

# Participant Roles in Socially Expanded Games

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**Abstract.** One common feature in pervasive games is the way they obfuscate the social boundary of play by involving non-players in the game in various ways. We discuss how several earlier pervasive games have invited bystanders into participation, mapping design alternatives for future game development.

## 1 Introduction

Games are often considered to happen inside a defined social boundary – a *magic circle* – which serves as a protective frame defining playful events as happening outside the players’ ordinary lives [2, 11]. We have earlier [6, 7, 8] presented a three-dimensional design space for pervasive games, suggesting that pervasive games expand spatially, temporally and socially beyond the limits of regular games. Pervasive games are typically played in places and times that are not defined in advance, and the activity of playing is ambiguous, often blurred with player’s ordinary life.

Social expansion implies that the game expands socially over the boundary of game, most often inviting non-players to participate in a way or another. The social boundary of game is redefined, and thus the protective frame is compromised. This is clearly an ethically challenging style of game design, but also a very promising one due to the fact that it can be used to create very engaging experiences. In this paper, we will take a closer look at the design options and potential risks that arise from social expansion, by inspecting a group of pervasive games<sup>1</sup>.

For pervasive games, it is extremely important to investigate social expansion in depth, as it is almost a necessary consequence of expanding a game widely in space and time. Take for example the simple game *Botfighters*<sup>2</sup> [11]; when players come close to each other, their ‘bots’ engage in battle, calling the player to action. Although the game is purely a player vs. player experience and does not depend on bystander presence, the gaming activities of the players influence the everyday lives of outsid-

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<sup>1</sup> Many of the games referred here have been described in further detail in [8].

<sup>2</sup> *Botfighters* is a location-aware mobile game, where players near each other can initiate player-vs.-player fights. When escaping a battle or chasing an opponent, the player must physically move in order to change the cellphone cell where he stands. The game mechanics strongly encourage keeping the game active 24 hours a day..

ers. The bystander might bump into a running player, or wake up to his girlfriend's phone as she gets attacked by another player.

## 2 Shifting Roles

How, then, do people get involved in pervasive games? One way to approach this is to analyse the roles that games offer to players and non-players. There are multiple roles available even in classical games. The archetypical *player* is a person who is at the same time aware of the ongoing game and able to perform actions to influence its current state, and who has a particular personal objective in the game (often a winning condition). Players can be differentiated from the other active *non-player participant* roles. Non-players are differentiated by their lack of a personal game goal; the (sports) referee role is an archetypical example.

A borderline role is that of the *spectator*. Spectators are aware of the game and can even be actively involved in it (e.g., through cheering or providing players with information). The difference between spectators and players is that spectators have no direct influence over the game; their involvement in the game is restricted to their ability to influence the behaviour of the participants.

The final role worth that merits discussion in this paper is the *bystander*; whether unaware or aware of an ongoing game, bystanders have no intention or opportunity to participate in it. Socially unexpanded games are typically completely insulated from bystanders: they are not affected by the game (even if aware of it) and they have no influence over the game.

In socially expanded games, these roles are not fully separated from each other. The simple case is when a socially expanded game offers opportunities for *role shifts*. Our major example of this will be the *rabbit hole invitation mechanism* employed in alternate reality gaming, discussed in detail below. A non-ambiguous example of role shifts is offered by *Anthills*<sup>3</sup> concept. This board game supports moving between all four roles. Bystanders are (peripherally) aware of the ongoing game but not affected by it. As the game features a large, public board, it also supports a spectatorship. There is also an active spectator role, where a spectator can join the game on either side, or alter the current state of the game board (by kicking the anthill or triggering locust waves etc.). Finally, the game supports role-shifts at any moment during the game. Players can join and leave after any move.

The most spectacular feature for socially expanded games is that the roles also can become blurred. One feature that has been utilised in several games is that players might not know who else is involved in the game. For example in *Killer: The Game of Assassination*<sup>4</sup> [3], the players typically do not know who the other players are.

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<sup>3</sup> A concept-level prototype developed within IPerG project. *Anthills* is a light party game. The game is a technology-enhanced board game where two ant hills battle each other for territory. Players do simple turn-based moves and can go in and out of the teams as they please.

<sup>4</sup> *Killer* is an example of the larger *circle of death* game genre, where players seek to assassinate each other in their everyday life, typically using propped bombs or water pistols. The

*Uncle Roy All Around You*<sup>5</sup> [1] and *Prosopopeia*<sup>6</sup> designers made use of design elements that made the players continuously suspect that people around them were other players.

### 3 Contextual Awareness

Several game designs offer ambiguous roles for players and spectators through a deliberately ambiguous game context. When a person first makes contact with the game, it does not make itself fully known. It will be noticeable that something is taking place, but not exactly what is happening. The typical pattern is that people become aware of the game through passing through three broad stages of awareness.

