

## **Art, Simulation and Surgical Humanities**

This Research Networking Award within the AHRC Science in Culture strand set out to explore how the closed world of the operating theatre - represented through realistic participative simulation - might act as a prompt to artistic response, provoking new conversations and giving rise to insights for all concerned. By allowing a range of experts to engage in prolonged, intense yet unconstrained dialogues and experimentation, the project proved to be highly successful, opening up rich seams of discussion and triggering new lines of enquiry based on unexplored connections. Further work is now required to take advantage of these opportunities.

### **Activity**

Over the course of the project, our core group (surgeon – Professor Kneebone, artist – David Cotterrell, semiotician – Professor Kress, jazz pianist – Liam Noble, computer scientist – Cian Plumbe and design engineer – Matt Harrison) has come together in different settings and capacities around the theme of surgery. A progressive series of discussions has highlighted the boundary-crossing nature of each of these domains of expertise, and the value of mapping new territories of engagement.

At the outset of the project we set out to gain insights into one another's professional worlds. These events were followed by a closed session where the themes, ideas and areas of convergence raised by the event were critically evaluated.

- The group contributed as audience members and as speakers in the first interdisciplinary event – Art, Image & Politics Symposium held at John Hansard Gallery, University of Southampton, March 2012.
- The Big Bang Fair 2013, London, ExCeL, 14 - 17 March 2013. This event was used to prototype visual arts and sound-based research methodologies. It also facilitated the experimental collection of content to be used in creative responses for further use at future, subsequent events.
- A prototype display based on the trial recordings was presented at the Design4Health exhibition at SHU in June 2013
- The project was selected to be presented at an AHRC hosted RCUK parliamentary event on Health and Wellbeing in June 2013. Documentation of the project was selected for inclusion within an associated publication to be produced and circulated within and beyond the event.
- Kneebone and Cotterrell presented at an AHRC Science in Culture award holders event in Bristol on 11 September 2013
- Cotterrell and Kneebone presented at the Cheltenham Literature festival and led a panel and public discussion on the relationship between surgery and art and the way in which surgery can be informed by external observers.
- Kneebone supported the development of a collaborative dance project which was presented at The Place, London - the UK's premiere centre for contemporary dance.

In addition to discussions within and beyond our core group, we explored the affordances of new visualisation and haptic technologies. For example, 360 degree video capture allowed us to capture multiple perspectives on both open surgery and interventional cardiology.

The project continues to reverberate in the practice of all the participants. For example, we have explored the concept of parallel perspectives by inviting experts from disparate disciplines to form a growing network. Collaboration with puppeteers has shown striking similarities with the worlds of jazz and emergency surgery, where wordless communication and the highest levels of dexterity and coordination underpin collective expertise.

Most recently, a collaboration with kitchen and front of house teams from the Fat Duck Restaurant in Bray used simulation of open and keyhole surgery as a prompt for exploring similarities and differences between the worlds of chef and surgeon. Unexpected resonances for all participants have led to plans for continuing development.

### **Next steps**

Because surgery is an alien world to many people, yet at the same time a world that concerns and affects us all, this apparently incongruous conjunction with the worlds of art, music, semiotics and design has proved highly creative and fruitful.

Direct parallels within other aspects of society relating to power hierarchies and empathetic challenges within formalised relationships have been identified. These conceptual challenges which derive from, but transcend, the specific context of surgery have been identified as key areas of collaborative engagement and potential areas of future collaborative research.

Building on the success of the Networking Award, our next step is to explore opportunities for further funding to take our findings to the next level. We are exploring opportunities within the AHRC's current and projected funding programme.

### **Budget**

The project was completed within the budget allocated by the Award. The project also benefited from leverage with other funded work being carried out by the Investigators, providing major support in kind and opening additional opportunities for exploration.