

# Place as Media in Pervasive Games

Hugh Davies

ABC Producer, ANAT Board member

18 South Crescent, Northcote

Victoria 3070

+64 04 3381 1146

huedavies@gmail.com

## ABSTRACT

By blurring the boundary between game fiction and reality, Pervasive Games impact the shared space of the city areas that they use as gaming platform. Drawing on notions of spatial theory and Pervasive Gaming practice, this paper discusses ways in which game designers can navigate the constraints and possibilities of gaming in social and physical spaces towards creating greater immersion for players and generating new associations for city spaces. This design challenge within Pervasive Gaming represents a broader shift in interest from representing spatial reality in gaming, to being a part of shaping it.

## Categories and Subject Descriptors

Cross media, Games

## General Terms

Performance, Design, Human Factors, Spatial Interaction

## Keywords

Pervasive Games, Game Design, Psychocartography

## 1. INTRODUCTION

The term Pervasive Games encompasses a wide range of emerging and interrelated game types. These games are typically played in city areas and often utilise a range of digital media platforms such as mobile phones, websites and GPS tracking as well as analogue media such as posters, maps, notes and can involve physical activities including performance and treasure hunts. These games are often presented with or within other activities such as art installation, urban renewal, political activism and advertising. While there is currently little agreement on a definitive description of Pervasive Games, what distinguishes them as different to traditional game types is that they use the real world as a game play area and by doing so they blur the margins between game and reality. This expanding and blurring of the boundaries of game space creates an ambiguity between game world and non-game world that, in turn, alters the players' perception of place - both during and potentially after the game.

In this paper I will discuss how Pervasive Games impact the physical reality they use as gaming platform, and how game designers can navigate the constraints and possibilities that playing in social and physical reality entail.

I will begin by briefly discussing the concept of the magic circle and the way Pervasive Games challenge this notion. Drawing on the work of prominent researchers in the field, I will then outline the key concepts and characteristics of Pervasive Games, with

particular focus on the uncertainty they create between game and everyday worlds and the resulting implications for designers, players and the general public. Referencing the concept of psychogeography and discussing its relationship to Pervasive Games, I will attempt to show how players can both receive information from and form relationships with spaces. Finally, with reference to researchers in the field of game spaces and urban design respectively and with examples of games including my own, I will discuss the ways in which notions of space and place can be utilized to create player immersion in Pervasive Games.

My objective is to show how the use of places as media in Pervasive can, if executed successfully, impact our relationship to place as we actively participate in creating a shared reality.

But first, I will turn to the notion of the magic circle, a theoretical concept used to define the boundaries of game environments.

## 2. GAME WORLD

Playing a game means acting according to a specific series of rules, objectives and codes of conduct, different to the ones we normally navigate within in our everyday lives. Playing a game therefore requires stepping into a different world, or rather; a magic circle. The notion of the Magic Circle [18] presents games as closed systems: when players join a game they simultaneously enter a sort of contract with this game, agreeing to understand and accept the game world, its rules and its boundaries. As Hector Rodriguez [17] points out, these boundaries are frequently both physical, consisting in a literal precinct such as a chessboard, ring, field, stadium, stage, etc, and temporal involving a clear beginning and end, which mark the game off as a temporary interruption of ordinary life.

By expanding the play area away from the board game, computer or lounge room or arena and into public arena such as cities, parks and indeed the world, Pervasive Games challenge and blur the Magic Circle - the boundary between the game world and the non-game world. Alternate Reality and Immersive Games, considered by some academics and designers to be forms or genres of Pervasive Games, even employ a TINAG (This Is Not A Game) rhetoric [13], by which they deny their very existence as games. It is this very ambiguity of game to reality that makes these games so compelling and immersive. However, while these types of games open up new challenges and possibilities for game designers to exploit, they also raise issues concerning the confusion of reality in public areas.