- **Unaware state:** The game experiences go unnoticed or are interpreted as 'everyday' phenomena.
- **Ambiguous state:** The experiences produced by the game are too obvious or too closely related to each other to be ignored; still there is no frame of reference that would reveal and confirm the fact that it is a game, which we will refer to as the *gameness* of the experience.
- **Conscious state:** The game context is accessible to the person.

The critical stage is that of ambiguity, as this is when it is possible to misinterpret the experience as reality. As discussed further on in this section, the game experience in this state is that of a *reality game*, a piece of fabricated reality that is a game but does not reveal itself as such. A particular problem is that the audience will form their own interpretation of the context. Unless the ambiguous experience is carefully designed, these interpretations can very well be much more dangerous and worrying than the true explanation (that it was a game).

It should be noted that the ambiguous state can still support a playful, *ludic*, interpretation. An example of this was observed with the reality game *Vem gråter*<sup>7</sup>, where at least one of the informants reported a ludic experience in the ambiguous state. This participant had read some of the background material for the game on-line, and then

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game typically lasts for less than a week, and involves various creative strategies of assassination, sometimes involving help from unaware outsiders.

<sup>5</sup> *Uncle Roy All Around You* was developed by Blast Theory as an experiment in game-based performance arts. The game mixed online and on-street participation. The game theme focuses on making contact with people you do not know beforehand, both players and bystanders. Players interacted with instructed actors as well as with complete outsiders.

<sup>6</sup> *Prosopopeia* was a pervasive larp mixing character-immersive role-playing in cityscape with the players' ordinary lives. The aim was to create as seamless experience as possible, which was created by a minimalistic rule set and encouraging players to do things for real instead of simulating them in any way. This game was developed within IPerG.

<sup>7</sup> *Vem gråter* was a prototypical reality game, a series of mysterious poltergeist phenomena staged at Gotland University College. By observing the clues hidden in the events – witch hunters skulking about, text written on walls – a bystander could understand that a ludic structure was present and possibly solve the haunting puzzle.

went, with a group of friends late at night, to visit one of the places where the background story was set.

Interestingly enough, it is actually possible to create game experiences that take the opposite direction. In *Uncle Roy All Around You* players were initially very clearly invited to a game. They were explicitly told that it was a game and they were given a clear game objective to find Uncle Roy. A time limit was set, which made it possible to also fail the quest. However, as the game went on the original goal became subsequently blurred, the focus shifting towards much less goal-oriented objectives with a strong focus on social expansion. Eventually, the players were confronted with several tasks which involved confronting strangers, with no clear knowledge about who were in the game and who were not. A similar design strategy was employed in *Majestic*<sup>8</sup>, where the game was first publicly announced and bought as a game. Once the game was started, it was suddenly ‘cancelled’ for unclear reasons. A couple of days later, the gamer received a second, much more ambiguous invitation to the real game.

### 3.1 Reality Games

Reality games are not games in the typical sense of the word; they are games that do not reveal their gameness to the participant. As the player does not know that he is playing a game, it’s easy to question whether he actually is or not. A typical reality game is based on fabricating reality; staging events that are interesting from the target audience’s point of view. *Vem gråter* was a reality game, intending to present a poltergeist mystery to university staff.

In reality games, the critical function is to entertain the participant or to provide him with an artistic experience. This way they differ from *candid camera*, which is intended to entertain an external audience, and from *scam-baiting*<sup>9</sup>, which is intended to entertain the scam-baiters (and to steal some of the scammer’s time). In the unaware and ambiguous states, socially expanded games appear as fabricated reality. This becomes particularly problematic when the game is unbalanced in a way that there exists a group of players that are aware of the ongoing game, and a group of outsiders who are affected by the game but unaware of its context. In *Prosopopeia* the players talked on several occasions with strangers about the game content. *The A.I. Game* fabricated a false movie credit, a ‘sentient machine therapist’, in the end credits of a commercial. All such designs should be considered and designed also from the outsider perspective.

*Vem gråter* illustrates the importance of the thematic choices of socially expanded games. As this game used a scary themes, it elicited negative interpretations – even though nobody actually was made to believe in ghosts. The pleasurable intensity of a

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<sup>8</sup> *Majestic* was Electronic Arts attempt to launch alternate reality games as a retail affair. The game had to be bought in stores as a normal computer game, but once initialised it ran as an alternate reality game utilising multiple channels of communication. The game was discontinued in the fall of 2001.

<sup>9</sup> Playing along with internet scammers, often documenting the funny results in websites like [www.419eater.com](http://www.419eater.com).

scary movie is generated by the combination of safeness of the fictional situation and scariness of the portrayed events.

