Translation: From Bench to Brain – Using the visual arts and metaphors to engage and educate

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Abstract

This article examines multidisciplinary public engagement projects that bring together developments in psychiatric research and practice with visual art and its use of metaphor. The article focuses on the art exhibition *Translation: From Bench to Brain*, which was the basis for further collaborations, illustrating how the learning from the original event influenced subsequent projects. Combining art exhibitions with online documentation and resources, the projects explored not only medical and scientific themes, but also the wider social, cultural and ethical ramifications, specifically aspects of identity, risk and stigma. The activities demonstrate the value of a developmental approach to public engagement as a process, whereby projects build on previous activities and evolving multidisciplinary perspectives, networks and expertise.

Keywords: public engagement; psychiatry; mental health; visual arts; metaphors; psychiatric genetics

Key messages

- Public engagement projects involving the visual arts and their use of metaphors can foster opportunities for discussion on developments in psychiatric practice and research.

- These projects benefit from a multidisciplinary team approach, with a range of perspectives and expertise.

- They are an ongoing process and take a developmental approach, whereby projects build on aspects of previous activities.

Background

Psychiatry has a long shared history with visual culture (Trapp and Trapp, 1936). Much of the interest in this relationship has been focused on forms of self-expression, the therapeutic application of 'art psychotherapy' and 'arts in health' (Schmid, 2005). Indeed, the mind and mental health issues have been represented visually throughout history, from crude illustrations of the 'medieval cell doctrine' to complex models and mind maps (Clarke and Dewhurst, 1972; Sims, 2003); visual and other metaphors have also been used in this context (Stott *et al.*, 2010).

In recent years, there has been increased interest in the use of visual resources in providing information to patients, families/carers and the general public, and in the

education of students and professionals (Burton, 2010). Art exhibitions and creative events have also instigated and promoted dialogue about the mind, brain and mental health in order to tackle myths and social taboos (Albano *et al.*, 2002; Kwint and Wingate, 2012). Exhibitions and events with a focus on dialogue, participation and engagement provide another way in which awareness of research can be increased but, importantly, are also an opportunity for research to be informed by relevant societal concerns and questions. This approach provides the opportunity for two-way public engagement *of* and *with* science within a creative framework.

This article discusses multidisciplinary collaborative projects, which bring together visual art/communication, metaphorical thinking and mental health issues, to communicate and engage with various groups about developments in psychiatric research and practice (see Lewis and Thomas, forthcoming). The activities gathered together individuals and groups from within Cardiff University, and those from communities, services and industry – including schools, mental health services, artists, art collectives and design companies. The team behind the projects, and in particular the key artists involved (Rhys Bevan Jones and Julia Thomas), were interested in metaphors related to the mind, disorder, research processes and genetics, and their use to foster alternative ways of thinking about a subject or to aid explanation of complex ideas to non-scientific audiences. This interest arose because metaphorical thinking, rather than the classical use of metaphor as linguistic decoration, has been regarded more recently as important and commonplace within our everyday process of reasoning and understanding (Lakoff and Johnson, 2003).

In this article, we reflect on metaphors related to medical and scientific work, and how these are used to communicate and engage with various public groups. In particular, we focus on the public engagement exhibition *Translation: From Bench to Brain* and its accompanying events, which was the basis for a number of further projects and exhibitions. This illustrated how the application of visual culture is not confined to the therapeutic setting, such as the art psychotherapy studio, but can also extend to a broader audience and with more wide-ranging aims that go beyond the health benefits for the individual. The activities that have developed since the initial exhibition also demonstrate the value of a developmental approach to public engagement as an iterative process, whereby projects build on aspects of previous projects.

