

Provoking Reflection Through Artistic Games

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INTRODUCTION

An important, indeed often essential, feature of games is that they enable players to experience extraordinary situations beyond those that are safe or even possible in everyday life. Not only can this be entertaining, but it also provides opportunities for learning. This learning may involve acquiring and rehearsing skills in the game that may ultimately transfer to the real world. However, other forms of learning are also possible.

In this position paper we consider the learning that might potentially take place when an unusual perspective offered by a game provokes its players into reflecting on issues concerning the world around them, their relationship to other players, and the nature and role of games and related technologies. This kind of provocation is a particular feature of artistic games, where artists deliberately design a game to pose a question or to explore an underlying issue. We draw on three examples of artistic games, all performances that have toured internationally since 1998, to illustrate this idea. As well as being professional art works, these performances also served as research projects, where a combination of ethnography, audience feedback and analysis of system logs yielded new insights into the design and experience of such games and in this case, led us to consider the ways in which they might provoke reflection.

DESERT RAIN

Desert Rain is a combination of performance, installation and computer game [4]. Six players are sent on a mission into a virtual world to find six human targets. They explore motels, deserts and underground bunkers, communicating with each other through a live audio link. Once in the virtual world, they have twenty minutes to find their allocated targets, complete their mission, and get to a final room, where the identities of the targets are revealed.

The key feature of Desert Rain is the way in which the virtual world is integrated into an extensive physical set. The experience begins in an antechamber where the players don special clothing and are briefed as to the nature of their mission. A player's access the virtual world by being zipped into an individual fabric cubicle (see figure 1), where they shift their weight on a pressure sensitive footpad in order to control a viewpoint that is projected onto a rain

curtain, a two meter square curtain of water spray (figure 2). The rain curtain further blurs the boundary between physical and virtual as it allows performers and players to physically step through it, establishing the illusion of crossing into and out of the virtual world. Finally, at the end of the experience, the players move on to a physical room that is a facsimile of one of the rooms in the virtual world where they access short video clips describing their targets.



Figure 1: players zipped into their fabric cubicles

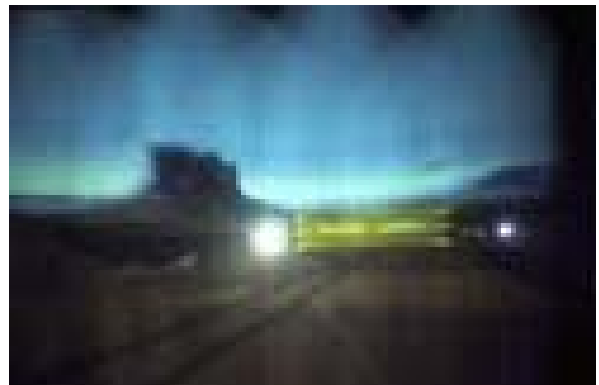


Figure 2: a virtual world seen on the rain curtain

The central artistic concern of Desert Rain is virtual warfare, the blurring of the boundaries between real and virtual events, especially with regard to the portrayal of warfare on television news, in Hollywood's films and in computer games. Both the form and content of Desert Rain are designed to provoke participants to reevaluate the boundaries between reality and fiction, and between the real

and the virtual. The juxtaposition of computer game and live artistic performance, especially the use of an extensive physical set, questions the relationship between the fiction of games and reality. Sending participants on an apparently game-like mission to find ‘targets’ who turn out to be people who relate to the first gulf war in different ways – from a soldier who to part, a peace worker, an actor who was involved in a fictional drama and someone who watched the war unfold on television – contrasts the different ways in which the war was experienced and portrayed in different media.

Desert Rain has toured venues throughout the world since 1999 including Nottingham, Karlsruhe, London Bristol, Glasgow, Rotterdam, Prague, Stockholm and Sydney. Reaction from both players and critics suggests that the experience can provoke strong reactions. For example:

“... the experience does recreate some of the fear and disorientation that those on the ground during the Gulf War must have felt” and “part of a growing trend in performance and installation to blur the line between spectator and participant” [The Guardian, UK, May 18th 2000]

CAN YOU SEE ME NOW?

CYSMN is a game of chase played out across physical and online environments. Up to 15 simultaneous online ‘players’ logged in on the Internet are chased through a virtual model of a circumscribed area of a city by 4 ‘runners’, professional performers, who are located on the actual city streets and are equipped with handheld computers with wireless networking and GPS receiver and also walkie-talkies [1].

