

# The Unfamiliar Grey Matter(s): Talking Brains

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## Biography

Andy is an experienced Artist, Researcher and Teacher with over twenty years of history working in higher education in the UK. Having worked in three Russell Group Universities he has strong art professional skills in Art Education, Contemporary Art, Galleries & Museums, Teaching & Learning, Visual Art Practice as Research and Initial Teacher Education. He has continually collaborated with cultural institutions such as Tate Exchange, Tate Britain, ICA, Kings College Art Centre Cambridge University, Peckham Platform, and the Freelands Foundation. Andy presently lectures at University College London, on the PGCE Art & Design secondary course, MA in Museum & Galleries in Education and MA in Art & Design in Education programmes. He is a member of InSEA, NSEAD and a Fellow of the Higher Education Academy. Andy is a practicing artist who belongs to the Red Herring artist co-operative studio in Brighton. His artistic practice includes sculpture, film, objects, drawing, print in an installation or in situ context. He continues to regularly exhibit nationally and internationally.

## Abstract

**I'm interested in collaborations between artists and scientists, and how they generate new knowledge. In this discussion I will consider Visual Art Practice as Research. I'll be speaking about my art practice, and in particular my exhibition entitled 'Talking Brains' at King's College Cambridge in February 2018. In the article, I offer a brief discussion of the concepts of 'artful in-**

**quiry’, and how this concept as a research model can be generative. I then go on to raise questions of personally situated knowledge production as a research strategy that crosses the disciplinary boundaries of art and science. I will consider how my exhibition - operating as a hosted space for display and conversation much like the 17th and 18th Century Salon - functions as an opportunity to engage in (thereby generating) dialogue between artists (me), scientists (neuroscience and other students at Cambridge), and educators (PGCE Art & Design teachers). Generating trans-disciplinary conversation on the brain, ways of seeing, and ways of being. I’ll conclude with reflections on how collaborative knowledge production generates multi-perspectives and thus unanticipated knowledge.**

## **Keywords**

**Visual art practice as research, making, personally situated knowledge, artful inquiry, arts-based inquiry, gallery context, exhibition, artist, (neuro)scientist, educator, artistic and scientific collaborations, trans-disciplinary, alternative ways of knowing, art practice and pedagogy, dialogue, evidence-based research, art teaching, UK Initial Teacher Training, dyslexia, (dis)location, depression and brains.**

## **Introduction**

This article explores visual arts practice as research, the pedagogy of teaching art, trans-disciplinarity collaborations and their role in creating new forms of knowledge. I will suggest that these subjects, when used as research models for art education, are generative. I will begin by providing a conceptual framework and methodology for my practice where I will raise questions around sit-

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Figure 1: Talking Brains Exhibition (2018). Short film (1min 4secs) of the Kings College Cambridge exhibition Feb 2018.

uated knowledge production and arts-based inquiry, and when these are deployed as a research strategy, can be used to cross boundaries between art and science and create interdisciplinary dialogues between practitioners and educators in both fields. From here I will use my most recent exhibition ‘Talking Brains’, as a case study, and I will consider how an exhibition and gallery functions as a space for both the display of art as well as conversations around knowledge production and distribution. *Talking Brains* (Fig. 1) is a mixed media exhibition that explores the relationship between the brain, dyslexia, (dis)location and depression. By bringing these ideas to the fore, ‘Talking Brains’ provides us with an opportunity to create a dialogue between artists, scientists and educators, allowing us to generate trans-disciplinary knowledge on the brain and produces different ways of seeing, and different modes of being. In what follows, I will document the exhibitions’ motivations and aesthetic contributions, along with accounts of visitors’ playful engagements and reflections within the complex interconnectivity of art and science. Even though this is a work in progress I will conclude by considering the possibilities for art educators and their practice with this type of research project.

## **Conceptual framework and methodology**

My practice includes sculpture as well as film, objects, drawing, print and work with installations or in-situ contexts. I teach at the UCL Institute of Education, in London and my studio is located in Brighton. I use my art making, my research and my teaching to inform each other (Irwin and de Cosson, 2004a) and create a rich and meaningful relationship. This article allows me to explore through a personal narrative my recent journey with depression, its relationship

with my brain and experiences as an artist, researcher and educator.

