Experience Workshops

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ABSTRACT
This position statement describes a method called "Experience Workshops", developed by the authors for working with expert audiences in the design of an interactive artwork. Based around the participants' experience of a high-fidelity prototype, the workshop aims to generate experiential language, draw together the artist's goals and the participants' experiential actualities and provide a way to reflect together on the gaps and connections between them. We describe the research principles and needs which led to the development of the method and the models it draws from. We show how the method has been used, and reflect upon its effectiveness.

1. RESEARCH BACKGROUND
There is a growing interest in applying insights and techniques from interaction design to the field of Interactive Art. For example Hook et al [4] have used a co-discovery method in a laboratory situation to gain verbal descriptions of the audience experience of an interactive artwork. Vom Lehn et al [15] use an ethnomethodological approach to understanding how audiences encounter interactive exhibits in real-world settings. Edmonds et al [2] have conducted studies of digital art practice from the perspective of creativity support, developing new HCI methods for the purpose. In our research we have been finding ways to integrate tools and techniques from human-centred design into the process of creating interactive art [7, 13]. The approach is characterized by an emphasis on the audience's *lived experience*.

All art occurs through the active participation of the audience, and art critics and theorists in the pragmatist and phenomenological traditions have argued that a consideration of experience should be at the heart of investigations into the meaning and operation of art [1, 10]. Interactive art is a particularly interesting case as it is created with the explicit recognition that the audience's participation will "activate" the work. The degree to which the interaction is the medium of the work varies, from the simplest example where interaction is akin to flicking an on/off switch, to works where audiences generate the content and control the parameters of the work. In our research we are concerned with artworks in which the interaction is rich, complex and fundamental to existence of the art-work.

2. CASE STUDY: CARDIOMORPHOLOGIES
The Experience Workshop method was created as part of a human-centred design process developed for the artwork Cardiomorphologies, by George Khut.

Cardiomorphologies uses bio-sensing and multimedia technologies to create real-time audio visual representations of the audience's breath and heart rate. Individual participants sit in a chair before a large screen, in a dimly lit and enclosed space. The participant is fitted with a breath sensor (usually a stretch-sensor fastened around the body below the rib cage) and heart rate sensors (either attached to the arms or held in the hand). The pattern and frequency of breath and heart rate is projected onto the screen as animated visuals. A surround sound system plays back a complex soundscape with amplified heart sounds that beat in time with the participants own heart beat. In this work Khut aims to give audiences an alternative insight into the way our thoughts and physical sensations are intimately linked. Specifically, he aims to enable participants to influence their heart rates through experimenting with their breathing and with their thoughts [11].

2.1 Experiential goals
As part of the overall research process the researchers worked with the artist to establish a list of experiential goals for the art-work. As you will see, these became a starting point and key feature of the Experience Workshop:

- Close fitting (reflecting as accurately as possible changes in physiology),
- Sensual and kinaesthetic (generating sensations of changing weight, motion and patterning within the body),
- Quiet, concentrated, inwardly attentive focus,
- Explorative,
- Simple/minimal aesthetic,
- Enabling (developing an ability to physically sense changes in heart rate pattern, and how these patterns interact with different mental/emotional states),
- Instructive (participants have a sense that they have learned something),
- Meaningful (provokes a consideration of mind-body processes).

2.2. Prototyping the artwork
We used an iterative process to create Cardiomorphologies, in which increasingly sophisticated prototypes were shown to audiences, and their feedback was used to develop the work to the next stage [7, 12]. Although the idea of "prototyping" is borrowed from interaction design, most art-forms have some kind of mechanism within their traditions of practice for sharing work in progress and gathering formative feedback, such as rough-cuts and previews. For an artist opening up the creative process in this way takes a lot of courage no matter how it is done. The danger is that art-work prototypes are (mis)judged by the same standards as finished works. This often leads to negative and unproductive

feedback. It is incredibly important therefore to structure and manage the audience's experience of and reflection on the prototype carefully. The prototype is a key point on the journey from a concept to an actual thing. It offers a tangible, shared experience which can be the basis of discussion between everyone involved in the project. The audience needs support in order to reflect on the prototype, not as a half finished artefact, but as a way of stimulating and grounding imagination. The Experience Workshop was developed as a way to structure this discussion with the audience, and particularly with the knowledgeable or "expert" section of the audience.