### 2.1 Gaming in Reality

“The opportunities of spatial expansion are immense. It allows social playing in many locations simultaneously, taking games to places where they are not usually supposed to be”, argues

Gamelab and IPERG researcher Markus Montola. [14] Many of these games challenge the use of the spaces that they occupy by their very presence in them. Through their disruption of public space many Pervasive Games seek to critique and to disrupt social norms of these areas in efforts to reclaim the streets from purely commercial interests or as a strategy for urban renewal.

This is not to suggest that any of these games override the conventions of society with the rules of the game. On the contrary, the context of reality confers an extra set of rules upon the player. Players must thus operate both within the laws and codes of everyday reality as well as navigate the imposed structure of the game - just as a tennis player must deal with the reality of climate conditions as well as the imposed rules and physical demands of the game. Yet, within Pervasive Games the distinction between reality and game may not appear as clear cut - to neither players nor civilians - once the games begin.

## 2.2 Blurring the Boundary

Players will often be uncertain of the significance of everyday occurrences and presence of bystanders; are they players, passers by or in-game elements such as actors posing as bystanders but with ulterior motives? Likewise, the general public can be equally suspicious of the un-pedestrian actions of players. This confusion is not just a compelling element of these games; it also touches upon the ethical dimension of mixing game with reality.

Montola has pointed out that blurring the line between the ordinary world and the game world may lead a participant, a bystander or an official to make an assessment of events without a full understanding of the situation they are witness to. [16] He cites three possibilities to which I have added relevant examples:

- Mistaking a toy gun for a real gun: In the game *Street Wars* players become assassins and hunt each other down through city streets, parks and even homes with water pistols. [20]
- Mistaking a real security company for an in game one. In *Prosopopeia*, Game Masters posed as security guards making players believe that they may have been breaking the law. [15]
- Mistaking played emotions for real ones: In *Blast Theory's Uncle Roy All Around You*, players were asked to make a commitment to a stranger for one year. [2]

In acknowledgement of such potential problems, IPERG [7] seeks to uncover and understand the societal impact of Pervasive Games and to encourage interaction that promotes positive individual and societal outcomes.

## 2.3 Social Impact

Directly and indirectly, Pervasive Games place social interaction at the core of the game play; between players, amongst the public and between players and the public. They systematically present scenarios whereby players must co-operate with each other towards goals, sometimes depending on the enlisting of passers-by. The effects of this social communication are openness of outcomes, a resounding awkwardness [5] but also of shared intimacy and community building. This new kind of intimate sharing of space can be instrumental in creating a greater social nearness and a higher tendency to cooperate that potentially reaches beyond the game context.

Game designer and researcher Jane McGonigal believes that these games create a kind of social sand box making it: "safe to behave in new ways, to escape from habit, and most important, to see new possibilities of engagement, both with the space and with others." [10] This potential of the games is exemplified in the Collaborative Production Game *SFZero*.

*SFZero* is a game in which players are invited to undertake game tasks and are challenged to invent new ones. The stated goals of the game include meeting new people, exploring the city, and participating in non-consumer leisure activities. Defining the difference between the game and reality, the *SFZero* website cleverly outlines the ambiguity between player, character and individual, describing how players' characters are identical to them in almost every way. However; "your character is able to do things that you may be unable or unwilling to do yourself". [19] In this statement *SFZero* challenges players to extend their possibilities, prompting them to overcome fears and inhibitions, through the guise of their game characters. The player can be less inhibited than the individual, yet remains aware and answerable to the risks inherent in the everyday world. McGonigal has observed that Pervasive Games encourage players into a performance of belief, similar to the suspension of disbelief associated with cinema audiences. [13] While suspension of disbelief implies a tacit agreement of audiences to defer judgment and accept fiction as truth in exchange for entertainment, performance of belief requires players to become actors, not just spectators, performing within the reality of the game, thus creating greater immersion both for themselves and for others. Expanding on this notion of performance of belief, Eva Nieuwdorp introduces the concept of the liminal interface: 'the semiotic switch between the lifeworld domain and the semiotic domain of the Pervasive Game', [12] asserting that the pervasive interface exists not only in the hardware and software of these games, but above all in the mind of the player. Accepting that the magic circle, the demarcation line between game and non game, exists primarily in the mind and imagination of the player, the designer can then consider ways in which to affect the game stage used by the actor/players in Pervasive Games. Indeed, in Pervasive Games, players must - in order to embrace the spirit of the game - succumb to the constructed reality of the game world even as it exists within the shared physical reality of a city area.