This project also exists within the current changing academic climate, in which partnerships with communities are considered to be important for the co-production of knowledge. The Connected Communities programme, funded by the Arts and Humanities Research Council, undertook research through collaboration and co-production between universities and communities in order to disrupt the idea of the university as the only or most appropriate site of knowledge production. Since 2010, the programme has funded over 300 projects, involving around 100 artists, to explore the concept of 'community' and better understand our changing world and its problems. Similar to the summary findings from this programme, we have also acknowledged that the development of relationships takes considerable time in order to overcome existing barriers.

Translation: From Bench to Brain – A public engagement exhibition

Over the past ten years or so, the term 'public engagement' has gained greater coherence in higher education institutions. Within the scientific disciplines, for

example, it is now normal practice to complete sections on engagement in funding applications, while science festivals have grown in size and popularity. Indeed, science communication and public engagement events have a considerable history in the UK (Gregory and Miller, 1998). 'Sci-art collaborations', as they have been termed, are one such initiative to benefit from an increased recognition that science communication involves much more than simply relaying scientific information to a broader non-scientific audience (Webster, 2005).

Although such collaborations can sometimes be uneasy (see, for example, Glinkowski and Bamford, 2009 and Ede, 2005), there has been sustained interest in art as a form of inquiry and alternative way of knowing. Art can provide commentary, critique and the opportunity for the production of new knowledge through the multiplicity of art practice, which is not restricted merely to a representation of, or education about, science (Born and Barry, 2010). In collaborations with universities, research centres and individual scientists, artists can provide an experimental framework for promoting alternative perspectives in neutral, re-imagined, playful territories (Evans, 2016; Pahl *et al.*, 2010) because the artist 'moves in a realm of shifting meanings, imaginings and interpretations' (Coessens *et al.*, 2009: 95).

Artists working in other domains of knowledge production is not a new phenomenon. During the 1960s, amid calls for increased civil rights, initiatives such as the Artist Placement Group attempted to re-situate artists into non-arts settings in order to effect social engagement and social change. Such developments are considered to have been the catalyst for many artist-in-residence programmes (Slater, 2001).

The *Translation: From Bench to Brain* exhibition included the work of artists Julia Thomas, a former biostatistician, and Rhys Bevan Jones, a practising psychiatrist. Most of Julia's work covered the processes and practices of psychiatric research (the 'bench' in the exhibition title), especially in genetics and genomics (for example, *Big Science I–III* and *Outlier*). Rhys's work, on the other hand, was broadly based on the clinical aspects of psychiatry (the 'brain' in the title), particularly contemporary and historical visual representations of the mind (for example, *Memory Palace)* and mental states and disorders (for example, *Classification/Depression).*

The exhibition was organized by the Cardiff Medical Research Council's (MRC) Centre for Neuropsychiatric Genetics and Genomics in conjunction with what was the Centre for the Economic and Social Aspects of Genomics (Cesagen), and ran for six days at BayArt Gallery in Cardiff as part of the Economic and Social Research Council (ESRC) annual festival of social sciences. Posters were produced in English (see Figure 1) and Welsh, and bilingual postcards, web pages and social media accounts (Facebook, Twitter) were created to advertise the event. A report on the week, including images of the artwork and events, can be requested from the authors.

The multidisciplinary organizing team for this, and subsequent projects, comprised artists/designers (Julia and Rhys), psychiatrists (Ian Jones and Rhys) and social scientists (Jamie Lewis and Simon Read), enabling us to draw on a range of expertise and perspectives from the visual arts, social sciences, medical research and clinical psychiatry. This was important because the exhibition explored not only medical and scientific themes, but also the wider social, cultural and ethical ramifications, specifically the concepts of identity, risk and stigma. The exhibition raised important questions about how modern medical science can affect our sense of self and our relationship with society and research, while also recognizing past practices and cultural icons, such as the 'memory palace' (Draaisma, 2000), which is a feature of the BBC television series *Sherlock* and Thomas Harris's Hannibal Lecter novels.