I can identify with the notion of ‘research as bricoleur’ (Denzin and Lincoln, 2003b), mainly because I realise that my practice does not fit into one neatly bound paradigm; my form of inquiry is a Mosaic (Clark and Moss, 2001), a patchwork, or *bricolage* made up of many perspectives which frame and thus guide inquiry (Denzin and Lincoln, 2003b). As argued by Lincoln and Guba:

There is a great potential for interweaving of viewpoints, for the incorporation of multiple perspectives, and for borrowing or bricolage, where borrowing seems useful, richness enhancing, or theoretically heuristic. (Lincoln and Guba, 2000:264)

Lincoln and Guba’s definition of bricolage is interesting in relation to my practice as it suggests building, constructing and bringing materials together. Denzin and Lincoln push this notion further, discussing concepts around the bricoleur researcher ‘as a maker of quilts, or, as in filmmaking, a person who assembles images into a montage’ (Denzin and Lincoln, 2003b). It is this bringing together of pieces or different perspectives that I set out to achieve in the case study.

I also draw on the concept of Arts-based inquiry (Diamond and Mullen, 1999b; Sullivan, 2005) throughout this article in order to theorize the aforementioned exhibition and my artistic and professional practice. Arts-based inquiry uses approaches which allow scope for examining representations of language such as symbol, objects, image, film, video, texts, art, music and culture as artefacts of contemporary culture (Diamond and Mullen, 1999a). It uses the processes and forms of art to approach, analyse, and represent research (La Pierre and Zimmerman, 1997; Diamond and Mullen, 1999b; Eisner, 2002; Irwin and de Cosson, 2004a; Sullivan, 2005). Arts-based approaches allow me to collage together ideas as I create, transform, critique, promote shifts in thinking through intellectual, ‘artful’ inquiry (Diamond and Mullen, 1999b).

I also use ‘Artful’ inquiry as a way of getting to know myself better. I am dyslexic, hard wired slightly different to others in terms of the way my brain ‘sees’ things. More recently, I have been diagnosed with depression. I have been exploring the effects these diagnoses have had on my outlook and my way of being. In particular, I am examining the effect the brain has on the body and vice-versa - specifically the interplay between the outward structures of physical objects and the way we perceive these structures in our minds. At the same time that I was creating the body of work featured in ‘Talking Brains’ exhibition, I was coming to terms with the depression and anxiety. I was exploring what was happening inside my head and its effect on my body. At first, I simply wanted to see my brain, to understand the relationship between the inward tensions and outward changes. I was trying to give the exploration shape and create art with it - art which might produce different understandings of depression and anxiety. Since creating this work, I have been producing art which investigates the relationship between my brain and my art making: a ‘dialogue with my neurological self’. I have been striving to make concrete some of the sensations and emotions I have experienced along the way. It is these aspects of my art work, the looking, thinking and observing from an artistic perspective and creating new parameters that reflect a knowledge base that is directly related to the arts (La Pierre and Zimmerman, 1997) which I wanted to share with scientists.

## **The Case Study**

In 2015 I was invited to take part in a scientific research project on depression and hypermobility at Sussex University medical school. The goal of the research project was to investigate joint hypermobility and explore whether it was overrepresented among people with anxiety disorders. My participation as a control subject was contingent on firstly filling out pages of questions about my general and mental health. I was then asked to undergo a Magnetic Resonance Imaging (MRI) scan of my head. Researchers monitored my brain as I responded to visual stimulus

