

ELICITING COMPASSION : AN ARTIST IN RESIDENCY AT THE MAX PLANCK INSTITUTE, LEIPZIG

Tina Gonsalves

This talk will discuss my residency (funded by the Australia Council's Inter Arts Board) based at the Max Planck Institute for Cognitive & Brain Science in Leipzig, a research center in Germany working with the director of the social neuroscience lab, Prof. Tania Singer. Singer's research area explores the role of trust, compassion and altruism in our lives.



Fig 1. Group photo of invited researchers at "The How to Cultivate Compassion Workshop 2011", Studio Olafur Eliasson, Berlin, Germany, July 2011, (Copyright: Max Planck Institute/Studio Olafur Eliasson).

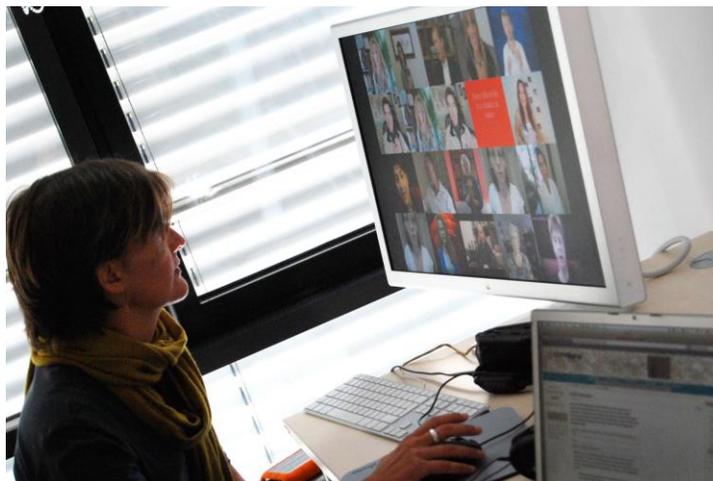


Fig 2. Tina Gonsalves working at the Max Planck Institute, Leipzig, Germany, August 2011 (Photo: Matthew Wild, copyright: Tina Gonsalves)



Fig 3. Tina Gonsalves testing "Percolate" which uses eye display technology developed by Nokia Research Center in Finland. The conversants look probingly into each others eyes as they converse, Nokia Research Center, Tampere, Finland. (Photo: Martin Schrader, copyright: Tina Gonsalves)

PROBING THE PSYCHO-PHYSICALITY OF EMOTION

As an artist, my work has always explored the emotional body through drawing, painting, collage, video and interactivity. I met Prof. Tania Singer, director of the Social Neuroscience lab at the Max Planck Institute for Cognitive and Brain Science in Leipzig, six years ago, when I was immersed in a year-long fellowship Arts Humanities Research Council/Arts Council England fellowship at the Institute of Cognitive Neuroscience (ICN) at University College London (UCL). I was at the ICN working with neuroscientist, Hugo Critchley whose research explores emotional psychophysiology, and Singer was part of Critchley's group.^[ii] Singer was at the ICN working on some very interesting experiments exploring the effect that love has on empathy. At this time, Singer had just begun developing her interest in how meditation may impact the biology of the brain. Singer invited me to the initial meetings at the ICN with Matthieu Ricard, a Buddhist monk, French interpreter for the Dalai Lama and member of the Mind & Life Institute, an organization dedicated to collaborative research between scientists, Buddhist scholars and meditators on the effect of mind training and meditation on the brain. Singer began scanning Ricard's brain while he meditated in the fMRI scanner. I found it fascinating.

EXPLORING SOCIAL EMOTIONS

After my fellowship with Critchley, I began to work with social neuroscientist Chris Frith. Singer was part of both Critchley's and Frith's research groups. I initiated a residency at the Wellcome Department of Neuroimaging at UCL, working Frith. I was curious about how our sense of self arises from our need to map relations between self and others. Frith was discussing how a building block of human interaction is emotional contagion, the tendency to catch and feel emotions of others, so that we automatically mimic and synchronize with the vocalizations, postures, and movements, converging emotionally. Emotional

contagion can sow the seeds of empathy, as one then begins to identify with another's feelings. We embarked on a video project called *Chameleon*, exploring emotional contagion and empathy. Over nine prototypes, we worked with a range of research institutes to transform scientific, technical and visual theories of emotional transfer into poetic interactive installations driven by emotions of the audience and the portraits on the screen. Each day the mood of the *Chameleon* portraits adapt to the range of visitors' emotional expressions, affecting the tone and emotional ecology of the gallery space. I worked with a team of human computer interaction scientists to study audience experience. *Chameleon* was successful in exploring the concept of empathy and foregrounding emotions.