Figure 1: Poster for the public engagement exhibition
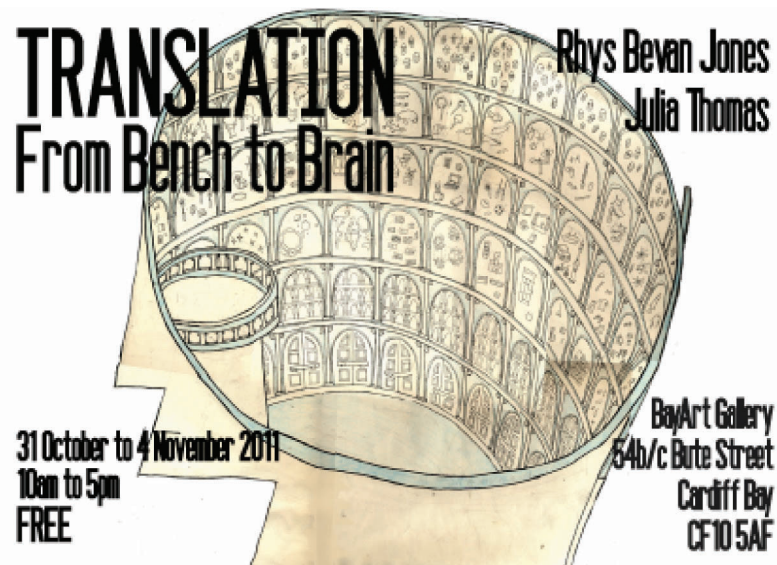
In this and subsequent projects, psychiatry travelled from the clinic, laboratory and university premises to less institutional and more informal venues, spaces and modes of engagement. Visitors were encouraged to reflect on the pieces, read the accompanying panels (in English and Welsh) that provided context and educational material, and talk to the artists, scientists and social scientists at the exhibition. They were also invited to contribute to the artwork themselves and interact with the multimedia installations, which stimulated further reflection and discussions. Such active participation, rather than a passive reception of information, is an important aspect of public engagement. It has been argued that creativity, and the act of making, fosters curiosity such that people connect with others and what is going on in the world (Gauntlett, 2011). The visual and multimedia educational resources attempted to accommodate individual learning styles and promote active learning (Biggs and Tang, 2007). Much of the work displayed had been created following collaborations with various groups and thus 'upstream engagement' was a key factor during their development (see Wilsdon and Willis, 2004).

The initial exhibition attracted a diverse audience of around 300 people over the course of the week. The events attracted people with an academic and professional interest in psychiatry, people with experience of mental health problems and school students, as well as a more general public. Responses from completed questionnaires (see Tables 1 and 2, and Box 1) indicated that visitors found it educational, interesting, enjoyable, relevant and accessible. Feedback also highlighted the value of multidisciplinary dialogue within a creative framework, which led to the approach being adopted in future projects and activities. Overall, the event was a creative, interactive and accessible way of engaging the general public and specific groups about the complex subject matter.

Table 1: Responses to ESRC questionnaire on the *Translation: From Bench to Brain* exhibition: Background information

Age	
Under 20	2
20s	31
30s	30
40s	6
50s	7
60+	6
Occupation	
Academic/research	19
Student/college	15
Teacher	6
Government/public sector	14
Business/private sector	6
Journalist/media	3
Other	20
Why did they attend the event?	
In a professional capacity	21
As a member of the public	52
As a student	11
Primary reason for attending	
Gain information for work	15
General/personal interest in the topic	58
Networking opportunity	4
Encouraged by employer	1
Other	6

Table 2: Responses to ESRC questionnaire on the *Translation: From Bench to Brain* exhibition: Rating the event

How would you rate the event on the following criteria?				
	Very	**Fairly**	**Not very**	**Not at all**
Interesting	60	17	1	0
Enjoyable	56	20	2	0
Educational	43	35	0	0
Relevant	27	36	10	2
Understandable/ accessible	52	24	2	0

