

Exploring the Edge of the Magic Circle: Defining Pervasive Games

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ABSTRACT

Pervasive gaming is a genre of gaming systematically blurring and breaking the traditional boundaries of game. The limits of the magic circle are explored in spatial, temporal and social dimensions. These ways of expanding the game are not new, since many intentional and unintentional examples of similar expansions can be found from earlier games, but the recently emerged fashion of pervasive gaming is differentiated with the use of these expansions in new, efficient ways to produce new kinds of gameplay experiences. These new game genres include alternate reality games, reality games, trans-reality games and crossmedia games.

Keywords

magic circle, pervasive game, social expansion, spatial expansion, temporal expansion, alternate reality game, reality game

1. INTRODUCTION

Pervasive gaming is often considered a new form of gaming that eludes easy definitions. Many different forms of gaming have been grouped under the concept, including the massively collaborative problem-solving games (*The A.I. Game*), the location-based mobile games (*Botfighters*), the games augmenting the reality with ludic content (*Visby Under*) and the games staged with a combination of virtual and physical elements (*Can You See Me Now*) – to name a few. (see e.g. [2, 3, 11, 15])

These games do not have a single common denominator making them pervasive, though each of them has salient design features systematically working the way out of the magic circle of play.

The metaphorical magic circle of play is a voluntary, contractual structure that is limited in time and space. In Huizinga's [5] definition of play it is defined that the participants agree that some activities in some places by the players are interpreted playfully as a part of the game instead of ordinary life. Breaking these boundaries of game is not an original idea, but the systematic approach on it makes pervasive gaming a novel form of gaming.¹

¹ The *Circle of Death* games (written down and codified by Steve Jackson's [6] *Killer: The Game of Assassination*) could perhaps be considered the first games dominated by this kind of pervasivity. Johnson [7] traces the first contemporary-style *Circle of Death* games back to 1966 (see also [18]).

2. EXPANDED GAMES

The regular game is played in *certain spaces* at *certain times* by *certain players*. In the classic games these attributes are defined before the game, even though the possibility of changes may be retained. When these features are changed, the changes are a part of the social gaming process rather than the formal system of the game.² An outsider might join a typical parlour game while it is running, or maybe take over some player's assets when she has to quit, or the game might be paused for a while – but these changes do not usually take place on the level of the formal game system.

In spatially, temporally and socially expanded games these changes may also be implicit and unknown to players (even though they touch the formal system of the game); the player might not know when and where the game is played, or by whom. Going even further, in an expanded game, the game participant exerting influence on game might not be aware of the game implications of her actions even herself. In terms of making difference in the game, walking around innocently with *Botfighters* in the pocket constitutes a gameplay action, as does cheering aloud in an *ice-hockey* match. These borderline cases problematize the simple definitions of "player", "play session" and "play space". Participants, organizers and game referees might all be unable to decide the nature of these concepts.

Pervasive games consciously exploit the ambiguity of expanding beyond the basic boundaries of the contractual magic circle. This often leads to the point where the game interface is completely ambiguous: Any action could be a game action, and any sensory observation by any participant could be seen as part of the game.

2.1 Spatial Expansion

Spatial expansion indicates that the socially constructed location of the game is unclear or unlimited. Games such as *Songs of North* (see [8]) or *I Love Bees* have used cityscape as playground, expanding locally and even globally. Since these games can be played anywhere and everywhere, it is unclear where they are actually played. From the player perspective, one captivating factor is exactly the uncertainty on what locations are actually gaming areas.

Spatial expansion can also take place in the cyberspace³, for instance *The A.I. Game* was played both in physical places and all over the internet on various sites [16]. The game also expanded to

² In other words, these changes are handled by constitutive rules only in the expanded games (see [16]).

³ Denoting here the social spaces constructed within information networks (rather than physical locations).

forums organized by players themselves – even the organizers had no idea of the various places where the game was played. The cyberspatial expansion even expanded beyond the internet, as the game messages were posted in places such as movie trailers.