ELICITING COMPASSION

Chameleon led me to contemplate ideas of compassion, and how it could be highlighted in the interaction scenarios of the work. Compassion is a complex state of being. Empathy explores the feelings of another. Compassion requires empathy, and it also requires a time investment, as one feels compelled to alleviate or reduce the suffering of another. The Dalai Lama discusses compassion in dialogue with Paul Ekman in their book 'Emotional Awareness: Overcoming the Obstacles to Psychological Balance and Compassion'. *"... It is translated as a sense of connectedness, a sense of endearment to others, where the idea is cultivating a state of mind that makes the sight of others' suffering unbearable to you. Cultivation of that is the crucial component of compassion. It is said that the stronger this sense of connectedness, the greater your feeling of unbearableness when you see others suffer. . . . When you reach that state of mind, then others are seen almost as an extension of yourself, as part of you."*

These thoughts led me to contact Singer. Since our first meeting six years ago at the ICN, Singer, along with other renowned scientists, had been working with the Dalai Lama and his close circle exploring the biological effects of compassion meditation on the brain and body. I was intrigued by Science's interest in incorporating a more holistic approach to knowledge. I was also intrigued by Buddhism's interest in science *'offering powerful tools for understanding of compassion, revealing the interconnectedness of all life, and that such understanding provides an essential rationale for ethical behavior and the protection of the environment'*. (Dalai Lama)

In 2010 Singer was awarded a large European Research Council (ERC) grant to research "Plasticity of the Empathic Brain: Structural and Functional MRI Studies on the Effect of Empathy Training on the Human Brain and Prosocial Behavior". We decided that the time was right to begin a residency.

In September 2010, I began the journey to the Max Planck Institute in Leipzig, Germany, meeting with Singer, and her ever-growing team. Singers' approach is multi-method and interdisciplinary, combining techniques and paradigms from the fields of neuroscience, bio-psychology, economics and the arts. The ERC grant will encapsulate an ambitious longitudinal study, taking place over a twelve-month period (the initial starting date was March 2011). Up to 200 subjects will be recruited. The subjects will have little or no background in meditation techniques. Over a year, they will undertake compassion training, while partaking in everyday life. They will be monitored up to six key times over the year (fMRI scanning, pathology, self reporting). This is a leap beyond previous studies as most studies of compassion training usually take place over a shorter period. The training usually takes place in a 'retreat' type of environment and the subjects usually have some meditation background.

Over the study period, the group are investigating the degree to which short and long term affective and cognitive training can significantly induce functional and long-lasting structural neuronal changes in the brain and lead to pro-social behaviour. They are also looking to the hormonal, health-related, and behavioural changes.

As an experiment like this has never been done before, much time has been spent discussing approach. Over long meetings, protocol and ethics considerations get refined. We discuss the importance of appointing the appropriate teachers to administer the compassion training. My role has been to brainstorm how we can use technology to create 'compassion interventions' with in everyday environments. Each of the subjects will be given a mobile phone that will be both a reporting tool and a tool to elicit compassion. A secure web based 'meeting point' may stream meditations, hold each days learning activity and become a place to share stories of compassion. It may also hold questionnaires, options to upload comments and chat online with subjects.

In July 2011, Singer held the "How To Cultivate Compassion Workshop" to refine the protocols, teachings and ethics that will be implemented in the longitudinal study. The workshop was based at the Studio Olafur Eliasson in Berlin. Eliasson is an Icelandic contemporary artist known for sculptures and large-scale installation art, employing elemental materials such as light, water, and air temperature to enhance viewer experience. In 1995 he established the Studio Olafur Eliasson a laboratory for spatial research where he collaborates with scientists, artists, architects and engineers. Eliasson is working with Singer on a compassion based project from the 2012 Olympics. Over four days, a mix of neuroscientists, psychologists, psychotherapists, academics, Buddhist monks, artists and like-minded international researchers studying compassion gathered. The approach to this gathering was more experiential, less didactic. Powerpoint presentations, 'p' values, graphs and statistics were not high on the agenda. Instead the discussions about compassion moved into 'interventions', so each of the researchers can 'experience' the teachings. This was matched with macrobiotic vegan food and group meditations designed to elicit compassion. Throughout the 5 day meeting, I found myself crying often! Reflecting, many of the Scientists were walking around Eliasson's studio with red and swollen eyes, which resulted in a lot more discussion, hugs and also laughter. For all involved, it was a felt, compassionate learning experience. I find this multi-method approach of Singer's is intriguing and inspiring. Out of the workshop she gathered committed key advisors to help oversee the study.

To me, it seems Singer is also attempting to 'live' the study. When we discuss the study, she often speaks about it very personally and her words become emotional. She talks of meditating daily and often attending meditation retreats. Quite a few members of the group meditate each day. Before I arrived, Singer and her research group undertook an eight week Mindfulness-Based Stress Reduction (MBSR) program together. The course was developed Jon Kabat-Zinn, at the University of Massachusetts Medical Centre. He sees it as '*a way of learning to pay wise attention to whatever is happening in your life that allows you a greater sense of connection to your life inwardly and outwardly*'. The MBSR program started in 1979 and is now offered in over 200 medical centers, hospitals, and clinics around the world. The training teaches methods of stress-reduction and formal practices in mindfulness meditation, encouraging the development of greater compassion. The group reported that undertaking a course like this with work colleagues was enlightening, vulnerable and strange. However, it did lead to a lot of the key issues that the subjects will encounter when undertaking the longitudinal study: Attendance motivation, ethics, the importance of great and inspiring teachers, the importance of keeping the study secular, and deeper issues of trust and sharing.

