
Regenerative Social Engagement through Performative Technologies

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Figure 1: The Hafod-Morfa Copperworks.

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Abstract

In this paper we discuss the use of performative technologies for regenerative purposes in a heritage context. Our motivation stems from a heritage site of world significance—The Hafod-Morfa Copperworks—being left abandoned for some time, leaving the area overgrown and unused. By re-opening the site and introducing performative technologies that encourage participation, we hope to encourage the local community and other visitors to engage with and re-use the site. Here, we introduce a number of prototype technologies that we have already developed and begun testing. Taking these experiences into account, we discuss the implications of visitors playing the role of a performer, and the trade-offs of using an experienced artist or performer.

Author Keywords

Performative, heritage, regeneration, community

ACM Classification Keywords

H.5.m [Information interfaces and presentation (e.g., HCI)]: Miscellaneous.

Introduction

When the Industrial Revolution in Britain came to an end, many of the buildings and sites involved were either repurposed or demolished to make way for new

developments. Some areas were not so fortunate and were left abandoned and forgotten. One such place is the Hafod-Morfa Copperworks (see Fig. 1) in the Lower-Swansea Valley, Wales. Once, a key player in the manufacture and distribution of refined copper throughout the world, the few remaining government protected buildings at the Hafod-Morfa Copperworks form a site of world significance. In the 1980s, after being fenced off from the public for nearly 30 years, the area became an unusable, decaying scar on the landscape.

Recently, a long-term multi-partner project named Cu @ Swansea—led by Swansea University—has aimed to breathe new life into the site through a careful blend of renovation and regeneration. As members of this project, we have focused our attention on developing novel technologies to allow visitors to interact with the site, ‘bringing the past back to life’. Through this intervention, we hope to re-engage the local community and visitors, offering them a chance to build a sense of ownership of the site. All who visit the site will be given a chance to experience what it once was, what it now is, and what it may become in the future. To realise this vision, we have begun developing and testing performative technologies. By introducing such technologies, we will allow visitors to share knowledge and experiences, enabling them to define and understand the place through an expressive medium. As the site will not be stewarded, we plan for the performances to be controlled by the visitors themselves. Our initial research has raised some concerns with the suitability or willingness of visitors to perform in front of spectators in public.

In this paper, we outline the experiences developed so far, discussing common themes in our findings and the potential need for an experienced artist or performer.

Background

In ‘Performance and Performativity at Heritage Sites’ [1], Gaynor Bagnall discusses the importance of performance in a heritage setting. She argues that it is a ‘key social practice’ at such sites, and is useful in stimulating reminiscence. There are many examples of performative experiences for learning [6] and enjoyment [4] where the user is given a high level of control over the performance. In such performances where the user is the spectacle, performance perception [3] can play a large part in their willingness to take part. In the *humanaquarium* [7], users are able to influence a group of performing musicians by touching the glass window. Passersby have control over and can affect the performance, though they are not the spectacle. Their input requires little skill as their actions are mediated and interpreted by the artists.

Experiences

We have developed a number of expressive [5], performative experiences that involve user’s taking control of amplified, public feedback using a set of amplified gestures. With these technologies, we have carried out a number of experiments, including user studies in public places and a focus group with members of the public [2]. The aforementioned focus group included a participant who worked at the site while it was operational, researchers, historians and members of the general public. All of the performative experiences we have developed make use of a mobile phone as a control device. We made this decision based on the currently widespread use of smartphones with internet connectivity. Any visitor who has a capable mobile device will be able to control/perform using the exhibits on-site. Visitors who do not have this kind of device will still be able to experience these performances, but as spectators through the public feedback peripherals such as speakers and projectors.

Performative Projection

One of the experiences we have developed is a mobile projection system (see Fig. 2). The system was designed to be used to overlay the environment with projected birds, insects and other natural processes. During a study at the National Botanic Garden of Wales, it became apparent that projection visibility was an issue. In most cases, users were projecting in brightly lit areas, too far away from the projection surface. This caused frustration among some users and made the system less enjoyable. A possible solution to this issue would be to use an experienced user who would be more tolerant of the technology's limitations and know how to exploit them.

Surround You

Another of our experiences involved embedding location-aware loudspeakers in the environment to create the effect of spatial audio (see Fig. 3). Using a mobile device, users could point at speakers and activate contextual sounds. In a study that we conducted on Swansea University Campus, many users were not comfortable with the loud, amplified audio produced by their actions. This issue most likely relates to performance perception issues [3], which can be controlled through using an experienced performer.

Director

Our latest experience is a system that allows visitors to guide, or be guided using simple sounds and directions (see Fig. 4). To direct a user, the directing user tilts their device. In a preliminary study to test the granularity and usability of the approach, a common concern raised by participants was that of the skill and integrity of the user directing them. The main worry was of a non-expert user directing others in an area that they were not familiar with. By using an expert user to direct visitors around a site, participants claimed they would be more comfortable.



Figure 2: Falling raindrops projected onto a leaf.



Figure 3: A sound point for users to point at.



Figure 4: A user receiving a direction to follow.

Discussion

We would like visitors to the Hafod-Morfa Copperworks to be performers, spectators and contributors within the site. Our research so far has suggested a number of reasons why visitors may not want to, or in certain situations, may not be best suited to performing. We imagine that the introduction of an expert user or artist as the performer may make visitors feel less involved, in turn making the experience less engaging and enjoyable. Perhaps the answer is to introduce a less complex, indirect control over a performance, similar to that in the *humanaquarium* [7]. Our future work will involve introducing more experienced performers, measuring the difference in expectations and experiences of visitors when they have little or no control over a performance.

Project Background: Cu @ Swansea

Cu @ Swansea¹ is a multi-partner project led by Swansea University, aiming to renovate and regenerate the area around the Hafod-Morfa Copperworks. Large portions of the project are funded through grants, though Swansea University and Swansea City and County Council have also invested heavily in the project. Our involvement with the project stems from a fully funded Swansea University PhD, to research the site and explore new kinds of potential interactions and experiences for visitors. The overall vision is to produce a set of technologies that will not only benefit this site, but also other public spaces.

Proposal

For the socially engaged arts action, we propose a small, performative exhibit, controllable through conference attendee's own internet connected mobile devices. Attendees would be able to stand near or far from the

¹http://www.welshcopper.org.uk/en/about_regeneration.htm

exhibit, controlling perhaps sound and/or visual aspects of it through their own devices by visiting a web page. As performers, these users would create a spectacle for bystanders. The exhibit feedback should remain simple and will aim to engage attendees as both performers and bystanders, perhaps amusing, confusing or surprising them in the process.

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