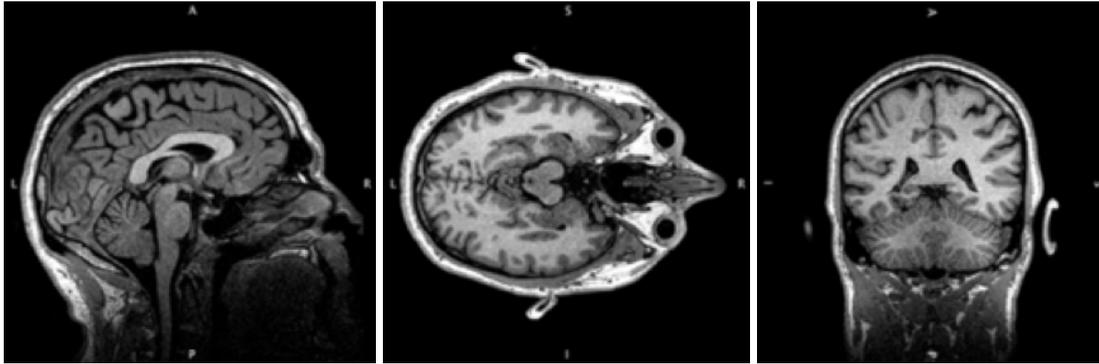


Figure 2: 'Inside my head: MRI scan' (2015). Andy Ash. Digital photographs B/W 3x 161mm x 161mm.

and questions during this operation. They scanned for reactions in the grey matter areas associated with emotional arousal and attention. They would then plot the structures and examine the responses of each subjects' brain. I participated in this study on the agreement that I could have all the digital data from my MRI scan. Access to this data gave me the opportunity to travel through the interior of my head from three start positions: Sagittal (the left to right side of the head); Coronal (back to front of my head); Transverse (top to the bottom of my head, from my crown to my throat) (Fig. 2). By using the visual data collected by the MRI scan I was able to develop art work by analysing the inside of my brain, mapping the structure and learning about unseen physical areas. I was starting to understand my brain, the relationships between the body and the brain, and how this informs my understanding and generates questions about my world. It was an attempt, on my behalf as an artist, to understand meanings, actions, intentions, artefacts (Schwandt, 2000) and importantly attempt to make lived experiences accessible to the viewer.

### **King's College Cambridge exhibition February 2018**

My experience at Sussex University informed my exhibition at King's College Cambridge Art Centre. The King's College of Our Lady and St Nicholas was founded in 1441 by King Henry



Figure 3: Wilkins Building with Arts Centre on top floor. Photograph by the artist Feb. 2018



Figure 4: View from Arts Centre window during the exhibition across the lawns to King's Chapel, photograph by artist including 'My Brain' (2015)

VI and is one of the smaller Cambridge University colleges with around 420 undergraduates and 280 postgraduates. King's Art Centre is on the second floor of the Wilkins Building (Fig. 3) which looks across the Front Court to the famous late Gothic King's College Chapel (Fig. 4). The Art Rooms were established in the 1970's and consist of two empty flexible spaces which can be used for exhibition, workshops and studios. As a member of the college fellows and students are able to use the space for independent or collaborative visual art work.

King's, like all other colleges at Cambridge University, does not offer a practice-based art degree, yet they do have a well-used art space! I was intrigued to meet and engage with the scientists, mathematicians and linguists who engage with the space. I had previously worked with neuroscientists, and my interest in Visual Art Practice as Research (Sullivan 2005) meant that I wanted to continue to develop trans-disciplinary conversation's (Foucault 1972, Barry A & Born G (ed) 2013) which might generate new knowledge. 'Talking Brains' was initially

conceived as a way of thinking about the gallery as the site of exchange of ideas as well as acting as a ‘laboratory’ for practical inquiry. In addition to the exhibition, I curated a series of artist-led activities in the gallery space; practical workshops, gallery discussions and a Salon event. I viewed this range of contact (between artists, students, academics, and scientists) as an opportunity to explore multiple understandings and perspectives on contemporary art, knowledge and ways of seeing, all in the hosted space of an exhibition focusing on the brain. As an artist in the gallery space I saw myself as a facilitator, someone who engages the audience in line with a ‘constructive’ learning model (Watkins, 2003), generating spaces for the participants to be active makers of meaning rather than passive recipients of knowledge. Pringle (2009:25) discusses this approach as ‘artist-led pedagogy’ an opportunity for:

... gallery interpretations [which] are constructed through group dialogue. This allows for different views to be expressed and provides a means of ‘testing’ ideas among learners, with the artist educator and against the work.