Within this ludic dramaturgy, players are able to interpret every action and event as potentially part of the game, making them sensitive to every nuance of reality and giving mundane tasks and events compelling new meanings. Experiencing this new sensitivity with others can, as Jeremy Reynolds notes, result in a 'sense of empowerment that players feel from taking part in a vast network of similarly-minded, networked individuals'. [1]

## 3. DESIGN AND PLACE

Designing a Pervasive Game can be an engineering feat. While at their best, these games can combine the in and out of games worlds into a player unique gestalt experience, game makers must plan and work hard to balance a wide variety of media and game events as well as allowing for the input of players resulting in unforeseeable situations and outcomes. One of the most fundamental and unpredictable factors in this process is the positioning of games in public areas. How can this best be executed to facilitate maximum player immersion and interaction in a city space?

Game designers can collect great inspiration from architects, urban planners and others involved in spatial design. One spatial concept of particular relevance is psychogeography. Introduced and defined by Guy Debord, psychogeography is the study of the psychological impression and effects of a geographical environment. [11] This impression includes the effects of its formal features such as size and scale as well as the resonance of its history and memories. An important distinction between space and place is to be made when discussing psychogeography. Space refers to the structural and geometrical qualities of a physical location, whereas the notion of place includes the scope of experience, interaction and the use of space by its inhabitants. [5] Granted that place and space are in reality both social constructs [4] place is, for the sake of this discussion, space experienced. [21] While the memories, experiences and formal qualities of a place can weave psychological texture and narrative to the game space, un-experienced spaces can also be utilized in games by conveying the texts and history of locations. Furthermore, physical space is the platform we inhabit in our everyday lives, within it we are confident and in our element. Our body is the central reference point for our perception: from it and with it we interpret the relationship to other objects and events. The qualities of physical space therefore have deep psychological meaning to us that can be exploited in physical space game design.

### 3.1 Design into Practice

In September 2006, the annual New York festival for contemporary psychogeography, Conflux, invited international artists, filmmakers, and urban adventurers to investigate everyday urban life in Brooklyn through emerging artistic, technological and social practice. Less than one week later began Come Out and Play, a festival dedicated to discussion, investigation and practice of street games including Pervasive Games. With a significant overlap of ideas between the two festivals, many of the same participants and activities were present at both events.

A concept that emerged repeatedly in discussions at this time was that the very experience of play can change the perception of space to place in the mind of a player as they form new contexts and associations through participating in a game. In *Journey to the End of the Night*, a game that was presented at both events, players raced around a pre-determined circuit of the city stopping at checkpoints and trying to avoid being caught. In discussions with players after the game, native New Yorkers reported witnessing new aspects of their home city – discovering places that prior to the game they had been unfamiliar with or did not even know existed. Players visiting the city for the first time experienced a different emergence of place as they found themselves in locations that they had heard of before but had never actually visited. Locations such as Chelsea, Broadway and Little Italy resonated with intertextuality from the many references to the city and its streets in numerous media texts.

Places thus have life beyond the immediate experience of them bringing us on to what Henry Jenkins calls game spaces' narratological consequences. [9] Spatial design can enhance our sense of immersion and communicate story perspectives by tapping into the shared history and personal narratives of the location in which the game is played out.

For the sake of this discussion it may prove useful to think of space and place as media - as material that can store and communicate information. As argued, space is already rich with

content, embedded with objects, beings, memories and nostalgia waiting for us to ascribe meaning to and thus redefine it as place. Designers need only contribute small additions that tie seamlessly into the real world to appropriate an entire area as being of their own design.

Disney Imagineering artist Don Carson has suggested that successful game design might be achieved by creatively embedding narrative information into the game environment. [3] Although this statement was made in reference to digital games and environments, the technique might equally be applied in pervasive games and public spaces.

