EXPERIENCING PERVASIVE COMPUTER MEDIATED ART EXHIBITIONS

• VUOKKO HÄRMÄ •

Cultural institutions such as museums and galleries are going through a transformation driven by an increasingly competitive funding environment and a sense that they need to reconnect with their contemporary visitors. Audience-led design has been seen as one of the main ways to attract visitors to museums for some time (McLean 1993). Active participation during visits to cultural institutions has been reported to generate positive feedback from visitors (Bagnall 2007), and so contemporary museums and galleries have become increasingly concerned with promoting public engagement through offering interactive installations (Hein 2000). Museum staff, exhibition designers and curators are under pressure to create attractive exhibitions that encourage participation and evoke emotional and behavioral responses. Thus the manufacturing of experiences has become a key issue in the design process, with digital technologies playing an increasing role in rendering artworks accessible. Drawing on research carried out in the UK, this paper considers the relationship between technologically mediated artworks and social interaction in museums and galleries, and suggests some further questions about possible cross-cultural variation in this relationship, specifically with respect to Finnish conventions of social interaction.

The data for this research was collected in collaboration with Susie Scott and Tamsin Hinton-Smith, sociologists from the University of Sussex, as part of the WINES3-project called 'Supporting Shy Users in Pervasive Computing'. I draw on two case studies of interactive art exhibitions. The first was Tina Gonsalves' 'Chameleon', a multimedia artwork which utilizes facial recognition technology to provide emotional feedback to interactants, that is, visitors. The work itself is explicitly concerned with exploring emotional expressions and responses in non-verbal interaction. The second case study was part of an exhibition at the Victoria and Albert Museum in London called 'DeCode', which included digital artworks by different artists that incorporate varying types of interactions from visitors: their body movements are reflected on a screen with multiple colours; voice recognition creates illustrated shapes and figures on another screen. We collected the data by ethnographic methods such as observation, qualitative field notes and semi-structured interviews. The research group will be publishing more on findings from the case studies, as well as on the methodologies used to explore social emotions.

The domain of interactive art is a relatively recently developed realm, and installations employing pervasive technologies have become popular only in the past decade. They are not just technologically-mediated artworks; they draw on the viewers' everyday life competence with using mobile and wireless computational devices. The perception of the art will vary to some extent depending on the visitor's familiarity with such technology. Artists as well as designers themselves are keen to use advanced computerized technologies such as face and voice-recognition technology, or movement trackers or sensors that track a visitor's body temperature, heart rate or eye movement. The core novelty of pervasive technologies is that they collect information from people through sensory devices which

have been fitted into the environment. Compared to text-based systems or hand-held devices, pervasive computing environments are offering more complex, fragmented and often passively captured forms of self-presentation and interaction. The visitors may not even be aware of the many ways they themselves are 'present' in an environment, or what is recorded about them. If they are aware they may become uncomfortable about how much and what kind of information is available and to whom. The feedback and cues in such a context are distinct from the face-to-face situations of everyday life or even from the modes of communication familiar from 'traditional' text-based computing. Museums and galleries as contemporary heritage sites are therefore actually offering both provocative and insightful examples of 'hybrid environments' (Bannon et al. 2005). Here innovative digital technologies are often being used within the frame of the physical space, the museum or gallery, a space that is still seen as traditional and somewhat hierarchical with its culturally and socially determined rules and norms, but they are inviting visitors to experience exhibitions critically, using their own subjective experiences.

Museums and galleries have conventionally been seen as locations of 'high' culture whose contents and spatial arrangements signify sophistication and so are likely to be exclusive. In their classic study of European museums Bourdieu and Darbel (1969) noted that certain visitor groups may feel that they lack the cultural capital needed to perceive and experience art in 'correct ways'. The 'correct' perception of artworks is thus a matter of cultural competence, acquired through socialization and education. The concepts of visitor-centered design (Falk and Dierking 1992), participatory museums (Simon 2010) and inclusive museums are examples of cultural institutions' more recent aims to increase accessibility to sectors of the public who might otherwise be excluded. These highly visitor-focused approaches are increasingly resulting in visitors being required to adopt the interchangeable roles of someone who creates experiences and of someone who experiences them. The visit to today's interactive exhibition is created for the *user* who utilizes the technology but also for the *visitor* whose interest the museum or gallery wishes to accommodate.

Importantly, the objects on display in an interactive museum are not complete without the agency of the museum visitor. In the case studies I draw on here, the museum visitor's engagement with the artwork is mediated with pervasive technology and it is this which makes the artwork 'alive'. The artwork itself is seen as open to many and infinite, subjective interpretations which offer potential experiences for its viewer. However the visitor's presentation of self is also shaped and he/she is transformed from passive stroller gazing at static objects, into actively engaged critic.

However, becoming actively engaged can leave the individual feeling shy or hindered from taking part. The data reveal that the public's common response to pervasive technology in the exhibition area remained aloof and reserved. We used visitor tracking maps, together with video recordings and observational fieldnotes, to find patterns of visitors' movements in the exhibition area. This revealed that a common response to the interactive exhibit was to stand aside and watch others perform. Only then would most visitors 'try it out', and many clearly avoided any interaction with the artworks before seeing someone else do it or getting guidance from a member of staff. Several interview respondents reported feelings of embarrassment, fear, shyness and anxiety.

These kinds of emotions can be labeled as social emotions, also 'self-conscious emotions' (Tangley and Fischer [eds] 1995) that occur when people reflect upon their own behavior or status in social interaction. The trigger for the embarrassment, according to Harré (1990), is the fear of breaking the social rule or norm which causes confusion and misunderstandings in social situations. This notion leads us to consider Goffman's (1959) work on the presentation of self in everyday life, where he sees interactions as performances aimed at different audiences. Susie Scott in our research team, following Goffman's approach, has analyzed fears of appearing to others as an incompetent visitor as a reflection that one projects onto the *competent other;* the actual or anticipated audience (Scott 2007). This leads us right back to Bourdieu's notion of correct and incorrect ways of perceiving arts, where the people with cultural and social capital appear as the competent museum visitors. This is because interactive artwork objectifies visitors, forcing them to become part of the exhibit, a spectacle to be looked at and drawn into the possession of the artist. Now in a new role as a user *and* a visitor, the person attempting to engage with such exhibitions is faced with new performative and dramaturgical dilemmas. An individual's success or otherwise in engaging with the piece can be observed by passing visitors and staff, leaving them feeling subjected to evaluation and scrutiny. This may exacerbate concerns about misunderstanding the artworks and provoke worries about cultural competence. Thus, the liberating force of ubiquitous technology and the assumed inclusivity of visitor-centered exhibition design are much more complicated than at first appears.

Although this research was conducted in the UK a brief guess at its relevance to Finnish society is not difficult to make. Finland appears to be a nation of technology enthusiasts. It has been said, albeit jokingly, that Finnish people are particularly keen on technological communication because it allows them to avoid face-to-face interaction. Besides, shyness and reluctance to participate visibly in public situations are often commented-upon characteristics of the Finns. Whether this is the case or not, in Finland drawing attention to oneself is certainly not a cultural value; Finnish codes of interaction suggest rather the opposite. Would pervasive technologies in cultural institutions evoke greater public engagement among Finns due to their interest in new technologies? Or would Finnish audiences turn out to be reluctant participants because other aspects of their culture get in the way?

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VUOKKO HÄRMÄ, Ph.D Cand.
DEPARTMENT OF SOCIOLOGY
UNIVERSITY OF SUSSEX
vh37@sussex.ac.uk