Focus on artwork: The mind and mental disorder

Representations and metaphors are often used in the clinical psychiatry setting and in psychotherapy to help engage, communicate and explain aspects of mental health difficulties, as well as in everyday language to describe how we feel (Stott *et al.*, 2010; El Refaie, 2014). Mood is sometimes described as if oriented on a vertical axis, as up or down, or as low or high. Colours such as blue and black have been used when describing depression, and Winston Churchill described his depressive episodes as his 'black dog'. There is a range of other metaphors, including weather references such as 'under the weather' or 'under a black cloud'. The use of metaphors in therapy does not only help to communicate issues related to mental health; the analysis of a person's (or patient's) use of metaphors (and metaphorical language) can help others to understand his or her perspective. Changing these metaphors can be a focus of therapy sessions (Stott *et al.*, 2010).

To create *Metaphors of the Mind* (see Figure 2), Rhys asked friends, family and colleagues how they 'see' the mind, and illustrated some of these ideas using pen and ink, printmaking and digital imaging media. For example, one person thought there was a senate in his mind, in which the little participants would debate the issues of the day, while another described the ways in which thoughts and perceptions could be sorted into postboxes in the mind. The images are examples of how it is possible to communicate complex ideas in a relatively simple, effective and sometimes amusing way. It may be important to take into account the different metaphors that people use to visualize the mind when attempting to educate or engage individuals about mental health issues. The drawing *Memory Palace* (see Figure 1) represents an ancient procedure that turned memory into an imaginary space in which 'images' could be retained, based on an architectural metaphor (Draaisma, 2000).

Figure 2: *Metaphors of the Mind*

Credit: Rhys Bevan Jones

Physiognomy (see Figure 3) is a collagraph print based on the practices of physiognomy and phrenology, which offer a wealth of visual references and involve judging character from physical features. The media often use images related to such outdated practices when referring to mental health issues. This may be in part because psychiatry, despite emerging biological findings, has often lacked the visual references of other medical specialties, relying more on an individual's symptoms and signs to reach a clinical diagnosis (WHO, 1992). Therefore, a major challenge in psychiatry is to illustrate subjective experiences and phenomena that fit with uniform classificatory systems.

Figure 3: *Physiognomy* (Collagraph print)

Credit: Rhys Bevan Jones

During his teaching, Rhys asked medical students how they 'see' depression, and illustrated the ideas using mixed media and digital imaging. In creating *Classification/ Depression* (see Figure 4), he also referred to historical imagery and the experiences of service users, and asked friends and colleagues. The print can help to show the diversity of experiences possible and illustrate how individuals often do not fit seamlessly into neat 'textbook' presentations of illness. The 'squares' or 'experiences' can be exchanged with others outside the bounded frame, as classification systems can change with new developments in science and society (McKusick, 1969). Indeed, classifications have been a source of interest for psychiatrists, scientists and medical sociologists alike (Bowker and Star, 2000; Pickersgill, 2014).

Figure 4: *Classification/Depression*

Credit: Rhys Bevan Jones

Another print on the theme of disorder was *Social Phobia* (see Figure 5), which is a condition based on the fear of scrutiny by other people that can lead to the avoidance of social situations. Positioned in an alcove by the entrance to the exhibition, as if to represent being hidden away, the etching represents the rapid eye movements of a person suffering with social phobia as they scan someone's face but avoid their eyes.