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. Ideologically it can be seen as a way of reclaiming public spaces for people.

The challenges might include the problems of causing unwanted public disturbance, creating hazardous situations in traffic and risking the expansion of games to places where they definitely should not be played (such as hospitals or airports).

It should be noted that the typical single-player games played with mobile phones are not spatially expanded in nature, since certain players play them in certain spaces. The spatial expansion only applies to games that are affected by the player's spatial context, usually in relation to physical places or to other players.

2.2 Temporal Expansion

Pervasive games expand temporally from the explicit play sessions; the socially constructed game session is interlaced and mixed with ordinary life. In *Killer* every action the player does until the game is over might be a game action.

Temporal expansion can be done in many ways: Some games (*Majestic*) might stay dormant for long periods of time, but alert the player into playing them at any given moment. *Publius Enigma* left the players in the dark on whether the game ended at all [17], while the exact starting point of *Prosopopeia*⁴ was left quite undefined by the game, since non-game events were retroactively redefined as parts of the game.

Temporal expansion ties in with social expansion, as the temporal span of the game is often obfuscated to the point where even the players might be unaware of whether they are playing at a given moment. When the game can call the player without a warning, the player answering her cellphone does not know if that answering constitutes a game action or not.

Temporal expansion offers opportunities for interlacing games with everyday life. In the aesthetics of expanded gaming the uncertainty of when life might turn into game is considered intriguing, as it augments the effect of enchanted reality. Boring moments of life can be enchanced by any mobile game, but temporal expansion reaches even the moments of not-playing.

The essence of the problematic side of temporal expansion is the same; game might require attention at worst possible times or require generally too much attention. If the price of failing to attend the game when needed is too steep, the game may become very taxing over time. If the game is played constantly, the privacy considerations also become an issue: as Sotamaa [15] points out, using the search function of *Botfighters* to find friends playing the game is the obvious thing to do.

2.3 Social Expansion

Perhaps the most controversial and potentially the most bountiful type of expansion takes place when the game expands socially,

obfuscating the boundary of playership. In the unexpected places and times where the expanded games are played, unexpected people make a difference regarding the gameplay.

Defining the player becomes a tricky issue when the concepts of goal and game action are as problematized as they often are in boundary-reaching games. If we define the player as “a person having stakes in the game who influences its progression by taking actions within the constraints of the rules”, we can claim that *ice-hockey* spectators are actually players. Even though they might not have an explicitly defined position in the game rules, the fans have emotional stakes in the game and they influence it by supporting their team in every accepted way. The influence of an individual might be minimal, but – at least according to the sports mythos – the support does make a tangible difference.

Social expansion is done in several ways ranging from indifferent to revolutionary. The pervasive game might use outsiders as game elements; the *Prosopopeia* organizers left messages and artefacts to non-players, and the players' task was to obtain them during the game. One planned (but unfortunately not implemented) way of doing so was sending an actor to interact with bystanders before the game, so that the players might get additional clues on his whereabouts by discussing with the eyewitnesses.

Outsiders might also constitute an audience to the game, possibly influencing and participating the game as well. In *Whirling Dervishes* (see [13]) the consciously playing gamers knew the rules and objectives of the performative game organized to the bemusement of bystanders. Seeing the performance, many outsiders voluntarily joined it, becoming performers, players or gamers with the others – though with a lot less explicit information about what the whirling on a street was about.

Sometimes the game also blurs the boundaries of players and organizers in order to achieve various effects. Experimentation on this has been conducted at least in the *A.I. Game* [16] and *Prosopopeia*. In the latter project, organizing the game was re-defined into the game world as a part of the game world.

Social expansion offers opportunities of community forming by encouraging spontaneous interaction of unknown people and potentially spices up outsiders' lives by making them spectators or participants. The marketing opportunities are also significant, both when marketing pervasive games themselves (*Perplex City*⁵) and when marketing some external product (*The A.I. Game*).

