

PLAY AND THE EXPERIENCE OF INTERACTIVE ART

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Doctor of Philosophy in Computer Science

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CERTIFICATE OF AUTHORSHIP/ORIGINALITY

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

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CONTENTS OF ATTACHED DVD:

Section 1:	Documentation of <i>Elysian Fields</i> artwork.	50 secs.
Section 2:	Documentation of <i>Sprung!</i> artwork.	59 secs.
Section 3:	Documentation of the <i>Just a Bit of Spin</i> prototype.	56 secs.
Section 4:	Documentation of the <i>Just a Bit of Spin</i> artwork.	2 mins. 13 secs.

Notes: The DVD contains documentation of the four artworks that were made as part of the research process of this PhD. The documentation is in DVD Video format.

To view this documentation, watch the DVD video on a TV with a DVD player. You could also view it with player software on your computer (e.g. Windows Media Player or Apple DVD Player).

The data section of the DVD contains some extra thesis documentation. To view this data put the disc in your computer and open the DVD to explore the folder titled BrigidCostello DVD-ROM Contents. This folder contains example data from the project's two case studies. It also contains a PDF copy of the thesis.

ABSTRACT

Encouraging audience engagement is a challenge that confronts all interactive artists. If an audience member does not interact or does so in a cursory manner, then it is unlikely that the artistic aims of an interactive artwork will be met. The research project under discussion here approached this challenge by focusing on play as a way to encourage both audience engagement and exploration. Using practice-based research methods the project aimed to develop design strategies for stimulating a play experience within an interactive art context.

The research process began with the creation of two interactive artworks and the development of a framework of thirteen characteristics of a play experience. These characteristics are: creation, exploration, discovery, difficulty, competition, danger, captivation, sensation, sympathy, simulation, fantasy, camaraderie and subversion. This play framework was then used during the creation processes of a third and fourth interactive artwork. Two subsequent evaluative case studies assessed the playful characters of these four artworks within an exhibition context. They also explored the usefulness of the play framework as a tool for both evaluation and design.

The findings from these case studies suggested that the play framework was indeed a useful tool for design. They also suggested three additional design strategies for evoking play experiences within an interactive art context. First, to work with patterns and ambiguity to create a rhythm between rule-based play and improvisational play; second, to use the relationship between action and representation to connect with the emotional and sensual memories of an audience; and finally, to use robustness and responsiveness to give an artwork a vital and playful character and make it an equal participant in the play experience.

The findings from the case studies also led to a greater understanding of techniques for installing playful interactive art. Exhibition signage was found to be important for creating an environment conducive to play and for shaping and directing a play experience. The studies also revealed audience play preferences for either puzzle solving or sense-making. An awareness of these preferences, it is suggested, could help exhibition designers to create an environment that will maintain the boundary of play.

Finally, the findings from the case studies led to a greater understanding of techniques for evaluating playful interactive art. The play framework was found to be useful during evaluation for collecting detailed data about play experiences

and for developing a common language between artist and audience. The use of social pairs as participants was found to help reduce anxiety and encourage play. The sobering effect of evaluation anxiety was also reduced by using peers as participants and by giving participants some training in the practice of doing evaluations. Finally, in order to maintain the play spirit it was suggested that the experience of doing an evaluation needs to be designed to be playful itself.

These findings will be valuable for any artists and curators of interactive artworks that aim to evoke a play experience. They will also be of use to those within the general interaction design community, particularly designers focused on the creation, evaluation and exhibition of playful interactive systems.