In 2005, I developed and trialed a Pervasive Game called *Yestercry* that involved players following a trail of clues towards solving a mystery in competition with other players and in game characters. By manipulating small spaces within the game play area, players had the impression of arriving at locations sometimes before, sometimes after the mysterious stranger they were pursuing. This strategy, adapted directly from Carson's proposal of embedding narrative information, saw players drawn through the story space, following a trail of "bread crumbs" left behind by fabricated game characters and events.

At one point, the game tasks required players to return to a room that they had visited previously, only to find it ransacked. While this was intended to be read by players as an in game event, players reported being unsure if this was carried out by other more zealous players, in game characters, or by real world vandals or burglars and questioned whether to report the incident to either game masters or police. Either way, it created a mood of urgency and malevolence appropriate to the overall game aesthetic.

In Blast Theory's *Uncle Roy All Around You*, players were given directions and access to a deserted room styled as a typical executive office of the 1970s. Later in the game they were invited to ride in a white limousine and were questioned by a stranger. [2] These purposefully textured environments created a distinct aesthetic that players began to see elsewhere and even seek out in the city environment.

Although effective, this technique can be overused, leaving the game space saturated with narrative information. As Henry Jenkins notes in regard to digital games this kind of design can; "totally predetermine the uses and meanings of the spaces". [9] A game space that is fastidiously designed to accommodate to one specific narrative misses out on the immense creative potential that lies in more open interaction between players and places. Adding weight to this, Kevin Lynch discusses, in his *The Image of The City*, how within urban design it is important to leave a "poetic and symbolic potential" in public spaces, as this potential allows room for new "fresh stories" to be created in the interplay between place and person. [11] Indeed, in order for players to form real and lasting relationships with city spaces, not game exclusive ones, it is important for game designers to minimise the artifice of the Pervasive Game spaces.

## 4. CONCLUSION

I began this paper by demonstrating how Pervasive Games challenge the notion of the Magic Circle and in turn the distinction between in-game and out-of-game events. Referring to the work of key researchers in the field, I then outlined the pertinent concepts of these game types, including the performance of belief and the liminal interface showing how players actively

facilitate their own immersion. Linking with the concept of psychogeography, I then showed how players are able to form relationships with spaces through the experience of play that can transfer beyond a game's duration. Finally, combining research in spatial design and examples of actual games, I illustrated how designers can employ space and place as media to convey narrative and aesthetic information.

My fundamental argument is that spaces and places store and communicate narrative, aesthetic and psychological information and that game designers can employ this knowledge towards create greater immersion for Pervasive Game players. Furthermore, as these games have a fundamental relationship to the spatial world, and as individuals often connect physical tangibility with proof of reality, the social and spatial relationships that Pervasive Games can potentially give rise to can extend beyond the game. This said, perhaps, the growing interest in Pervasive Games is not just to be understood as deriving from experiencing the blurring of game to reality, but also marks a shift in interest from representing reality in gaming, to creating it. However, the broader impact this shift will have on the relationship between people, places and reality is still to be seen.

## 5. ACKNOWLEDGMENTS

Special thanks to Aja Smith and Simon Young whose assistance in composing this paper was valuable and highly appreciated.