3. WORKING WITH EXPERTS

During our data-gathering we noticed that a large proportion of the audience for Cardiomorphologies had a professional interest in aspects of the work, particularly art and interaction design. We were interested in the insights that might come from the experience of this specialised sub-group of the audience. We wanted to develop a method that would allow us to work with this group as peers.

We foresaw a potential conflict between our emphasis on lived experience and the professional audiences' training and habits, which teach them to quickly turn *experience* into material for informed, evaluative *opinion*. This is a vital part of their professional work, but in this research we were interested in intervening in this process to allow new possibilities to emerge from lived experience. We had used human-centred design techniques, such as personas and scenarios, to help us to reflect on lived experience (both our own and that of the audience) in our own professional practice, so we aimed to design a collaborative tool that could facilitate a similar process for professional audiences.

Since there were many different kinds of professional knowledge relevant to the piece we decided to develop a group based activity that would provide different perspectives on the work at once. This was also intended to help "defamiliarize" the process of creating professional judgements by juxtaposing different knowledge bases. Our aim was to develop a method that would allow us to collaborate with this group as knowledgeable actors. We were looking for a process that would support the participatory creation of meaningful outcomes rather than the generation of raw data.

4. MODELS OF GROUP WORK

We drew on existing tools from museum studies and participatory design including Focus Groups, Future Workshops and the "Excellent Judges" framework for museum professionals.

4.1 Focus groups

Focus groups are a flexible technique for qualitative data gathering which elicit in-depth views from a closely targeted specific group. Kreuger defines them as a "carefully planned discussion designed to obtain perceptions in a defined area of interest in a permissive, non-threatening environment"[8]. They have a history in social research and marketing, and are often used in exhibition evaluation and development [5]. According to some researchers focus groups were originally used in the evaluation of audience response to radio programs in 1941 (see [9] for a thorough review of the literature). The value of the technique is that the momentum of group dialogue will uncover topics, and probe more deeply than individual interviews, whilst allowing researchers to identify points of commonality and difference between participants. The range of uses of focus groups relevant to our needs in the project include learning how respondents talk about phenomena, identifying problems with a service or product and stimulating new ideas and creative concepts.

Relevant good practice recommendations from the focus group literature [9] include keeping a group small enough so that all members can easily contribute, particularly in expert groups where participants are more knowledgeable and will have more to say. There are lots of different views on how to plan questions, a common one being the funnel approach (general to specific). Kreuger is particularly useful in arguing that you should rarely use "why" questions which lead to over simplified rationalisations led by the situation. He suggests emphasising open-ended descriptive questions which allow people to talk about the actualities of their experiences [8]. Lewis [9] also points out that focus groups benefit from readily available stimulus material such as floor plans, mock-ups etc so that participants have something concrete to refer to.

4.2 Future workshops

Focus groups are very much based on question asking, and as a result tend to cast participants as sources of information rather than reflective actors. In Participatory Design a tool called the Future Workshop has been co-opted from the area of community decision-making to facilitate more active group work [6]. Future Workshops focus on the generation of possibilities for a particular work situation by skilled participants. The workshop has three phases; critique, fantasy and implementation. The critique aims to generate descriptions and insight into the participants' problems in their current experience. It is based on structured brainstorming in which participants are each given short periods of time to speak freely without the need to defend or explain their words. Their narratives are converted into short statements written on wall charts.

Kensing describes a particular technique of noticing and developing metaphors in participant's language which helps to gain insights into the way certain phenomena are experienced by the participants, and to begin to group and organise statements.

The fantasy phase is similarly structured, but based on generating imaginative possibilities. In the implementation phase participants work in groups to convert these possibilities into outlines of utopian situations and evaluate their potential. The future workshop method provides ways to generate shared material, and put the participants in the driving seat.