I wanted to develop a sense that the gallery space was the inside of my head. In order to accomplish this, I used the two windows that looked out across the lawns to the Kings Chapel as the eyes out to the world (Fig. 3 & 4). I often use a yellow reading ruler, a coloured transparency which when laid over text helps with the prevention of text movement. This ruler not only helps with visual perception problems with my dyslexia, but also makes reading more comfortable. The colour yellow is therefore quite symbolic to me as it often a lens through which the world is tinted. I made a reference to this by partially blocking out the centre of the windows with yellow film. This created a subtle shade, a wash, to the room interior when the sun shone through. I installed the piece *Left’ and Right* (2017) (Fig. 5) opposite these windows high on the wall. These two photographs are enlarged copies of the backs of my eyes, and were positioned to look inwards, in reflection. Between the two windows I curated my glasses for the last 18 years

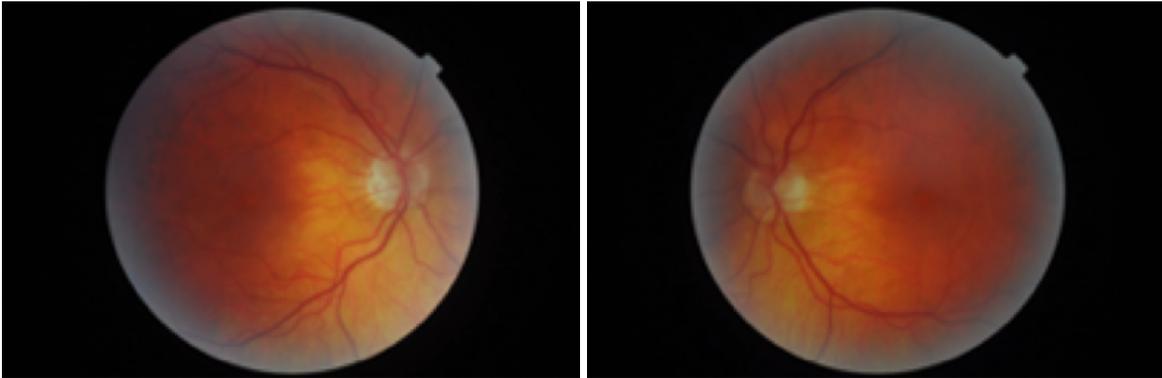


Figure 5: 'Left' and 'Right' (2017) Andy Ash Digital photographs colour 420mm x 594mm

in a time-line across the wall (Fig. 6), from the 1990's to the present. These were the actual frames I looked through every day and as I aged the changing lens that shaped the world I saw. They are a historical reminder, a reference point from which I observed things.

In the corner, to the left of the windows opposite the main entrance, I installed a film and sound piece entitled *Brain Fly-through* (2018) (Fig. 7). The piece was projected to approximately 2m x 2m directly on to the wall, and consists of a series of animated MRI stills of my brain. I stitched the MRI stills together in order to create a sense of travelling through my brain: Transverse, Coronal and Sagittal sections. The animation journey ebbs and flows through the

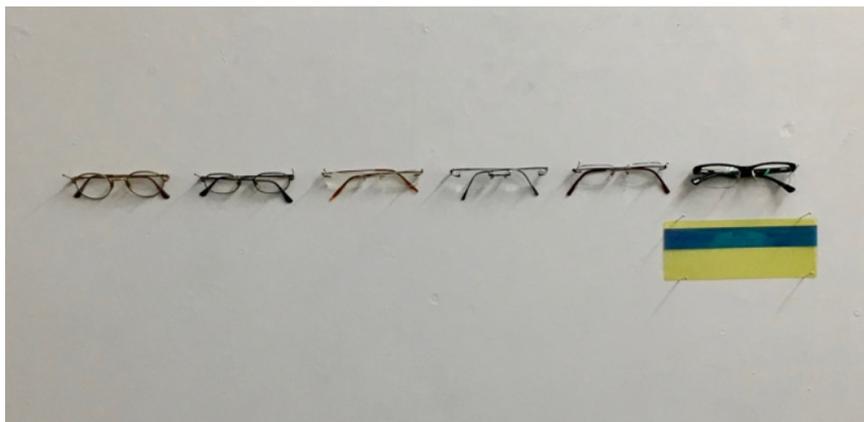


Figure 6: Framing (2018). Andy Ash. My glasses for the last 18 years with dyslexic ruler



Figure 7: 'Talking Brains' Film Andy Ash (2018)

inside of my head revealing the unseen black, grey and white interior. The original iteration of this two minute film contained sound; there was a looped electroencephalogram (EEG) recording attached to it. EEG measures voltage fluctuations resulting from ionic current within the neurons of the brain. In clinical contexts, EEG refers to the recording of the brain's spontaneous electrical activity over a period of time. This activity is recorded through multiple electrodes placed on the scalp of the patient. I was able to secure in an audible format, the moment a brain fires, i.e. an impulse passing from front to back of the brain, a split second of electrical current.