From an online player’s point of view, interaction is mediated via an abstract 3D graphical model of the streets. This model allows players to see the positions of other players and the runners (figure 3) and to exchange text messages. The players move through this model with a fixed maximum virtual speed. From a runner’s point of view interaction is also mediated via an abstract perspective, this time of a 2D map on a handheld computer (figure 4). As they move through the real city streets, runners can see the positions of players and other runners marked on this map, can read players’ text messages, and can communicate with one another using walkie-talkies with earpieces and head-mounted microphones. When a runner gets to within five virtual meters of an online player, the player is ‘seen’ and is out of the game.

A central artistic concern of CYSMN is the relationship between online virtual spaces and actual physical spaces. The game encourages online players to experience the city through another person (a runner), tuning into their audio descriptions of the actual city streets, hearing how they are moving, becoming aware of obstacles that they encounter such as traffic (even though these are not directly represented in the sparse online model of the city), hearing when they are tired and out of breath and finally, realizing that their online actions are having a remote physical effect

(e.g., that the simple act of crossing a line on a map may cause another person to negotiate the traffic to cross a busy street).

To date, CYSMN has toured to three cities: Sheffield, Rotterdam and Oldenburg and has been experienced by approximately two thousand online players. It has also been awarded the Prix Ars Electronica Golden Nica for Interactive Art in 2003. Reactions to the experience suggest that some players are indeed able to tune into a remote runner’s experience of the city streets and to adapt their gameplay accordingly as illustrated by the following quote:

“I figured out pretty quickly what was uphill and downhill. I also figured out which was the main road to cross”



Figure 3. Players’ perspective (runner highlighted)



Figure 4. Runners’ perspective

AN OVERVIEW OF UNCLE ROY ALL AROUND YOU

Uncle Roy All Around You is a game that mixes street players, who journey through a city in search of an elusive character called Uncle Roy, with online players who journey through a parallel 3D model of the city, who are able to track their progress, can communicate with them, and can choose to help or hinder them [2].

On arrival, street players are briefed and then sent out into the city to find Uncle Roy. As they move through the city, they periodically declare their position using an electronic

map and in return receive preprogrammed clues from Uncle Roy that lead them through a park and into the narrow city streets in search of his office. Some of these clues are useful, but others are deliberately misleading or even mischievous. For example, at one point the player is told to follow a tourist who is approaching them across a bridge; however, any such tourist is just a passing stranger. The street player may also receive messages from online players who appear to be following their progress and who send them text messages with advice, directions or otherwise. In return, the street player is able to record and upload short audio messages.

On arrival at the office, the street player receives a sequence of messages inviting them to step inside, look around and then fill in a postcard, answering the question “when can you begin to trust a stranger?” They are then told to leave the office and wait in a nearby telephone box. The phone rings and an actor tells them to walk around the corner and wait. Shortly after, a limousine pulls up and they are invited to step inside. During the journey back to the venue an actor asks them a sequence of questions about trust in strangers, culminating in them being asked whether they are willing to enter a year long contract to help another player in the game if ever called upon. If they accept, they are asked to hand over their address and phone number.

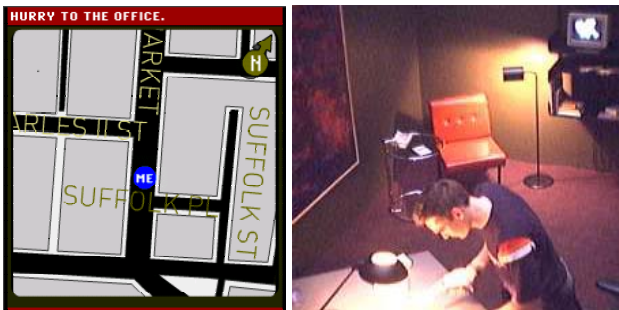


Figure 5: street player interface (left) and in office (right)

Online players explore a parallel 3D model of the city, where they encounter and chat with other online players. They also see representations of street players, both as a series of cards that provide background details (name, gender, appearance and a photograph) and also as a marker that shows the street player’s possible position within the city. Online players can find information in the 3D model that street players do not have, especially the location of Uncle Roy’s office and can then engage the street players in an exchange of information in order to help them on their journey – or possibly to hinder them if they so wish.

Whenever an online player enters Uncle Roy’s office, street players are invited to join them via a live webcam view. They are then asked the same questions that the street player is asked in the limousine, including whether they will commit to help a stranger for the next year and if so, are asked to handover their contact details. After the game, we pair up those street players and online players who made a commitment and send them each other’s contact details.