## 6. REFERENCES

- [1] Alternate Reality Games, special interest group website: [http://www.igda.org/wiki/Alternate\\_Reality\\_Games\\_SIG/Academic\\_ARG\\_Researchers](http://www.igda.org/wiki/Alternate_Reality_Games_SIG/Academic_ARG_Researchers). Accessed July 2007.
- [2] Blast Theory Website [http://www.blasttheory.co.uk/bt/work\\_uncleroy.html](http://www.blasttheory.co.uk/bt/work_uncleroy.html). Accessed July 2007.
- [3] Carson, D. "Environmental Storytelling: Creating Immersive 3D Worlds Using Lessons Learned From the Theme Park Industry", *Gamasutra*, March 2000. [http://www.gamasutra.com/features/20000301/carson\\_01.htm](http://www.gamasutra.com/features/20000301/carson_01.htm). Accessed July 2007.
- [4] Dourish, P. "Re-Space-ing Place: 'Place' and 'Space' Ten Years On", Presented at *CSCW'06*, November 4-8, 2006, Banff, Alberta, Canada. [www.ics.uci.edu/~jpd/publications/2006/cscw2006-space.pdf](http://www.ics.uci.edu/~jpd/publications/2006/cscw2006-space.pdf) Accessed September 2007.
- [5] Come Out and Play "What are street/big/pervasive games anyway? Hear from designers, players and academics". *Come Out and Play* Panel Discussion at Eyebeam New York September 2006.
- [6] Hornecker, E. "Space and Place – Setting the Stage for Social Interaction". In Position paper presented at ECSCW05 workshop Settings for Collaboration: *The Role of Place*. November 2005. <http://www.informatics.sussex.ac.uk/research/groups/interact/publications/Hornecker.pdf>. Accessed July 2007.
- [7] IPerG Website: [http://www.pervasive-gaming.org/index\\_swf.html](http://www.pervasive-gaming.org/index_swf.html). Accessed July 2007.
- [8] Jegers, K. "Pervasive GameFlow: Understanding Player enjoyment in Pervasive Gaming", In *ACM Computers in Entertainment*, Vol. 5, Issue 1. Article 9. 2007.
- [9] Jenkins, H. "Game Design as Narrative Architecture," in Pat Harrington and Noah Frup-Waldrop (Eds.) *First Person*, Cambridge: MIT Press 2002. <http://web.mit.edu/cms/People/henry3/games&narrative.html> Accessed July 2007.
- [10] Kramer, A. Blog: <http://learninglaboratory.blogspot.com/2006/05/pervasive-games-and-innovation-jane.html>. Accessed July 2007.
- [11] Lynch, K. *The Image of the City* MIT Press 1960
- [12] Nieuwdorp, E. "The Pervasive Interface: Tracing the Magic Circle". Presented at the International *DiGRA* Conference, June 2005, <http://hdl.handle.net/1892/1596>. Accessed July 2007
- [13] McGonigal, J. "A Real Little Game: The Performance of Belief in Pervasive Play", Presented at the Digital Games Research Association (*DiGRA*) *Level Up* Conference Proceedings (November 2003) <http://www.avantgame.com/MCGONIGAL%20A%20Real%20Little%20Game%20DiGRA%202003.pdf>. Accessed July 2007.
- [14] Montola, M. "Exploring the Edge of the Magic Circle: Defining Pervasive Games", Presented at *DAC* 2005 conference, December <http://users.tkk.fi/~mmontola/exploringtheedge.pdf>. Accessed July 2006.
- [15] Montola, M. & Jonsson, S. "Prosopopeia. Playing on the Edge of Reality". In Frizon, T. & Wrigstad, T. (eds.): *Role, Play, Art. Collected Experiences of Role-Playing*. Pp.: 85-99. Stockholm, Föreningen Knutpunkt. The Book for Knutpunkt 2006.
- [16] Montola, M., Waern, A. & Nieuwdorp, E. "Deliverable D5.3B.: The Domain of Pervasive Gaming". Presented at *IPerG*, January 2006, <http://iperg.sics.se/Deliverables/D5.3b-Domain%20of%20Pervasive%20Gaming.pdf>
- [17] Rodriguez, H. "The Playful and the Serious: An approximation to Huizinga's *Homo Ludens*", In *Games Studies* volume 6, issue 1, December 2006. <http://gamestudies.org/0601/articles/rodrigues>
- [18] Salen, K. & Zimmermann, E. *Rules of Play. Game Design Fundamentals*. Massachusetts: MIT Press 2004
- [19] SFZero Website <http://sf0.org/about/>. Accessed July 2007.
- [20] StreetWars Website <http://www.streetwars.net/>. Accessed July 2007.
- [21] Wikipedia: [http://en.wikipedia.org/wiki/Guy\\_Debord](http://en.wikipedia.org/wiki/Guy_Debord). Accessed July 2007.
- [22] Tuan, Y. *Space and Place: The Perspective of Experience*. University of Minnesota Press 1977