Located on the wall to the right of film was a series of ink drawing inspired by the MRI scans, collectively consisting of a series of brain structure studies. These works consisted of 9x A5 inquiries (Fig. 8). The aim of these drawings was to locate and give form to the different sections of my brain responsible for depression, dyslexia, (dis)connection and making. For instance, *Hippocampus* (2017) (Fig. 9) and *Amygala* (2017) (Fig. 10). As Susan Sontag (2012) writes: 'all great art contains at its center contemplation, a dynamic contemplation.' I



Figure 8: 8 Brains structure drawings Andy Ash (2018). 9 x Ink drawing 210mm x 297mm

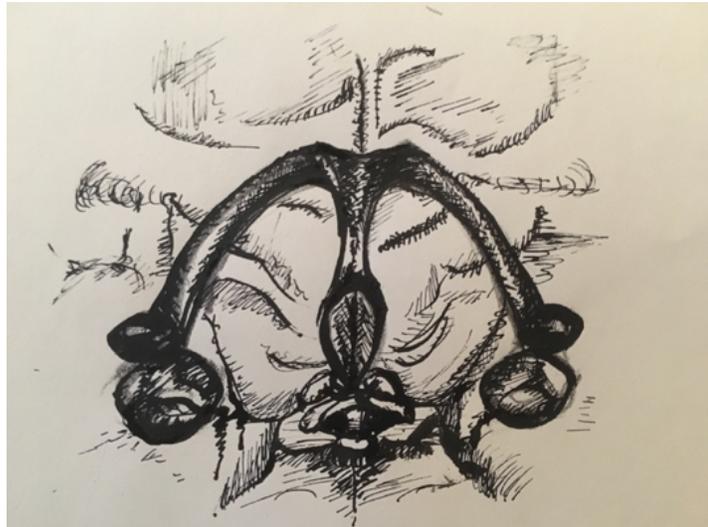


Figure 9: 'Hippocampus' (2017) Ink drawing 210mm x 297mm

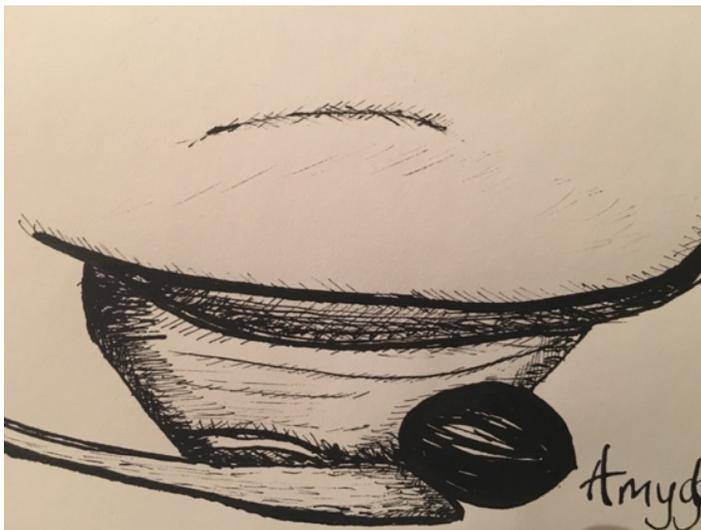


Figure 10: 'Amygala (2017) Ink drawing 210mm x 297mm



Figure 11: 'The Black Dog' (2017) Cast metal & ink drawing 210mm x 300mm x 250mm

drew inspiration from this quote, using it as a vehicle for these drawings. In this way, I was mapping my brain, not as a scientist in order to create a likeness or an imitation. Rather, I was documenting my brain as a process of contemplation, as a lived experience or encounter. In doing this I told the story of my brain and explore authentic and personalized ways of rendering my consciousness.

