Using Participatory Performance to observe Social Encounters in Public Space

Robyn Taylor  
Culture Lab  
School of Computing Science  
Newcastle University, UK  
robyntaylormusic@gmail.com

Guy Schofield  
Culture Lab  
School of Computing Science  
Newcastle University, UK  
g.p.schofield@ncl.ac.uk

John Shearer  
Culture Lab  
School of Computing Science  
Newcastle University, UK  
john.shearer@ncl.ac.uk

Peter Wright  
Culture Lab  
School of Computing Science  
Newcastle University, UK  
p.c.wright@ncl.ac.uk

Pierre Boulanger  
Advanced Man-Machine Interface Laboratory  
University of Alberta, Canada  
pierreb@ualberta.ca

Patrick Olivier  
Culture Lab  
School of Computing Science  
Newcastle University, UK  
p.l.olivier@ncl.ac.uk

Abstract
We describe how we have used the participatory performance medium to explore social interaction in public spaces by describing the design and enactment of two performance projects, humanaquarium and Nightingallery. We discuss how the performances were used to explore social behaviors in authentic public contexts, and suggest several avenues for future investigation of social phenomena observed in participatory performance scenarios.

Keywords
Digital arts, participatory performance, experience-centered design, practice-based research, interdisciplinary design, research in-the-wild

ACM Classification Keywords
H.5.2 User Interfaces (D.2.2, H.1.2, I.3.6)

Introduction
This article describes an ongoing process of practice-based research in which the creation and enactment of participatory performance pieces is used to investigate social interaction in public spaces. Our research team composes participatory performance pieces in which team members Taylor, Schofield and Shearer take active roles as performers, engaging in creative
improvisation with members of the public. This method of practice allows us to interrogate shared social scenarios by taking part in the collaborative performance firsthand, enabling us to examine the experience from within [10].

The participatory performance medium differs from traditional performance in that in addition to the conventional roles of performer and audience/spectator, the role of participant is added to the performance frame [1] [9]. Much research in current CHI literature explores how explicitly inviting spontaneous contribution from untrained individuals who are new to the encounter helps shape a collaborative creative experience. In particular, research has focused upon the practice of transitioning from spectator to active, `witting' participant [7] and how such transitions can be encouraged in informal, `guerrilla' style scenarios [8] [9], how encounters with interactive performance can be considered as trajectories through shared social experience [2], and how performance experiences can be mindfully crafted so as to most readily satisfy the needs and expectations of those who take part in the shared experience [6].

Our research practice focuses upon exploring how participants encounter and experience interactive performances which are characterized by their ambiguous, ludic [3] qualities – our performances feature interactions with technologies that are deliberately ambiguous and open ended, with the intention that participants must experiment and explore the interaction mechanisms so as to discover their functionalities.

This article describes two performance pieces, humanaquarium and Nightingallery, that we used to investigate social interaction in public spaces. We describe the design considerations that factored into the conceptualization, creation, and enactment of the works, and suggest how the use of the participatory performance medium could facilitate future investigation of social phenomena identified during the course of our practice-based research.

Staging Performances to Explore Social Encounters with Technology
Our research team created several performance pieces designed to explore how passersby engage with playful, creative technologies encountered in public spaces. Consistently present in our practice was a thread of investigation surrounding the question of how participants would engage with novel, unfamiliar technologies when encountered in authentic social spaces, remaining mindful of the social considerations that necessarily shaped and framed the encounter. Our manner of experience-centered design and evaluation practice conceptualized the participatory performance in terms of McCarthy and Wright’s threads of experience [5]. We considered participants’ encounters with the performances in terms of their sensual, emotional, spatio-temporal, and compositional aspects. Congruent with other experience-centered explorations of aesthetic interaction [11], we attempted to holistically address an individual’s engagement with the performance artefact, accounting for the socio-cultural factors influencing how the participatory performance experience was individually appropriated and personally understood.
Between 2009 and 2012 we developed several performances that were enacted in a variety of contexts. These included unstructured settings like museums halls and festival venues, as well as more formal exhibitions in concert halls or galleries. As we designed our pieces to be flexible and reconfigurable, we were able to adapt them as needed so as to accommodate a variety of different social scenarios within which they could be performed. This allowed us to stage the works under a wide variety of situational constraints, enabling us to study how participants engaged with them under a wide range of authentic performance contexts.

As we wanted to use the performances as a platform for investigation, the technological aspects of each performance were designed to have affordances intended to elicit and provoke the particular social behaviors we wished to interrogate as part of our research process. Additionally, although each performance was conceptualized to explore particular research questions from the outset, we were careful to design the works so that they remained sufficiently open, flexible, and participant-driven enough as to allow us to learn from the unpredictable experiences that would inevitably occur through the course of situated research-in-the-wild. By structuring the performances in an open-ended fashion, we were able to observe and encourage social interactions as they were encountered, and were able to refine and evolve future enactments of our works so as to follow up on these potential avenues of research as they presented themselves.