The challenges caused by social expansion include the risks of drawing truly unwilling persons into the game. Facilitating the creation of new social relationships is not without hazards either; problems similar to ones encountered in dating services might emerge. Finally these borderline players might not realize that they are participating a game. In some games the Huizinga's [5] criterion of voluntariness of play might be problematized.

3. DEFINING PERVASIVE GAMES

Using these three expansions as a conceptual framework, providing a strict or broad definition of pervasive game becomes almost a matter of taste.

⁴ An experimental pervasive larp played mostly in June 2005, Stockholm. (By Martin Ericsson, Staffan Jonsson, Adriana Skarped & al., organized with IPerG project.)

⁵ See “*Perplex City Faces Reality Check*”, in *Wired News* (the 12th of July 2005).

Pervasive game is a game that has one or more salient features that expand the contractual magic circle of play socially, spatially or temporally.

Rather than attempting to provide an exact divide of games into pervasive and non-pervasive subtypes, this approach provides a simple analytical framework for looking at the ways in which certain games are pervasive. It intended to provide a way of understanding a wide range of games from small-group position-based mobile games all the way to the massively scaled, performative *supergaming*⁶.

It should be noted that even the non-expanded games do not exist in complete isolation – every game is influenced by elements outside the magic circle. Trying to think about a trivia game without cultural context illustrates the impossibility of the idea. And games exist in social contexts: for instance, every player’s performance is dependent on where and when she learned to play the game, and on every time she played the game before.

This look at the ways of game expansions gives us a new way of analyzing traditional games as well. Sports (*ice-hockey*) and performative games (*Dance Dance Revolution*) are examples of social expansion, since the audience participation may influence the game despite the supposed spectatorial position. All games played in persistent worlds are temporally expanded by definition, though the players are often able to restrict their playing to certain play sessions⁷. If *Tamagotchi* is seen as a game, it is another example of temporal expansion. Finally, many children’s games (*hide and seek*, *tag*) are spatially expanded, at least when the limits of the playing area are not clear.

These expansions form a qualitative framework, not a quantitative one. It is impossible to unequivocally tell whether *Dance Dance Revolution* exhibits stronger or weaker social expansion than *The A.I. Game*, since the two forms of social expansion – implicit audience participation and conscious hiding of gameness – are very different ways of blurring the concept of player.

3.1 The Role of Technology

Pervasive games often rely on pervasive, ubiquitous and mobile technologies in creating the expansions of playspace. However, including such requirements to a formal, ludological definition would be artificial, since none of the three described expansions require any electric devices at all – as demonstrated brilliantly by *Killer: The Game of Assassination*⁸. In this, my focus obviously differs from some earlier approaches, such as the ones by Walther

⁶ McGonigal [13] defines *supergaming* as massively scaled gaming superimposed on everyday environment, that heightens the capabilities of the participants and harnesses the play of distributed individuals into an efficient problem-solving unit.

⁷ Some persistent worlds expand temporally more than others, for instance by allowing the players to attack each others’ assets even when they are offline. In these cases the players are unable to fully restrict their gaming to certain play sessions.

⁸ *Killer* is an example of a murder game staged in the real lives of the players. The players’ goal is to murder their victims sneakily with water pistols and makeshift bombs while avoiding assassination attempts. See [6], also [18].

[19] and Nieuwdorp [14].⁹ This is also the reason for not deriving the concept of pervasive game from its etymological roots, from the discussions on pervasive and ubiquitous computing.

Some game types often discussed as pervasive games do require technological solutions, as they include virtual elements. *Mixed reality games* [2] are played in spaces with both physical and virtual components, while *trans-reality games* [9] simultaneously include physical, virtual and mixed reality game staging spaces. In *adaptronic games* [19] virtual reality adapts to measured changes in physical reality – such as weather or traffic changes.

One more descriptive feature of many pervasive games is crossmediality. The *crossmedia games* [10] are played across different media such as cellphones and other handheld devices, television and internet, but in addition to these gaming devices it might use “media” such as flashlights, cameras, streetlights, outside events etc, with only the imagination as the limit. Some of these media might be used as output (TV) and input devices (camera) while some of them can provide contextualizing data to be used in the gameplay (sports statistics, news reports).