Located on the floor at the base of the drawings under the light of the left window was *The Black Dog* (2017) (Fig. 11). *The Black Dog* consists of a cast metal sculpture of the hind quarters of a Jack Russell. The dog is disappearing into a hole in the floor, burrowing through the synaptic network of my brain. It is a study considering the way depression connects to different parts of my brain and body. The phrase Black Dog has roots that can be traced back to a variety of origins. For example, the phrase has been used as a metaphor for depression and is associated in the UK with Winston Churchill, who famously used it to describe his darker moods:

I think this man might be useful to me – if my black dog returns. He seems quite away from me now – it is such a relief. All the colours come back into the picture.  
(Lovell, 2011:267)

I created this piece in order to question my own relationship with the Black Dog. To think about how to navigate this way of being and examine the connections in the relationship to self. How does depression connect to my work? How does it relate to my day to day thinking? What role does it play in my creativity? The piece *The Black Dog* is a study at the start of this process, considering the way depression connects to different parts of my brain and body.

To the right of *The Black Dog* across to the right hand window on a wooden table was *My Brain* (2015) (Fig. 12). *My Brain* consists of two life sized casts of my brain. One lobe is cast in clear solid resin, the other in hollow aluminum resin. The dimensions of the piece are accurate -



Figure 12: 'My Brain' (2015). Andy Ash. Life sized cold cast clear resin and aluminium resin the weight of the clear resin lobe is almost exact to a human brain. In order to create this piece, I first made a model of my brain in clay. From here, I made a silicone rubber and plaster mould and cast it in Polyester Resin. The cold cast clear solid resin piece is transparent and has gold leaf set inside the structure. The gold leaf, catches the light as it flashes, similar to the way a dendrite fires. The grey metallic piece acts as a counter to the clear resin. I used aluminum metal filler in the resin body, allowing the surface to have a polished, metal like look. The two halves of my brain were positioned in a yin and yang, top and tail, fashion drawing attention to the dark and the light, inseparable and yet interdependent nature of the two opposites.

On the opposite wall to the windows beneath *Left* and *Right* I installed *Dialogue: Artist & Scientists* (2015) (Fig. 13) which consists of a series of portrait style photographs of myself and Professor Anil Seth wearing custom made card *Brain Caps*. Professor Seth is the director of the Sackler Centre for Cognitive and Computational Neuroscience at Sussex University. I have had an opportunity to speak about the brain with him on a number of occasions. On one such occasion I made card brain caps for us to wear while we discussed understandings and his work.



Figure 13: Dialogue: Artist & Scientists (2015) Andy Ash.

My purpose in doing this was to make the interior visual on the exterior, so that we could see and think whilst talking. The caps served as a focus for our conversations about identity, perception and the brain. They have the location of different parts of the brain and their functions drawn on the outside of the cap. The visualization of these areas was a great device for making the audience stop and reflect when looking at the art work in the show. During an exhibition in 2015, we engaged in many discussions about the brain. The visiting audience were mixed and varied but interestingly lots of Prof. Seth's University of Sussex science colleagues and students came to the show and also wanted to talk about brains, research and the visual arts. This made me think about the importance of these kind of conversations between artist and scientists and the opportunities for developing interdisciplinary knowledge.

## **Contested Knowledge**

Knowledge, is a highly contested area of the UK education system at the moment. This is not a new statement to make as the claim about education being highly politicized has a long history. For example, Paulo Friere made a similar argument in the 1960's, writing that 'all education is political; teaching is never a neutral act' (Friere, 1972). The school system in the UK has for some time now been driven by a neo-liberal agenda that attempts to control what knowl-

edge should be taught to children by teachers. Successive governments, both Conservative and Labour, have used policy to control education professionals. Ball, vis-a-vi Giroux (1992) describes this approach, similar to education in the USA, as a ‘steering at a distance’ (Ball, 2007). Steering at a distance, he writes is problematic because:

It allows the state to insert itself deeply onto the culture, practices and subjectivities of public sector organisations and their workers, without appearing to do so. It changes meaning; its delivers re-design and ensures ‘alignment’. It objectifies and commodifies public sector work; the knowledge work of educational institutions is rendered into ‘outputs’, ‘levels of performance’ and ‘forms of quality’, that is this process of objectification contributes more generally to the possibility of thinking about social services like education as *forms of production*, as ‘just like’ services of other kind and other kinds of production. The ‘soft’ services like teaching which require ‘human interaction’ are re-made to be just like the ‘hard’ services (book supply, transport, catering, instructional media). They standardized, calculated, qualified and compared. More generally performativity works to edge public sector organisations into convergence with private sector (Ball, 2007:27).