CREATING COMPASSION INTERVENTIONS

My role here is viewed in many ways. Some researchers see art as a way of making the science more accessible, working well for public engagement. Others see it as the illustrations of concepts, communicating new ways of seeing, moving the science forward. I see my main role here is to influence the 'design' of the protocols. Artists often investigate ideas in different ways than scientists, allowing fresh perspectives. My knowledge in biosensors and creating 'emotive' video content, as well as my work with mobile technology and the web has influenced the structure and delivery of the protocols. I have been working on a range of video databases that may elicit feelings of calmness and altruism and anxiousness. Throughout the residency I have been holding 'compassion' interventions with in the lab and the other departments of the Max Planck Institute. One intervention created 'moments' of compassion, asking the researchers to define compassion, discuss personal memories where compassion was the primary feeling. Another explores how compassion renders itself on the face, asking the researchers to look at the video camera while mediating on compassion.. Another intervention explores a heightened awareness of time, inspired by Marina Abramovich 'The Artist is Present', and psychological studies, I asked participants to sit opposite me, as we sit and non verbally communicate for two minutes.

While at the Max Planck Institute the aim is to shift this research into *The Nowness Project*. This series aims to disrupt 'communication' technologies that have become embedded into our everyday social interaction, revolutionizing the way we share information and experiences to those close to us. In particular, I have been repurposing live chat, video conferencing such as skype, and social networking tools. I was interested in the idea "We are more connected than ever, yet people report feeling lonelier and more isolated than ever" (Cacioppo). By understanding more about compassion, I am hoping to embed compassion eliciting techniques into the coding /visualization/performance design/ interaction strategies of the work creating 'compassion interventions'. We are negotiating if and how we can implement these into the studies.

The first prototype we have been working on is *Present Perfect Continuous*. Audiences will download a chat programs/widgets to their own computer systems/phones. The objective is disruption: Audiences will have to rethink habitual communication response as the chat program will only allow them to talk in present tense.

The second prototype in production is called *Unravel*. It explores, via chat program interventions how language shapes our emotional feelings and how we make sense of the world around us. Objective is intimacy: The work will look to neuroscientific paradigms to probe the emotional content in text (rapid linguistic processing) aiming to recognize when emotions are expressed in text and then generate text with specified, more overt, expression of emotion eliciting questions.

The third prototype is called *Percolate*. It uses eye display technology developed by Nokia Research Center in Finland. As a phone call begins, a captured image of the conversants' eyes is transmitted to each conversant via the eye display technology. The conversants look probingly into each others eyes as they converse. The objective is to create new, more intimate communications by breaking down the usual social ritual of body space and cultural difference in gaze frequency and duration. At the Nokia Research Center, we conducted an explorative user study in a laboratory context with five pairs of users to understand their experiences with this system. The results show that this kind of mediated communication can cause a variety of experiences, such as "interesting", "surprising", "tranquil" or

“pleasantly strange”. Overall the user study suggested the full-screen display appears to create a more focused communication, and thus can help make the discussion more intimate and focused on the moment. We envision that a system like this could become a tool for deeper listening.

A fourth prototype is called *Take a Look Through My Eyes*. Research suggests that imagining yourself in ‘someone else’s shoes’ helps increase your empathy for their plight. This prototype reworks skype and eye display technology to transpose each other’s vision. First person viewpoint of video is taken through video attached on eye display. This is streamed to each of the conversants. The video facing the conversant’s eye is also captured. This is masked, for example, we can experience when each other blinked, stared, changed eye gaze. *Take a Look Through My Eyes* allows us to escape the confines of our own worldview, and allows them to see things from each other’s perspective – the beginning of empathy.

A fifth prototype *Ponder*, is an intervention that allows one to ponder on oneself. Most communication devices allow us to communicate with others. This communication device allows one to communicate with oneself – an intrapersonal communication. Glasses are repurposed with mirrors, so the wearer can only contemplate at him or herself.

A sixth prototype *Breath* is an application that sends out a sonic breath file to computers and phones at key times, as a small intervention to remind people of the present.

The Max Planck residency has provided a platform and a reflective space to conceptualize and produce projects, share ideas and knowledge while learning more about the themes that are essential to my work. The institute and Singer have been generous in supplying a private office, access to the building, researchers, all talks, and organizing access to an apartment in Leipzig. Although the actual study has been put back to 2012 (due to the logistics of housing new scanners, construction of new buildings, refining protocols), both Singer and myself are now investigating how I can spend more time in Leipzig to be involved with the actual study in 2012.

References and Notes:

Critchley's research in interoceptive awareness (consciousness of internal bodily state) was integral to my work. At the time, I needed to know more about the body's signatures of emotions: how to probe, entrain and monitor emotions to create emotionally responsive video installations, generating an awareness of the internal sensitivities of the body that we usually ignore. Together, we created Feel_Series (2005/06/07), a series of installations that responded to heart rate, sweat and movement. We also created a range of visual databases for use with in Critchley's scientific experiments to probe different emotional states.

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