Focus on artwork: Genetic and genomic research

While Rhys's works were based on thoughts from various publics about what goes on in the mind, as well as on clinical and historical sources, Julia's artworks were creative responses drawing on discussions with researchers, academic reading, and her experiences as a biostatistician. *Big Science I* and *II* (see Figure 6) are symbolic and commemorative of the many people, blood samples and data records required within the patient studies of psychiatric genetic research. Scale, collective mass, variability and the metaphorical nature of the materials and processes used, are key features of the work.
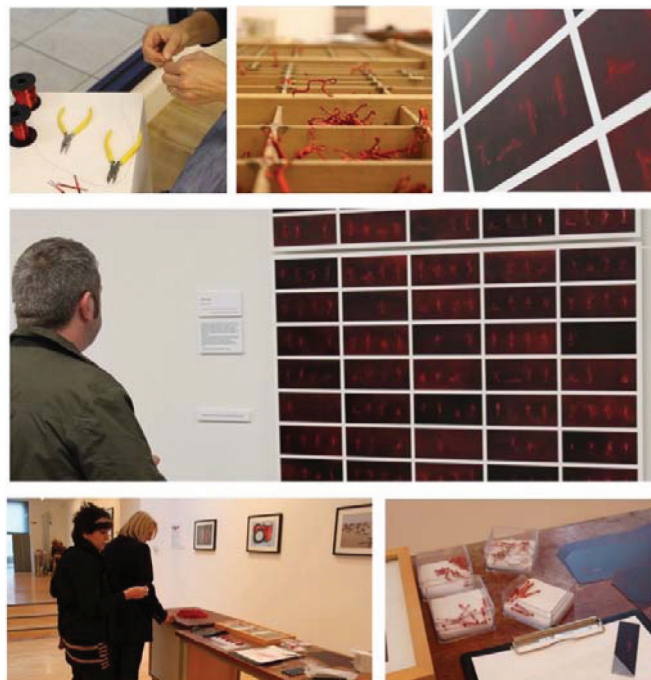
Figure 5: *Social Phobia*
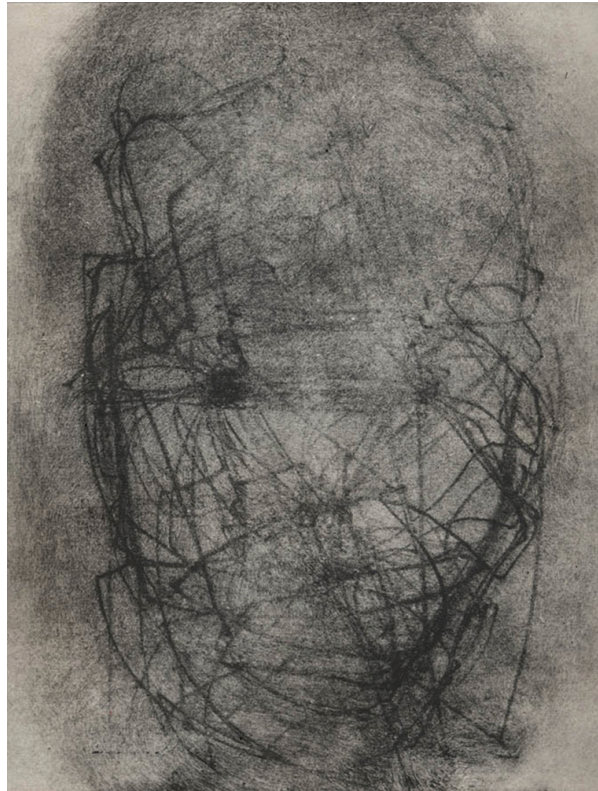
Credit: Rhys Bevan Jones

Figure 6: *Big Science I* and *II*

Credit for artworks: Julia Thomas

The artworks *Big Science I* and *Big Science II* developed from a growing number of wire figures to which various individuals and groups contributed. This provides a metaphor for collective knowledge production, while recognizing individual roles within large population studies. Inviting people to create figures at the exhibition was a springboard for further discussion about patient studies and although this act of making was seemingly trivial, it had a pronounced impact on opening up a conversation about the underlying science. *Big Science III* is a mound of cardboard boxes containing delicately folded but empty paper wraps, which make reference to past practices of packaging medicinal powders and the discourse of therapeutic optimism that surrounds genomic research.