The UK government and its various departments pays’ lip service to consultation with experts in the field, ignores them and then prescribes a curriculum which harks back to the late 1800’s. The school curriculum in the UK is invented by the politicians who dictate what books should be read, what history should be studied and what art should be emulated. As Ball writes:

... we have gained some insight into Gove’s [the then Conservative Education Minister] vision for the curriculum, based on his own school experiences, which seemed to consist of learning the capitals of obscure countries and memorising list of English kings and queens and the periodic table. Not exactly a curriculum for the

21st century or a pedagogy that recognises the recent focus in schools on student learning. (Ball, 2011)

Here, Ball is arguing that politicians are dictating the pedagogy and approaches to deliver curriculum in the classroom. The way this curriculum is delivered by teachers is then judged by government controlled bodies (Ofsted; UK school inspectors). This process means that teachers are increasingly becoming little more than *curriculum operatives* who are succumbing to the UK governments' policy of 'taming... the teacher' (Ball, 2003:10). Through this process, the government is able to present a particular way of knowing and being in society.

Hence, I argue this manipulation and control generates a gap, between learning as acquisition and learning as engagement and transformation. This gap is highly contentious because it is an abuse of power and a deliberate strategy to control teachers and schools. It is within this gap that we begin to explore the debate of what makes for good initial teacher preparation. As an artist teacher I see part of my role is to present a range of 'best practice' not just the present UK government policy. I do this in order to question and challenge the status quo, as well as to provide trainee teachers with the ability to critically engage with practice for the benefit of their pupils and communities.

Furthermore, one of the many other UK school curriculum issues with the present status quo is the privileging of some subjects over others. At the moment Science, Technology, Engineering and Maths subjects (STEM) are being granted special status in the curriculum at the expense of the Arts. I would argue, the privileging of STEM subjects at the expense of the arts is based on the wider misconception that STEM subjects are more academic thus more serious. As a consequence of this privileging it also means that general public and school systems believe that the scientific method, with its emphasis on primacy of impartial evidence, technical information, objectivity, and rational expression is of more value than any other approach to knowledge. It would seem that these concepts are paramount to the UK public and political

discourse, and I would say that science has the upper hand on airing their concepts daily and artists lag behind in the public debate. I have been exploring this gap through the relationship between art and science, asking the question: what can artist's with our situated knowledge and practice based understanding contribute to the world? When I talk of situated knowledge I'm thinking of:

... knowledge deriving from practice rather than written verbal proficiency in rational logic and analysis... situated knowledge systems are not closed. They do not prescribe sets of rules or fixed delineations of content. They are intensely practical rather than pragmatic, and are intended to respond in sophisticated ways to quite different contexts. Unlike scientific knowledge in which the effect of the observer is often a 'problem' and many experiments are devised in order to minimize it, in situated knowledge the whole point is that the observer is engaged. It is only through their engagement that knowledge can be manifested, and the observer is both the practitioner who makes things and the audience or respondent. (Hunter, 2009:151)

I am exploring the role of concepts artists use in generating understanding like: Visualising, abstracting, imagining, inventing, pretending, storytelling, re-presenting and re-interpreting things, critiquing things, and engaging in multi-sensory knowledge, all and many more are as important as indications of human achievement and communication as rational thought and empirical evidence. In addition to this, I am examining the value of Artful Inquiry, the skill of inquiring into something of importance through body, mind, heart and spirit. Artful Inquiry taps into the learner's tacit knowledge (experience, pre-cognition, sensations, perceptions and pre-verbal repertoire) and can thus be seen as a way of "Empowering the Intangible".

