The Lens of Ludic Engagement: Evaluating Participation in Interactive Art Installations

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ABSTRACT
Designers and artists have integrated recent advances in interactive, tangible and ubiquitous computing technologies to create new forms of interactive environments in the domains of work, recreation, culture and leisure. Many designs of technology systems begin with the workplace in mind, and with function, ease of use, and efficiency high on the list of priorities. [1] These priorities do not fit well with works designed for an interactive art environment, where the aims are many, and where the focus on utility and functionality is to support a playful, ambiguous or even experimental experience for the participants. To evaluate such works requires an integration of art-criticism techniques with more recent Human Computer Interaction (HCI) methods, and an understanding of the different nature of engagement in these environments. This paper begins a process of mapping a set of priorities for amplifying engagement in interactive art installations. I first define the concept of ludic engagement and its usefulness as a lens for both design and evaluation in these settings. I then detail two fieldwork evaluations I conducted within two exhibitions of interactive artworks, and discuss their outcomes and the future directions of this research.

Categories and Subject Descriptors
J.5 [Computer Applications]: Arts and Humanities: Fine arts.

General Terms
Documentation, Performance, Design, Experimentation.

Keywords

1. INTRODUCTION: WORK AND PLAY
There is an increasing need for ways to discuss engagement in interactive art installations. In particular, what is it that makes some works mesmerizing for many, and others fascinating, but only for the very few? In art traditions it becomes the role of critics and art theorists to notice aspects of art works, provoke discussions and build a language for debate. These debates are beneficial for all involved in the arts industry and are slowly emerging around interactive artworks. Artists are also finding ways to augment these traditions, and contribute with their own understandings of this form of engagement.

The use of language is important, and terms such as developer and user are commonly found within the disciplines of HCI and Interaction Design (ID). Designers of products often aim to provide a specific functionality, style and mood for the user, whereas designers of games are typically aiming to create a specific type of experience for their users through directing the sequence of the game. In game-type interactive works, the term player is common. More traditionally with an art work the ‘user’ of the work is referred to as the audience. The artist often aims for a different type of experience again for their audience, perhaps simply a place to reflect on a concept. For interactive works, where the audience is required to participate or act in some way, there are various descriptors in use. I prefer the term participant, where in interacting the audience member triggers or affects what happens in the work; in participating altering their own experience of the work. In art installations the focus is often on providing an experience that is outside of an everyday experience, rather than a focus on function, utility or process. This is not to say that Interaction Design does not also aim to provide more considered experiences, or that all artists strive for these outcomes.

There can be differing parameters for success. In an interactive art work (and art works generally), it is not necessary for every participant to have engaged with the work, for the work to be seen as successful. If some participate and enjoy the experience then this is a good outcome. The works need not necessarily be made with the idea of eliciting one homogeneous experience, but rather a range of experiences. For it is not expected that an artwork will need to please everybody, or that the artist will have set out to achieve this. On a first reading this may appear as arrogant, however the reverse is often true. The artist would not automatically expect others to understand their self-expressions. Often with works that seek to elicit play, the responses may be ambiguous, or there will be an assortment of experiences for different people, recognizing that the end-experience is also an indication of the experiences an audience member brings to the work. In communicating their ideas, and by exhibiting the work, the artist researches the experiences it will in turn cause or produce as a response in others [2]—often building further work as a result of these explorations.
2. USEFUL LENSES FOR LOOKING

William Gaver, who is situated not only in the disciplines of Interaction Design/Computer-related Design, but also in the domain of UK Art Schools has coined the phrases ludic engagement and ludic design to discuss designs that privilege pleasure over function. Gaver begins his discussion by highlighting Huizinga’s idea of “Homo Ludens—humans defined as playful creatures” as an antidote to assumptions around technology and efficiency. Gaver notes we are “characterized ... by our playfulness: our curiosity, our love of diversion, our explorations, inventions and wonder”. [1] For Gaver, “[d]esigning for pleasure demands a different approach from designing for utility”. The latter “is done while standing back to assess difficulties”, whereas the former “is best done from within”. Ludic Design invites “subjective engagement, empathetic interpretation, and a pervasive sense of uncertainty as positive values for design—design for everyday pleasure.” [3]