Disturbing the Blueprint (see Figure 7) is an interactive artwork composed of a microphone and pressure sensor pad linked to a screen. It explores the idea of DNA as 'the human blueprint'. This is a metaphor that has previously been used in popular science but, while capturing the imagination, has been criticized for its biological reductionism, potentially giving undue weight to the role of genes (Shapiro, 1992). The metaphor's popularity has meant that it is has been difficult to 'disturb', even when it is no longer scientifically helpful or accurate. The artwork also references how the effect of outside environmental factors can be modified by our genetic make-up, resulting in more complex gene–environment interactions. In the making of the artwork, the use of computer code to modify portrait photographs on the screen represents a shift in the practice of biology from green-fingered laboratory work to a statistical, computational science that has an underlying digital code (Kevles and Hood, 1992; Hood, 2003). Using the microphone or pressing the sensors (external factors) can interfere with that code, and showing the raw code on screen highlights the role that bioinformatics and computing play in post-genomic science.

Figure 7: *Disturbing the Blueprint*

Credit for artwork: Julia Thomas

Accompanying talks and workshops

Various events were organized throughout the week, reflecting the aim to engage with specific groups as well as with the wider public. Clinicians, scientists, artists and social scientists shared their practice and exchanged ideas during these sessions, while making space for the public to contribute to the collaborative experience and dialogue.

One evening, there were extended talks by researchers working in the areas of psychiatry ('Mental health and creativity' by Ian Jones), art/aesthetics ('The metaphorical nature of art–science collaboration' by Clive Cazeaux) and social science ('Big biological science' by Andrew Bartlett). There was also an artist walk-and-talk evening led by Florence Martellini, an arts project manager with expertise in the relationship between art and consciousness.

An afternoon was dedicated to a workshop for medical students, which consisted of a presentation and a walk-and-talk. This linked to a regular teaching session for medical students at Cardiff University that explored the relationship between psychiatry and art and film, and from which the artwork *Classification/Depression* was derived. During these sessions, students drew representations of disorders to help consolidate understanding of psychopathology and reflect on their perceptions (see Figure 8). Their images were compared with visual representations of the mind and disorders throughout history.

Figure 8: Display of how schoolchildren and medical students 'see' the mind

Another afternoon included a visit from a local primary school. The aim was to make it a fun, interactive and educational event, and an opportunity for children to see that art has a role to play in many aspects of our culture and society, including science. Children learned about genes and how factors such as diet and stress may affect our bodies. They used a variety of media to contribute their own artwork to the exhibition.

Finally, a poetry workshop led by poet Clare Potter provided other visitors to the exhibition the opportunity to respond through writing and poetry to the themes explored by the artworks. A forum was also arranged that gathered together interested people to discuss the establishment of a local art and science network.

Further pathways from bench to brain

How the Light Gets In, and other subsequent projects

The activities within *Translation: From Bench to Brain* provided a way of testing out different mechanisms of engagement with public groups that could generate conversation about the research. Although this experimentation with creativity and metaphorical thinking generated engaged and questioning participants/visitors, its context within a mainstream art gallery tended to attract particular public groups accustomed to such spaces. Julia went on to develop further artworks and to curate exhibitions and events in less traditional spaces and places, such as in a disused attic, a church, empty shop units and a disused ward of a psychiatric hospital. These settings attempted to reach people who would not normally attend art galleries. Such an approach meant that the conversation opened up further, most likely because of the interaction between artworks and the context of the spaces in which the artworks were shown.

Julia and Rhys also contributed to another public engagement art exhibition at BayArt Gallery, entitled *How the Light Gets In* (see Figures 9 and 10). Organized and curated by Jamie and Julia, this was an exhibition of work by six artists whose interests intersected with the subject of mental health. The exhibition also included work from artists involved in ATTIC, an 18-month project and gallery space in a disused attic of a mental health charity in Cardiff. The week-long exhibition also included a series of creative workshops focusing on themes within the artworks, and talks from artists and academics from Cardiff University.