The brain is an amazing thing, it allows us to see things from a range of viewpoints, and I

want to encourage our training art teachers to do so. Our brain can incorporate many systems of knowledge, we can test out evidence of our sensations and to make reasonable conjectures, but also to fantasise and dream. In fact, scientist do much of this too, and therefore I don't think they need to be mutually exclusive and it is why collaboration can add to the richness of knowledge and experience and present all parties with alternative ways of seeing.

### **Talking Brains: Salon evening**

I hosted a Salon evening as part of the 'Talking Brains' exhibition. I did this as it could be seen as a more informal and supportive environment, a gathering in a hosted space with the exhibition at the centre. The Salon became popular in the 18th & 19th century, a way of bringing different people together to share insights, knowledge and understanding of the day. In France at that time the focus was mainly political, cultural change and revolution. However, they also included artists, poets and writers who came to share work, make alliances and discuss ideas. In England they were predominantly hosted and attended by women, the working class and people who were on the fringes of society. These were usually people excluded from universities and places of learning so they acted as an alternative, Bohemian, way of developing knowledge.

I organised my Salon around art, food and alcohol, with the intention 'aut delectare aut prodesse' (either to please or to educate), and offered an evening partly to amuse one another and partly to refine the taste and increase the knowledge of the participants through conversation. It was an open invitation; around 25 people attended from a range of disciplines and institutions. It is important to note that I did not go to the Salon with a finely honed research question. Rather, I saw the Salon as a work in progress, or even a pilot stage, that would help me to identify how we might engage in collaborative research in the future. Emphasis was placed upon the experience of the exhibition, the dialogic with observation, reflection and discussion. This 'grounded' approach (Charmaz, 2003) helped develop an understanding of

the holistic overview, whilst reflection points towards a need for more detailed, ‘fine-grained analysis’ informed by contextual information.

I anticipate that each cycle of this approach would elicit various kinds of data which would help build a ‘richer’ understanding. There is a looseness to this way of working, which begins with a broad-brush approach and gradually produces more focused questions based on insights which arise within the particular research context. It is:

... an iterative process by which the analyst becomes more and more ‘grounded’ in the data and develops increasingly richer concepts and models of how the phenomenon being studied really works (Ryan and Bernard, 2003:783)

Ryan and Bernard continue, arguing that the power of this type of ethnography lies in its embrace of context, complexity, meaning, and its emphasis on the everyday lives of individuals (Ryan and Bernard, 2003). In relation to the Salon evening, the participants drove the topics of conversation and came with a number of interesting personal agendas for consideration. The debate was recorded and I am presently in the process of analysing the data. I have also completed several follow up interviews with a number of the participants to further develop understanding and ideas. I will be organizing another exhibition and Salon in the Spring, 2019.

Themes that are presently emerging revolve around art practice and pedagogy in the gallery context; artist as teachers; the dialogic as a form of learning; intersections of art and (neuro)science; the body and the mind; health and well-being and personally situated knowledge. At a time when Initial Teacher Education and art teaching in the UK is controlled so tightly from central government with its reductive notions of teaching and learning, this kind of practice opens-up opportunities for art teachers willing to develop their own models of pedagogy. Building upon subject specialisms and their own artistic practice as artist teachers, evidence-based research and collaboration with a range of stake holders fits with the mission of developing ‘best practice’

informed by research.

## **Conclusion: Ways of seeing**

This collection and experience presents a body of work in progress and it is still therefore quite incomplete. It started with a conversation with a neuroscientist in 2015 and I have continued to use a dialogic approach to look at the brain, my relationship to my brain and art making. I turned the Kings College exhibition space into a brain, a space for looking inside and outside, a space to reflect in, to reflect upon, to make connections and consider tensions. I have used my art as a form of consciousness and in this I am reminded of Maria Popova's, description of the reciprocity of knowledge and mystery in the work of poet and mountaineer Nan Sheppard, she writes: 'Out of this awareness arises an enlargement of both the mind and the senses, of the very self, beyond the body and yet intensely of the body' (Popova, M (2018:51). I hope to continue to explore with scientists, artists and educators their different perspectives and develop alternative ways of knowing in the hope of generating new and more relevant understandings for art educators and their practice.

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