People come to interactive works, and in particular to certain kinds of technologies, with their own sets of expectations. They anticipate things will work in certain ways, and initially may see the work as failing if this doesn’t occur. Over time, and by playing with the work, people may arrive at an understanding of the idiosyncratic nature of the work. Once they do this, they ‘give over’ to enjoying a different type of experience than they had expected. Whether a person is able to do this or not may depend on the person’s experience, and with their expectations around technology. People find their own levels with which types of works appeal or not. [2]

There comes a ‘giving in’ to an unexpected experience and this was reflected in my fieldwork evaluations, where for example one participant noted: “After I stopped trying to get a direct conversation flowing with the voices [of the work’s interactive bots] there wasn’t any difficulty.” As Gaver points out it is important to not answer to “immediate needs”. Ambiguous or unclear works often provoke interpretations that are unexpected and unplanned for, and it can be “difficult to predict what people might do with them”. [4]

As a result, it is important to consider different ways of thinking about successes and failures. Where there is a “focus on gathering a multitude of interpretations” and presenting these “in all their confused richness”, the designer surrenders their authority to the audience. [4] This brings the perspective of the designer closer to that of an artist, who, once the work is placed in the public arena, can no longer control the meaning of the work. Interpretation is placed in the hands of the active readers of the work—and the author as conduit is long-dead. [5]

I find it useful to work with these ideas—of ludic engagement and ludic design—functioning as a lens to look through, or a way of framing—how non-use, more ambiguous works may be viewed, discussed, and evaluated. The ludic lens then enhances the ways in which interactive art works can be perceived and understood in an inter/trans-disciplinary manner. Of course there is no one priority for all artists, or one way of working, or of thinking about work. However the joy of play—pleasure and enjoyment—often form some kind of relationship, either in the creation of a work, or in its public exhibition.

My fieldwork evaluations of interactive art installations, however, display a significant difference from Gaver’s testing of the interaction design works. Gaver et al’s method of fieldwork usually involves placing the design object in a home, and then observing—often over longer periods of time—the inhabitants’ interactions with the object. The works deliberately come without a set of instructions for use or explanation of their intended purpose. In this way the participants are able to make up their own stories or meanings for and around the works. By allowing others to explore technology in a way that is at odds with traditional, functional approaches to the design of objects, Gaver and his research team hope to offer “new perspectives on ways in which technology can fit into our everyday lives”. [3]

Unlike traditional workplace testing or Gaver’s domestic-based ‘live-with-the-object’ testing, interactive art works are often exhibited in public gallery or museum-style spaces, and also consequently situated in art-historical references. Further, the art world is replete with historical shifts and changes, in much the same way as ID/HCI. Both art-historical and technological shifts are referenced in interactive art installations, and therefore both need to be included as context in discussions around these works. Considering the space of the gallery also marks a shift in scale from the workplace or the home, and an increase in accessibility. Galleries are generally open to all—although there may be entry fees. Artists place their works in galleries to be seen, to communicate their ideas, and for the works to be experienced. The works may be ‘art for art’s sake’; there are no rules dictated assuming use or even enjoyment. However, there is no escaping the functional: and even art is framed and viewed through a functional lens, with its technical aspects ranked and discussed at technical conferences, and its participants needing practical in-roads into participating.

Diagram 1: The Lens of Ludic Engagement: a way to consider an artists rationale while making a work.

Caveat: The term artist has become a handy label used by many new media practioners of technology-based or non-utility works.
In the diagram above, I begin an exploration of the artist perspective and priorities (rather than as observed by another [4, 11]) in the process of creating an interactive art installation and where this intersects with the audience experience of the work. This is an important perspective to be included in HCI, Interaction Design and Evaluation-type discussions of interactive artworks. Artists iterate and evaluate using similar design-iteration cyclic processes. Further diagrams detailing similar procedures for ID products, that reveal these overlaps are also in process.

3. EVALUATING PARTICIPATION
Over the course of 2006, I conducted fieldwork evaluations of interactive art installations. I studied two exhibitions of interactive art works, and observed and recorded—by various methods—the degree to which people participated with the works. I set out to obtain some measure of their satisfaction in participating.