Figure 9: *How the Light Gets In*

Credit for artworks: various artists

Figure 10: *How the Light Gets In*

Credit for artworks: Jan Williams

Figure 11: Images of the *Drawing Depression* print and accompanying animation

Credit for artwork: Rhys Bevan Jones

For this exhibition, Rhys developed his project on *Classification/Depression* to produce an animation based on images from this print, as well as representations and metaphors based on mania and psychosis, with reference to a complex model of psychopathology put forward by researchers in Cardiff (Craddock and Owen, 2010). He collaborated with musician, Gareth Roberts, who composed an accompanying musical piece based on aspects of these disorders, following discussions with Rhys (see Figure 11). As a result, the work explored auditory/musical as well as visual representations of mental states and difficulties, through the use of harmony, tempo, volume, distortion and other musical elements. A workshop was held on 'Illustrating mental states',

during which the animation was shown and discussed. Gareth performed some of the compositions from the animation on piano in this workshop, and with a jazz band for the opening evening of the exhibition (see Figure 12).

Figure 12: Performance of the animation/music on the opening evening

Rhys has used references to the visual arts, film and the media, including work from the exhibition, when teaching aspects of psychiatry to students at the Cardiff University School of Medicine. Findings from questionnaires completed by students (n=120) showed that the sessions were enjoyable and engaging. Most students stated that the use of visual media had helped them to learn how to conduct a mental health assessment (95 per cent of students), and to improve their knowledge of psychopathology (73 per cent). Most were looking forward more to their psychiatry placements (91 per cent), and were more interested in psychiatry (88 per cent) following the sessions. A conference poster on this work was awarded the education prize at the International Congress of the Royal College of Psychiatrists (RCPsych). Sessions on psychiatry and the arts have also been held as part of the annual Cardiff University 'Winter school in psychiatry' for medical students, and the *Metaphors of the Mind* print has been used to advertise the event (see Figure 13).

Online activities and dissemination

New media are likely to feature more in engagement and educational work as the technology becomes more available and the effectiveness becomes clearer, and consideration must go into the design as well as the content of these projects. Accessibility is a key feature, with the Internet and multimedia featuring prominently in most people's daily lives, especially young people (Merry *et al.*, 2012; ONS, 2016). With this in mind, and to continue the discussions from the week, the *From Bench to Brain* exhibition report was disseminated and made available online (available on request from the authors), and the social media accounts were kept alive. The exhibition featured in the *Western Mail* ('the national newspaper of Wales'), the British Science Association newsletter and on BBC Art's website (Chamberlain, 2011) and BBC radio. Images on show were selected for the cover of *The British Journal of Psychiatry* (Bevan Jones, 2011) and *New Philosopher* journal (Boag, 2014).

Figure 13: Cardiff University 'Winter school in psychiatry' poster

Figure 14: Cover template of an information sheet for the online package for mood and depression in young people

Rhys has also developed an online psychoeducation package for adolescent depression. Visual metaphors have been illustrated and animated for this, to engage young people and to communicate aspects of mood and depression, and its management (see Figure 14). The package has been developed through a person-centred collaborative approach, following consultations with young people, families/carers and professionals from a range of services and charities (Bevan Jones, 2017). The package was in line with guidelines that stress the need to engage with individuals and families/carers and deliver accurate information about their difficulties (NICE, 2005), and built on the work of others at Cardiff University who have developed online mental health packages (Smith *et al.*, 2011; Lewis *et al.*, 2013).

Discussion

'Translation' is a well-rehearsed term used to describe the application of biomedical research. It is normally applied to the passage of laboratory-based research into the clinic and hospital (Lewis *et al.*, 2014). Articles in the journal *Nature* have likened this endeavour to attempting to cross the 'Valley of Death' (Butler, 2008), which suggests a more complex process than the pervasive, linear and simplified 'bench to bedside' metaphor. The practical integration of many different social worlds, professions, biological objects and platforms is required for successful translation from laboratory to clinic (Lewis *et al.*, 2014; Keating and Cambrosio, 2003).