4.3 Excellent Judges

The Excellent Judges concept is part of a professional development strategy for museum professionals called the Framework for Judging Excellence [14]. This encourages professionals engaged in visitor-centred exhibition design to reflect on and share their work with colleagues. The framework provides a structured approach to evaluating an exhibition individually in situ and then discussing it in peer-groups known as "Excellent Judges". It uses four criteria for evaluation; comfortable, engaging, reinforcing, meaningful. The framework encourages professionals to keep initial notes on their experience in museums called "call outs", which focus on "feeling-verbs" that reflect thoughts, feelings and responses, and to use these as evidence in assessing the exhibition against the 4 criteria. The

group discussion is based on exploration of areas of disagreement and consensus within the group. The drawback of the method from our perspective is firstly that it asks participants to record thoughts during the experience, which may alter it, and secondly that it encourages a rapid move to professional judgement against set criteria that do not grow out of the project itself.

5. THE EXPERIENCE WORKSHOP

All of the methods described above provide useful starting points, but none could fully achieve what we required. We developed our own tool to specifically respond to our research needs; to work with expert audiences on a professional level whilst staying closely accountable to their lived experience of the prototype. Using the artists' experiential goals as a starting point our aims for the workshop were:

- To generate experiential language to describe the prototype
- To use experiential language to draw together the artists' aims and the audience's actualities
- To provide a way for the audience, artist and researchers to reflect together on the gaps and connections between the aims and the experiences.

5.1 Setting the scene

We invited a group of six professionals working with art, interaction design and sound to take part. They were told that they would be taking part in a discussion and that no preparation was required. They each experienced the Cardiomorphologies prototype individually over the course of the day. At the end of the day they joined together in an informal setting, with the artist, a documenter and a moderator. The moderator set the scene by explaining the wider research project, and asking each person to introduce themselves, and their area of expertise briefly. The moderator described the workshop process as a collaborative way of understanding the prototype. She made it clear that we were primarily interested in their experience, that all material was useful (positive or negative) and that there were no right or wrong answers.

5.2 Generating experiential language

Joan Greebaum and Morten Kyng write that "...since neither designer nor user groups can fully understand each others' practices or meanings, we need to build a bridge that brings these experiences closer together."[3]. In the first part of the workshop we aimed to build a "language bridge" to join together the experiences of the audience, the artist and the researchers. To generate shared descriptive language we asked the participants to take turns describing their experience of the prototype as it unfolded over the course of their interaction. They were asked to stick as closely as possible to what they did or felt at the time. The rest of the group listened and noted down on two different coloured post-its key phrases that concurred with or contradicted their own experience of the work. They were free to mark the phrases as either 'positive' or negative" if they chose.

The participants responded well to this phase. They fluently described their experience in descriptive rather than evaluative terms, often saying things such as "at that point I noticed" which indicated a degree of "reliving" the experience, and attempting to report it in sequence. It is useful to have a good example of experiential reporting at the start, as this can help set the tone for the rest of the reports. A good way to ensure this would be to ask an experienced participant (i.e. one who has taken part in such workshops before) to begin. The process may have been improved by allowing participants to watch their experience on video as they described it, as with video-cued recall. However the duration of each experience (20minutes) made it impossible to report the experience in real-time.

The listeners also responded well, writing between 7 and 14 separate notes for each report. The level of concordance between reports was striking. For certain aspects of the experience there were up to 5 duplicate notes by different authors. Some comments later appeared hastily written or cryptic, and were difficult to interpret even for their author. One way to mitigate this would be to allow participants a minute to review and develop notes between reports while the content is fresh.

5.3 Drawing together goals and experience

In the second phase the artist presented his eight experiential goals to the participants. Each was written at the top of a large piece of paper, and these were then spread around the room. The participants were asked to assign words and phrases generated in the first phase to different experiential goals (see fig. 1 for an example of one aim). The aim was to find out whether any of the experiential goals coincided with the participants' own understanding of their experience and were understood as meaningful categories. If so we were interested in what language they used to describe those experiences and what aspects of them were positive or negative. There was also a spare piece of paper for any aspects of the experience that were not considered to tie into any of the aims.

