a slippery thing - you have a clear sense of what it is until you try and articulate it verbally. In my etchings about consciousness - the 2p etchings of the *Brainscape* suite- I let the white of the paper shine back through a confusion of cerebral arteries as a visual equivalence of consciousness. Maybe visual art can help articulate the subjective experience of being conscious whilst simultaneously visualising its objective physical generation.

RB: Collaborating with scientists has obviously been an important aspect of your work, what has been the reaction from the scientific community?

SA: Very good. I keep getting new projects, and commissions working in science department or hospitals, which is positive reinforcement of my work from scientists. I have a new joint residency at the moment in the medical school at York University and at Guy's Hospital in London exploring Sleep, and the promise of some new

projects in the future. Collaboration is very important, but I think the concept of *interdisciplinary collaboration* needs an honest re-appraisal. I work with scientists, but I'm not sure we are collaborating in any meaningful way; there are conversations, and we have an exchange of ideas. I might change and influence their work philosophically but, practically, I'm not helping them break any new boundaries with what I do, and neither would I expect to. Cross-disciplinary dialogues are hugely important both ways but, I think, collaboration is an overused word, and I don't think what I do is collaboration; I "work *with*". I'm collaborating with the artist Andrew Carnie at the moment on a piece of work and we're both physically involved with it; that's collaboration. I collaborate when I work with Stanley Jones at the Curwen studios to make lithographs, because our hands are both involved in the work. I collaborate when I made etchings with master etcher Nigel Oxley. Working on my projects with scientists involves an intellectual exchange and it's knowledge-sharing, but collaboration?... it's a tricky word!

RB: I totally agree! It's an overused word often only used for funding purposes!

SA: It really drives me mad on funding applications, because I am expected to know what the scientist gets from working with me. And I don't exactly know – it is for them to say. I do think they get a feeling of ownership of the work. I don't mean they have to buy it, but they know that there's an imprint of their input in the work. Neuroscience is a new frontier of knowledge in the twenty-first century just as Jung and Freud opened our minds to new ideas about what it was to be human in the twentieth century. I think artists would be bonkers to ignore it. I'm not saying all artists should work with neuroscience, but if you are of a philosophical nature, I think you can't ignore it. Also, it's uniquely beautiful and visual as well.

RB: What have you personally learnt from working with scientists?

SA: I think the relationship between our laboratories and studios are fascinating. I think I get as engaged in my work in my studio as scientists do in their laboratories; they are places of excitement, discovery and experimentation. The scientists that I've worked with are as much up for thought and left-field stuff as I am, but they are routed in a more formal methodical approach. I'm a very technical artist with my print-making, but science necessarily has to be

rigorously methodical. Discoveries have to be repeatable to be proven; it is a different type of methodology from art practice.

RB: Dialogue between the arts and sciences has the potential to create new knowledge and ideas and processes beneficial to both fields. Would you agree with this statement?

SA: I agree with the first half of the sentence. I think dialogue is hugely important. If you think about the ethical issues raised by science for example, the genetic interventions to stop mitochondrial disease, these are wonderful breakthroughs in science that do need dialogue. The hybrid person is a fascinating concept, with implications for notions of the Self. In the sciences and arts - and I'd add in humanities as well - it's very important that there's dialogue between all of these areas, because everybody gets so specialist that you can lose track of what you're doing.

Dialogues are hugely important for a wide-reaching understanding of the world and of what it means to be human. It is also important to raise ethical issues about some practices. It's quite hard, with all the different disciplines and specialisms, to keep up and really understand what other people are doing. I am incredibly curious, I am always interested in what other people are doing.

I've always wanted to make work about what it's like to be someone else, because one is so caught up, necessarily, by one's own subjective experience. I find it delicious to go into science laboratories and hospitals, the very process of watching other people at work; they're other worlds, they're wonderful.

But whether the dialogues between arts and sciences has the potential to create new knowledge and ideas and processes beneficial to both fields, I simply don't know. It might in individual cases, but I think you have to be careful not to overstate this. It is not what I aim to do when I work with scientists. I cannot speak for other artists. I am simply looking to make the best art that I can about ideas which interest me.

RB: How do you see SciArt progressing in the future?

SA: I think that SciArt is in danger at times of being seen as *niche* by many curators in public galleries. But I think they are not properly

looking at or engaging with, what is really going on. There are a number of brilliant, world class practitioners working in this arena judging from some of the international exhibitions I've been in recently. There is some truly innovative and excellent works being produced by these artists which curators at big art museums should be collecting now. I think that Sciart, although I think it needs to be renamed, is a genuine, innovative and significant contemporary art movement which will have a serious place in art history. Its progress in the future depends on the quality of the artists and the quality of their art.