As such, the exhibitions not only explored the metaphor of translation, but were also a site of collaboration, communication and contemplation. It was an opportunity for individuals and groups from a range of backgrounds to discuss challenging aspects of the biological, psychological and social dimensions of psychiatry in a holistic and accessible manner. At the time of gathering feedback for *From Bench to Brain*, we were concerned that those who completed questionnaires may have been more favourable towards the event, giving a response bias, and perhaps more could be done at future events to encourage visitors to provide feedback. There could also be further exploration of the methodology to assess such an activity, for example through questionnaires, interviews, group or online discussions, and the analysis of artwork and poetry made by participants and attendees. However, despite the limited evaluation for *From Bench to Brain*, the overall findings, and the iterative manner in which it influenced later projects, suggest that visual art/communication, including the use of metaphors, can have a role in the complex areas of engagement and education in psychiatric practice and research. The continued interest in subsequent exhibition events has suggested that this is a popular format.

It was a challenge to engage certain groups during the week, such as scientists and clinicians, perhaps because the event took some out of their 'comfort zone'. Some might have been concerned that bringing together the arts and psychiatry might make the specialty seem less 'scientific'. However, the event promoted a discussion on the 'science' of 'research' into psychiatry, and was supported by the MRC CNGG in Cardiff. Many visitors, including medics and scientists, commented that they were pleasantly surprised to see how the visual arts could be used in psychiatry other than in the context of 'art therapy', and how they appreciated the significance of metaphors in their work.

It may be argued that a visual art exhibition would not interest all publics. However, the event also used other approaches such as talks, discussion sessions, a poetry workshop and a forum. Furthermore, the arts, mental health and social science have been brought together in other engagement projects in Cardiff. Other artists have collaborated with the MRC Centre, and there are regular 'Cardiff sciSCREEN'

events, screening films followed by a discussion with multidisciplinary panels on developments in science and the social and cultural implications (Lewis *et al.*, 2017). There are also regular poetry workshops, music gigs, debating chambers and events involving celebrated artists who have publicly raised awareness of their mental health difficulties. This has galvanized interest in Wales. Additionally, an arts and mental health festival has been piloted, facilitated by Disability Arts Cymru and the community organization Making Minds; groups such as Arts Care-Gofal Celf have increased their profile (acgc.co.uk).

Psychiatry's long-standing and reciprocal relationship with art may well continue, not simply because of the current appetite for interdisciplinarity and multidisciplinarity, but because of their deep-rooted commonalities in seeking understandings of subjective experience and mental states (Green, 2008). As psychiatry becomes increasingly intertwined with science, technology and visual culture, it will be necessary to connect and combine multiple diverse sources of knowledge, and visual thinking is one approach thought to be well equipped for this challenge (Ravetz and Ravetz, 2017). Furthermore, recent global initiatives aim to connect art, science and health to encourage a new generation of creative thinkers. The Science Gallery in London is a good example. The *From Bench to Brain* team hopes to develop their multidisciplinary collaboration further, and continue to take the work 'out of the gallery' to other events and locations, as well as to publish online to help continue the dialogue with various publics.

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Acknowledgements

Notes on the contributors

All the contributors are based at Cardiff University.

Rhys Bevan Jones is a psychiatrist, clinical research fellow, illustrator and public engagement officer (RCPsych in Wales).

Julia Thomas is an artist–curator and a former biostatistician, and is carrying out an ESRC-funded PhD as part of her ongoing interdisciplinary practice. She co-founded the art project and gallery space ATTIC (https://atticblogsite.wordpress.com).

Jamie Lewis is a sociologist of science with a background in science and technology studies and public understanding of science.

Simon Read is a research associate, and has completed an ESRC-funded PhD exploring cultural representations of older people.

Ian Jones is Professor in Perinatal Psychiatry, NCMH director, and former chair of Cardiff MRC Centre Public Engagement Committee.

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