This part of the process was fun and physical, providing a welcome kinaesthetic intervention in a process of listening and verbalising. It appeared deceptively straightforward, but included some quite complex process of learning and negotiation. Understanding exactly what the artist meant by certain goals was achieved by a process of considering and discussing the attribution of experiential aspects. A fairly high degree of flexibility in "the rules" of facilitation supported this process. For example participants wanted to duplicate certain aspects so that they could attribute them to more than one aim, and be allowed to alter their attributions when they saw what others had done. Arranging the goals spatially seemed to help this process, supporting conceptual distinctions between and goals. It may be important to pay close attention to this spatial arrangement, ensuring that you don't create either a "no go zone" where 3 or 4 unpopular goals are grouped together, or creating confusion or false distinctions by placing apparently similar goals either next to one another or too far apart.

5.4 Reflecting on goals and experiences

All the participants, including the artist and the facilitator used the associated sets of goals and experiential language to reflect on their experiences of the prototype. Discussion focused on gaps and coincidences. The group particularly explored goals which had few or no experiential aspects attributed to them, areas of obvious and strong agreement about positive or negative aspects, and the "spare" experiential aspects which were un-attributed. The aim of this was two-fold. Firstly to identify aspects of the prototype that could be built upon, improved or

dropped in order to more closely achieve the goals, but also a re-evaluation of the goals themselves and their realistic potential.

For example the categories "Quiet, Concentrated and Inward" and "Close Fit" were extremely resonant for participants, the former attracting a large number of positive comments and the latter a mixed response. We judged that we had got the atmospheric approach to the work right, but that the visualisations and sound needed to reflect peoples physical feelings more closely and respond more exactly and rapidly to changes. Three of the experiential goals, "Enabling", "Instructive" and "Meaningful" were almost completely ignored by participants, who did not find them to match their experience. It was clear that these objectives were not being delivered by the experience as it stood (and were not perceived necessarily as desirable by the audience). We needed to reconsider our means of achieving them, and further, their existence as realistic goals.

One particularly interesting aspect was that the same responses would appear in numerous different categories, rather than all being attributed together. This suggests that the borders between elements of the experience are blurry; implying that any changes made need to consider how the different elements interrelate.

For an in-depth discussion of the insights gained from the workshop into the prototype, and the developments in the artwork that were made as a result see Muller et al (2006) [12].

5.5 The role of the moderator

As in focus groups, the role of the moderator is important for the success of the workshop. The moderator must build rapport among the participants, manage the level of contributions and articulate the ground rules so that all participants are clear about the process. The moderator must stick to principles of the workshop (e.g. steer participants reports back towards experience in the first stage if they begin to express evaluative opinion), but must also be flexible to the emerging themes and dynamics of the discussion. We found that it was important for the facilitator to focus on the principles of the process and try to bracket off her own opinions about the artwork, how it operates and what people will like or dislike. She should allow the emerging results to surprise her, without showing too much surprise (which participants may read as indicating a "wrong" answer). The facilitator must be alert to these surprises during the course of the workshop in order to take the opportunity to follow up the new discovery within the discussion.

5.6 Documentation and Analysis

Experience Workshops, like Future Workshops and other techniques in participatory design, begin the process of analysis in collaboration with the participants [6]. The participants themselves begin the categorization of their experiences, and reflect on patterns, links and causality. There is, of course, further analysis to done to tie the outcomes in to the overall trajectory of the project. After the workshop the researcher must consider both the analysis that has emerged, and the process by which it was achieved as material for reflection and further analysis. It is crucial then to have records of both the outcomes and the process. Audio recording, or ideally videoing the workshops is therefore essential, as is making close records of the physical evidence of the process and outcomes (such as the individual post-its, and their position on the paper).

6. CONCLUSION

The Experience Workshop proved to be a very rich and effective way of working collaboratively with expert audiences. It generated a vocabulary of experiential language which was used by the researchers throughout the project to evaluate the progress of the design and describe ideas. We had confidence in this vocabulary as it had been generated by consensus and was reflective of lived experience. The workshop provided a powerful means for reflecting on the artists' experiential goals, their operation within the prototype and their usefulness. From the perspective of the artist this not only influenced the design of the work but also had implications for his reflection on his practice more widely [7]. A key aspect of the technique is that, whilst the process is firmly grounded in the participants' lived experience, it develops in them a deep understanding of the goals of the artist. This means thatit is equally based on the needs of the maker and the user. It also means that the process of discussion and evaluation is very much based on the unique aims and requirements of the work, rather than fixed criteria for quality, or pre-conceived notions of success.

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