Sciart is a label that I fight shy of, although I can see it is a useful shorthand to identify art which engages with science. I've made a career out of it, and I love it. There's never enough time to make all the work I want to make, but I get more and more emails from students who are understanding the point of it; so it can only be growing. As long as the work's great, it must just keep progressing.

RB: But there are a lot of artists that are merely promoting science, illustrating science, rather than engaging.

SA: There is a huge and fascinating history of scientific and medical illustration which stands alone. And there are many talented illustrators still working in this field. This has led to a confusion by some mainstream curators who think that those of us caught up in the Sciart movement produce work that is a bit illustrative, or merely promoting science. But, if they scratched under the surface and really understood the radical nature and significance of the best of the art that's being produced in this genre, they would see that something very exiting is going on.

Because much of the funding for Sciart comes from science Institutions with an agenda to promote science, there are some artists whose work might be seem to be illustrating science. But, there are many of us, working across many media, who are engaging with science in a more radical and philosophical way, whose aims are many and various - often to by explore what it means to be human from many perspectives. We have no interest in simply illustrating science. Knocking together a few brain scans and calling it art isn't enough for me- it needs to have an intellectual and artistic coherence.

RB: Going back to neuroscientists, you've said that they change our conception of ourselves. How do you see that progressing?

SA: It's hugely fascinating. Will neuroscientists ever be able to fully understand the structure and function of the brain? Could a brain ever understand itself? That's what I find fascinating, consciousness looking at consciousness looking at consciousness. It's so self-reflective! So, who knows? It's worth a try, is what I think about it; they'll certainly understand more. But, the more I get to see the workings of the brain, I sometimes get overwhelmed with its complexity. One of the problems is that neuroscientists, because of the complexity, have to study such minute areas of the brain, that somehow getting the overview, mapping it all together, it's a god-like role really! Very difficult! But, we will keep trying, it's the human condition.

RB: And, as you say, it's a new area.

SA: It's hugely exciting. The idea of it being quite reductive is quite worrying as well; the idea that people will then be able to pontificate on who one is. But, then again, the brain is plastic, it's always changing. And I love that notion that, somehow, just when you thought you've caught hold of it, it slips away and becomes something else! That's quite nice.

RB: You touched on a question I put to some other people, and got some interesting responses. The question was, can consciousness know itself? The responses I got was either, "Definitely not!", or, "Yes it can!" Interestingly, the people who have said, "Yes it can," were those who have studied contemplative practices.

SA: It brings me to a very interesting thing that I always say about my work, which is that I don't ever want to answer questions in my art. I always ask questions. It doesn't seem to me the role of me as an artist to give answers. I'm not there to solve consciousness, but emotionally I feel I "know" what consciousness is, what it feels like to be sentient. It feels quite simple to be *me*. It is only when we try and explain it, it seems so very difficult. I think I shall leave these answers to neuroscientists and philosophers to work out.

RB: I agree. It's the questions that are important. "Creating thought experiments", I think is the phrase. You've touched on projects you're working on now, would you like to say anything more?

SA: I've started a big project on sleep, working with Professor Miles Whittington at York University, and down in London, at the same time, I'm working with the Sleep Centre at Guy's Hospital. That means I'm both looking at the neuroscience of sleep, and talking to individual patients about their experiences of sleep and sleep disorders. I've just got ethical approval for the project which is great. I've called the project *The Dark Self* which I quite like, because we sleep a third of our lives; we just trust it! We might as well be dead when we are asleep! It's very curious – and I am focussing on the deep sleep that we are not conscious of. How will I get any narratives about that apart from brain waves? Also, I think it's interesting because sleep is something that everybody does; everyone has to sleep, in the way that not everybody has epilepsy, or schizophrenia. So, for me it's not only a brain condition, it's a shared human and animal necessity, and I'm very fascinated by that. Very little has been written by philosophers about sleep – and I'm working with a young philosopher Patrick Levy who has some fascinating thoughts about Sleep as a positive rather than negative state from a philosophical perspective. I've only started it in the last two months so I don't know where it's going, and both lots of funding they've given me are open-ended; no one's expecting anything in particular, which is a great place to be. I'm also finishing another project looking at Optogenetics, and I've got another possible commission looking at Tinnitus, which would be sound piece. So, I shall be busy!

RB: What are your future projects and aims?

SA: I'll tell you one big aim. I would love for there to be a large, either national or international show in a mainstream public gallery about the human condition in the twenty-first century, from an artistic point of view, bringing together all of the extraordinary artists who are working in this way. I think there needs to be one big mainstream exhibition. We need to find the right curator and the right gallery. I think it would be timely and I think it would blow people away with some of the work that's around.

Personally, I just want to find the time to realise all the work that's buzzing around in my head. And finally, I hope that the London

property market allows me to keep my rented studio in east London.
Fingers crossed!