**humanaquarium (2009)**

The *humanaquarium* project was designed to investigate how participants could take active roles in shaping the development of an improvisational audio-visual musical performance piece [10]. Each performance saw Taylor and Schofield (both of whom are trained musicians and professional performers) seated on the ground inside a transparently fronted 1.5m cube. Inside the cube, Taylor sang soprano, and Schofield played mandolin as well as various electronic interfaces. Their improvisations were mapped to visualizations that were projected behind them on the rear surface of the cube, allowing the cube structure to function as a small staging space which framed the performance. Participants were invited to co-create the musical performance by manipulating Taylor and Schofield’s improvisation via the transparent screen. The screen was implemented using FTIR technology [4], enabling participants’ touches on the surface to be translated into audio-visual effects that were applied to the musical performance. During performances, Shearer was able to engage and interact with participants, taking part in the installation alongside them, outside of the box enclosure.

The design of the system was primarily intended to explore how participants experienced the co-creational aspects of the performance encounter. During the development process, attention was paid to understanding how our design choices affected participants’ experience in terms of how to minimize stage fright, increase potential for collaboration, and experiment with varying degrees of legibility in order to create a stimulating, playful experience [10].
The design for the Nightingallery project grew out of experiences we had with humanaquarium. We were interested in further exploring how participants could appropriate a participatory performance interface in order to contribute artistically to the creative experience, enabling what Sheridan terms a ‘witting’ transition [7] from participant to performer. In addition, a second avenue of inquiry arose resulting from an interesting collection of interpersonal interactions that we noticed taking place between participants as they encountered and played with humanaquarium’s interaction paradigm. In order to further investigate these phenomena of performance appropriation and experience sharing, we conceptualized a design for the Nightingallery project. Nightingallery featured an animatronic bird that users could communicate with via a vocal interface. The bird would move and sing in response to the verbalizations of the participant. We envisioned encounters with participants to take the form of improvisational street theatre in which Taylor, Schofield and Shearer engaged with the scenario by playing the roles of minders and assistants to the bird character, encouraging playful suspension of disbelief by modeling the treatment of the bird as a real, live entity through our own actions, behaviours and language.

Our first configuration was intended to examine how participants would share private experiences with those around them. In this system configuration, participants interacted with the bird via a handheld telephone handset. Our intention was to create an asymmetric interface in which the bird’s audible content was known only to the person in possession of the handset who could then choose how to communicate his/her unique experience with his/her companions. This configuration enabled us to elicit a variety of participant interactions, allowing us to observe how they shared information amongst themselves as they experienced the installation. In order to better facilitate participant-led ‘performances’ with the work, an alternative configuration of the Nightingallery interface replaced the telephone handset with a conventional microphone, an interface with a conventional affordance more suitable for enabling participants to use the installation to perform for their peers.

Further Opportunities for HCI Investigation
Through our experiences with the humanaquarium and Nightingallery projects, we have had opportunity to observe how the participatory performance medium facilitates and encourages unusual and interesting social interactions in authentic public spaces. By designing performance interfaces that were sufficiently enticing, we had success in soliciting spontaneous participation in creative, improvisational play. The encounters with the performance interfaces happened in explicitly public settings, indicating that the appeal of taking part was tempting enough to overcome social obstacles such as shyness, stage fright, and social risk. As such, we feel that the participatory performance medium provides an interesting platform for observing the unique social interactions that arise from the particular demands of a scenario that requires participants to engage in improvisational, creative behaviors in full view of the onlooking public. To continue our trajectory of research, we suggest several other social phenomena that we plan to investigate through the design of future participatory performance pieces.
Moments of intimacy between participants in the Nightingallery project were evidenced by complex musical interactions that occasionally took place when participants were attuned to one another enough to ‘jam’ via the bird interface.

During the course of performing the works we were fascinated by small moments of spontaneous intimacy that naturally arose. These moments were experienced either firsthand (shared between us – the performers – and participants) or observed (occurring between participants amongst themselves.) Due to the musical nature of both performances, intimacy was often manifested through moments of intuitive musical synchronicity. We found these spontaneous interpersonal connections inspiring, and would like to further pursue how to increase the frequency of such occurrences.

Our presence within the humanaquarium enclosure and our ability to actively connect with participants via eye contact and gesture could be seen as both reducing or alternatively increasing participants’ vulnerability – participants who wanted to take part had their contributions actively reinforced through our visible approval, while those who wished to hang back and observe may have felt guilty ignoring our efforts to solicit their interaction.

It was intriguing to observe how groups of participants negotiated territory and defined their personal space and control region upon the front screen of the humanaquarium interface.

References