The first exhibition I observed was my own single, interactive art installation titled Talk2Me, part of ReActive exhibition held at The Block, Brisbane in February 2006—(I have an 18-yr installation exhibition history). The second exhibition was a series of interactive art installations at ACM Multimedia Interactive Arts Program, held in Santa Barbara in November 2006, as a part of ACM Multimedia 2006 conference. Both exhibitions included interactive technologies as major aspects of their composition.

In the interests of brevity for this short paper, I deliberately do not discuss the works themselves. For fuller discussions of these works, see Talk2Me [6] and ACM Multimedia Interactive Arts Program. [7] Rather, I detail several evaluation methods used to gain an understanding of what the participants in the study reported as having found enjoyable or engaging with the works and their satisfaction—or dissatisfaction—with the works and why. I discuss the feedback itself and relate the means of obtaining this information/data to some other methods currently in use in Interaction Design and HCI practice and for those working in the interstices between Art and ID/HCI. [2, 3, 4, 11]

4. METHODS AND EMERGING THEORY
For both these exhibitions, I employed a number of methods—including shadowing, interviewing and informal discussion, and questionnaires—which I then evaluated.

My initial approach to the interactive art installations was as a standard audience member—complicated as creator of the work Talk2Me—to familiarize myself with the works, as well as to gain an experience from the perspective of an audience-participant. I then shadowed participants by observing people while they were actively engaging with the works. [8] Shadowing involves observing people in their every-day routines to gain an understanding of the context in which they operate: what they actually do and how they do it; (with what with whom, when and for what purpose).

I also participated and gathered information by taking part in informal discussions with the participants in situ. For the first exhibition, I put a call out via email for volunteers and also directly approached participants to fill in formal written questionnaires. For the second exhibition, I had a shorter period of time and directly approached participants with the written questionnaires. Furthermore, I spoke directly with many of the artists to get a stronger sense of their intentions for their works, a move toward the prior knowledge advantage I have with my own work. For both exhibitions, interesting discussions with participants often evolved before, during or after filling in the questionnaires—all of which provided context for understanding which elements of the works provoked strong engagement in these non-use settings. I took a grounded theory approach, in which theory emerges from the data as it is collected and analyzed. I found this approach amenable to examining participation in interactive art installations because it responds well to an evolving framework. In grounded theory, the research process cannot be planned too rigorously or too far in advance, as it is not known at the outset what data will emerge. In the analysis process, categories, properties and dimensions are produced. Grounded theory allows the related concepts to come out of the data, and the theory then emerges from these relationships. [9, 10]

I was specifically looking for simple but rich data, rather than masses of disparate data from unknown participants. I gathered 30 formal questionnaires for the first, and 25 for the second exhibition. Particularly with the formal questionnaires, I ensured I had an understanding of the context, specialties, professional expertise or sensibilities from which the interviewees were operating. Either I had discussions with them while handing out or returning the questionnaires, or while interacting with the work, or—and in particular with the second exhibition—many had presented their work or actively questioned others in the conference sessions, so their predilections were made public.

For the first exhibition, I also uploaded motion-triggered images from the space, and logged the text-to-speech-converted conversations of the audience with the work. I found this data excessive and context-poor, in comparison to that from observations, conversations and the written questionnaires. With interactive art installations there are a broad range of issues to be evaluated, and a “multi-method strategy”[11] that for me included time-honored art world techniques—artist-style critique discussions, observation-over-time, fly-on-the-wall style observations, informal discussion, both in situ and off site—wine at openings with a selected invitation list and dinner after the show—being added to HCI methods. For example, I was more comfortable with a ‘fly-on-the-wall’ style observation, where I might be in conversation or reading a book, but also partially observing participants, rather than obviously watching (shadowing). This also acted to minimize the impact being observed has in affecting the behavior of the participants.