3.2 Augmenting and Fabricating Reality

In many recent pervasive games, the three expansions have been used to enhance or enchant everyday life with hidden meanings. The *alternate reality games*¹⁰ use the three expansions in order to create the illusion of games not being games [11, 17] – even though they actually quite obviously disclose the fact that they *are* games. Sometimes they even disclose their gameness by explicitly denying it, like *The A.I. Game* did by declaring “This is not a game” in a television broadcast. This explicit denial enables the players to pretend and perform belief collectively, contributing to the social expansion and the feeling of alternate reality [12].

The other side of the illusion of the games not being games is that the players enjoy the illusion of not being players. This social expansion, includes the blurring of the game mechanics, ambiguity of the game interface (see [14]) etc. One requirement for the alternate reality illusion is that the players do not understand the game system completely.

In Sweden there also exists a small but interesting underground trend of radical alternate reality games taking the “players not being players” aesthetic to an extreme end. These *reality games* differ from the alternate reality games in that reality games fabricate reality; the reality game might not reveal its artificial origin to the “player” at all, but pretends to be nonfictional. In this sense the reality game is akin to a candid camera shoot with a new agenda: while candid camera is motivated by the enjoyment of an external spectator, the reality game is directed at the “player”.

It is indeed questionable if fabricated reality constitutes a game at all, since it is not based on the social contract of magic circle. As the players are not consciously playing, they also lack the lusory attitude required for gameplay, and miss the safety brought by the protective frame of artificiality [16], differentiating the ordinary life from play. The “players” are unable to operate in the semiotic domain of the game (see [14]), being unaware of its existence.

⁹ Also *ubiquitous gaming* has been directly derived from ubiquitous computing [1].

¹⁰ A.k.a. *immersive games* [11].

Even if reality games are not games, ludology offers a fruitful framework for analyzing them.

Though reality gaming is a tiny fringe phenomenon at the moment, its problematics are relevant for all alternate reality games played in the presence of bystanders. To the spectators any alternate reality game might appear as ordinary life; hence, they are all in a position equivalent to that of a reality game “player”. This is a critically important matter implying several legal and ethical design considerations to be investigated.

4. CONCLUSION

To say that pervasive gaming is not limited to the contractual playspace of the traditional magic circle of gameplay means that participating in a pervasive game influences the ordinary life of the player quite directly. Such influence presents new challenges for the game design, since the dynamics of game and ordinary life have to be negotiated. Eriksson & al. [4] address some challenges of life/game interplay by requiring *social adaptability* from pervasive games, denoting “the ability of a game to adjust, either actively or passively, to changes in the social environment so that negative effects on gameplay or activities overlapping play sessions are minimized”. Creating a framework for understanding social adaptability is work in progress within the IPerG project.

The conceptual framework of these three expansions is not an exhaustive taxonomy of how the contractual magic circle could be broken, though all the three I’ve chosen are derived from Huizinga’s [5] basic criteria of play. The last Huizinga’s boundary, non-ordinariness of games will be very interesting later, when the pervasive games include persistent worlds with economic systems. Breaking that boundary is already explored in the persistent virtual worlds; now that services and currencies are moved through the magic circle in a fashion significant enough to make a living for full-time workers, the game is no longer isolated from ordinary life. Extra-ludic legislation also increasingly regulates gameplay in these games (though some parts of it may be suspended in social gaming contracts), which might become a very complicated issue in alternate reality games that pretend and reality games that fabricate ordinariness. This dimension could be called *legal-economical expansion*.

The game genre behind the pervasive buzzword seems to be an extension of earlier gaming phenomena, using traditional elements in a new, extreme fashion. Whether pervasive games then constitute a genuinely new form of games is up to debate, but one thing is certain: the pervasive games use these elements to successfully produce genuinely different experiences.

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