Figure 6: an online player sees a street player in the city

The central artistic concern of Uncle Roy All Around You is trust. The game establishes shifting and ambiguous relationships between street players and online players, between street players and Uncle Roy, and between street players and passersby. It also invites street players to cross boundaries – entering an office and stepping into a stranger’s car – testing the limits of their trust in the game’s designers. At the end of the experience both street players and online players are then required to consider the nature of this trust in terms of whether they will commit to a stranger and divulge over their personal details.

To date Uncle Roy All Around You has been performed once, in London in May 2003, where it was experienced by over 200 street players and over 400 online players. There is some evidence from initial feedback from players that the experience could provoke strong reactions. For example:

“I found the game very absorbing and felt compelled to talk to two other players solidly for two hours afterwards which is a first for me.”

PROVOKATION, REFLECTION AND LEARNING

In the workshop, we wish to use these three examples to illustrate and explore two questions concerning the nature of provocation, reflection and learning.

Question 1: How do artistic games provoke users?

One of the goals of these kinds of artistic games is to provoke a response in participants. At the very least this involves engaging them with the experience and stimulating an emotional response. At a deeper level however, it can sometimes also involve raising questions and reflecting issues in a new light. In considering how such games achieve this, we can turn to a recent discussion of the role of ambiguity in interface design [3].

Ambiguous interfaces – where an interface is open to multiple interpretations – are usually seen to be problematic for interface design. Conventional HCI emphasizes the values of clarity and consistency and generally encourages interface designers to create unambiguous interfaces or to recognize and respond to the ways in which users resolve ambiguities (see for example, the documented strategies

employed by co-workers in emergency control rooms [5]). In contrast, artists may deliberately exploit ambiguity in a number of ways to create engaging art works, raising the possibility that interface designers might usefully adopt the same approach. In discussing this idea, Gaver *et al* propose that ambiguity is a property of the relationship between an interpreter and a thing to be interpreted and from this, identify three principal types of ambiguity:

Ambiguity of information – where information is presented in a way that requires the user to interpret it. For example an artist may deliberately reduce the resolution of the information or in contrast, may present it in an overly precise way in order to question its validity. The low resolution of the rain curtain in *Desert Rain* and the role of the audio stream in *CYSMN* both introduce this kind of informational ambiguity.

Ambiguity of context – where an experience deliberately and sometimes jarringly juxtaposes different forms or genres and so provides multiple simultaneous contexts for interpretation. *Desert Rain*'s mixing of computer game, performance and the Gulf War invokes such an ambiguity.

Ambiguity of relationship – where an experience calls into question the relationship between the participant and the material, challenging them to make intellectual, aesthetic or moral judgments. *Uncle Roy All Around You* involves extensive use of ambiguity of relationship by questioning the relationship between a player, Uncle Roy (the voice of the game), other players and passersby.

Question 2: What might be the educational value of provoking users through artistic games?

We then wish to discuss whether provoking players in these ways can have a broader educational purpose. First, as is the case with art works in general, not all participants can be expected to undertake a deeper reflection on the issues being raised by an artistic game. Players have many valid motivations for participating – entertainment, amusement and social experience – that may not involve striving to interpret the artistic ambiguity of the work. Furthermore, making such interpretations can be difficult, requiring familiarity with artistic discourse and drawing on knowledge of other works, a process that may be facilitated by curation and critical review. In short, artistic games are not necessarily going to provide a very direct way of delivering educational material.

However, we suggest that they may also offer some advantages when compared to more didactic styles of game. One of these may lie in being able to reach people outside of a specific learning environment such as a classroom or work environment, engaging their interest as a part of recreational activities in what, at least from an educational perspective, would normally be 'downtime'. This may be

especially true of pervasive games that deliberately reach out into the everyday world, with the potential for attracting casual passersby. Second, artistic games may offer a good way of raising questions without giving answers; i.e., of opening up new territory and encouraging participants to reflect on issues for themselves while stopping short of simply serving up standard answers in response.

In summary, we wish to use the workshop to raise these issues with other researchers and to debate the potential of this approach to engage people when in unconventional learning environments and to open up questions without giving answers, as well as to identify further research that needs to be carried out.

BIOGRAPHY OF PRESENTER

Steve Benford is Professor of Collaborative Computing at the University of Nottingham and a founder of the Mixed Reality Laboratory. He is also a principal investigator on the UK's Equator project, a six-year, eight-partner initiative that is investigating the interweaving of physical and digital interaction for everyday life. Recent papers can be found in the ACM CHI, Multimedia, VRST, CSCW and SIGGRAPH conferences and also in ACM Transactions on CHI and Communications of the ACM.

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