5. COMMUNITY OF PRACTICE
The participants for both exhibitions were largely people working within the broader fields of design, art, interaction design, multimedia, or technology. For Talk2Me, the audience included a broader general-public component—for example, the parents of students or visiting school groups—as well as a digital, design, interaction design or visual communication focus. For ACM Multimedia Interactive Arts Program, the participants largely comprised the presenters of the conference itself (both presenters of the papers and the artists presenting work), so there was a strong technology, multimedia or interactive arts community of practice. What I found was that the flavor of the feedback—and its usefulness for the purposes of this research—was primarily influenced by the pre-disposition and experience the audience brings to the work. With a more general public, not so familiar with interactive works or with technology, the interactions and the feedback often focus
around how to use the work: how it works, how other things like this work; what to do with things like this; and what they mean. In short—education. Understanding function is useful, certainly, but if utility is not the intent of the work, then the audience has only taken the first step into the work and not engaged in further consideration of it. For example, one participant’s response to Talk2Me was “Had I known it was a MOO (ashamed to say I have never been) I would have explored further and got more of an education/orientation on what they are.” (A MOO/MUVE is a multi-user virtual environment and database that runs Talk2Me). As well, these newer participants often act towards the work as if they may “fail an intelligence test” [2] and adding to the problem, museums—often new to housing interactive works—strive to limit the interaction to largely shallow functionality with an “aim to educating the public”, [11] in turn maintaining entry-level experiences.

However, I discovered that professionals working in broader related fields readily understood, or were prepared to investigate more sophisticated, playful and experimental interfaces. They also found conceptually simpler works less interesting. Interviews with such an audience revealed positive responses to conceptual difficulty (e.g., “Difficulty not necessarily bad” and “Difficulty wasn’t the reason to not stay”), as well as more critical expectations from the works (e.g., “not being able to interact with the robot I wondered why it was there”). When participants were asked which works they did not enjoy or spend time with, their responses were often similar: “works [in] which interaction was not considered a key element but a supplementary one”.

With each evaluation I added more criteria to evaluate the audience demographic, supporting Kristina Hook et al findings that “we have to consider users’ interpretations, understanding, attitudes, personality, and expectations of computer culture” [2]. Certainly having a larger context for each interviewee helps to place their response within their areas of expertise. For example, for Talk2Me—when asked “When interacting with the work, what aspects did you find enjoyable?": A writer responded “The randomness of the responses (stream of consciousness) that reminded me of James Joyce style writing.” A graduate interaction design student answered “I enjoyed the space as a whole mostly. It was very comforting and natural... the technology is obvious, but does not consume the space.” And a TV producer stated “my choice of words (recognized and setting off) nice-sounding voices—the writing was often insightful. I love playing with professional sexy tools—I tried to build a story from phrases (play... in a nice place).” In the context of their professions and training—combined with a tacit knowledge of the interviewees cultural and social background—this detailed feedback holds rich information, and it was these kinds of complex and unique information that I had not expected to find the most useful. Over-simplification or reduction of these specific and very individual responses, in contrast, may “[wash] out any details that actually interest.” [2] The detail provides “a variety of interpretations and experiences” [2] and despite the evidence, my aim is to gather broader audiences to continue to expand this diversity. The interplay is one that allows for ambiguity and context, that which the individuals bring with them to the work, and that which the work houses and in turn seeks to elicit and provoke in its participants.

6. CONCLUSIONS AND FUTURE WORK
My initial two fieldwork evaluations indicated the usefulness of ludic engagement as a lens with which to evaluate engagement in interactive art installations. They also demonstrated an increased understanding of non-use engagement in interactive art installations among participants engaged in an art-technology community of practice. Specialist audiences engaged more strongly with the works and provided more fruitful feedback; however, this has both benefits and limitations. For artists working in this area, extending this experience of strong engagement to a more general audience is a significant challenge. In my future research I am working on building a larger discussion and diagram to include an HCI/ID mapping of the design process, layering where these overlap with the artist process to emphasize similarities and differences. By mapping the often ambiguous and complex attributes of interactive art installations that a community of practice identifies as enhancing enjoyment, I intend to construct a framework for augmenting and evaluating engagement in non-use, ludic scenarios. I anticipate this research will bring a deeper understanding of engagement in interactive art installations that can in turn be enlarged and adapted so a broader community can also participate and enjoy a more in-depth experience of these works.

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8. REFERENCES