*Prosopopeia* risked a similar problem. In this pervasive larp the players were supposed to look for a disappeared woman from Stockholm. As a thematic decision, the woman was an old hippie, so the players decided to track her down by speaking to junkies and drunks on the streets. While this is not inherently problematic, it could have been perceived as scary or dangerous by some participants.

## 4 Role Offers

In all games featuring social expansion, the transition between the contextual states should be deliberately planned. The designer should understand what kinds of people are likely to associate with the game and how they should arrive at the planned state in the progression.

When the game makes itself known, be it ambiguously or unambiguously, it should enable different types of role-taking. A person who becomes aware that something is going on might want to join the game (or the mysterious activity), but he or she might also be satisfied just to watch or to take on some other non-player role. In line with the previous discussion of possible roles, a game could offer any of the following roles.

- **Invitation to play:** The game offers active participation as a player.
- **Invitation to participate:** The game offers active participation, but not in a direct player role.
- **Invitation to the spectatorship:** The game offers spectator opportunities.
- **Invitation to refuse:** The game offers the option to ignore the game.

An interesting aspect of offers is that whenever roles of an active participant or a spectator are available, these offers also implicitly imply an invitation to refuse the game. This will typically be a redeeming factor in itself: if you do not like what you see you can choose to ignore it. However, in the ambiguous state the invitation to refuse is less complete than in the conscious state. The refusing person will be left with an interpretation without the ludic context (fabricated reality never exposed as non-ordinary), or alternatively that he or she is missing something interesting and fun. Quite often such an ambiguous experience is interpreted as ‘some prank’.

### 4.1 Invitation to Play

Invitation to play can be done in various ways. The seamless transition from bystander to player can be done in a fashion widely used and discussed in alternate reality games – through a *rabbit hole invitation*. A metaphorical rabbit hole is a clue hidden somewhere in ordinary life, leading the interested person towards a mystery hunt which is a clear ludic experience. (The fact that it is a preconstructed game, the *gameness* of the experience, will however often remain hidden.) Many examples

exist, *The A.I. Game*<sup>10</sup> being the pioneer of the technique [4, 5] (see [12] for detailed analysis).

In the *The A.I. Game*, the first players picked up a clue from watching a movie trailer on TV. At that point, the players were in the unaware state. When they started to investigate this clue, they found mysterious web sites. As it became clear that something strange was going on and reality fabrication had taken place, the players shifted to ambiguous state. Some obvious hints lead players towards ludic interpretations, especially the fact that all the game websites were dated in the future. However, only later it became clear to the players that they were actually solving an intricate pre-planned fictional mystery.

*Vem gråter* was intended to keep the participants in the ambiguous state as long as possible, confirming the gameness of the events only after the final scene. As previously discussed, this enabled both a non-ludic and a ludic interpretation of the events and the on-line content.

Another interesting model of invitation to play is *viral invitation*, where core players are trusted to bring more players into the game as it goes on.

## 4.2 Invitation to Non-Player Participation

Apart from invitation to play, a game can also offer *non-player participatory roles* for bystanders. We have already discussed *Killer* where the non-player finding a prop can contact the game master and have the player penalized.

Pervasive games may offer roles for participants and spectators who are in an ambiguous context: a participant or a spectator knows that something is going on, without knowing any details of the game or who are playing, or even that it is a game. One example of this was the *Whirling Dervishes*<sup>11</sup> performance/game, in which a flash mob reclaimed a street. Bystanders were invited to join the on-street dance session. Unknown to the participants, the players had a playful goal in the event of attracting as many participants as possible.

It should be noted that it is possible to design a game which offers participatory non-player roles while these participants are unaware of the ongoing game. In [9] we present possible game designs having these features, such as *Yum Yum Sheep*<sup>12</sup>.

On the other hand, offering roles of a non-player participant when they become aware of the game is often perceived as fun and engaging. In the *Yum Yum Sheep*

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<sup>10</sup> *The A.I. Game*, also known as *The Beast*, has been thoroughly detailed elsewhere [3, 4, 1]. Basically it was a web-based puzzle game with a very intricate rabbit hole structure. One of the main points was that the game tried to deny its gameness – even claiming that it was not a game, allowing immersive gameplay experiences.

<sup>11</sup> *Whirling Dervishes* was a flash mob performance in San Francisco involving ludic elements. The players flooded a street for a moment, performing a dervish dance. One of the participants' aims (or ludic goals) was to involve as many outsiders in the performance as possible.

<sup>12</sup> *Yum Yum Sheep* is a Bluetooth-based mobile phone game concept where the objective is to run around in an area, trying to spot as many other Bluetooth IDs as possible. Each ID is depicted as a sheep, fed to the player's monster that grows stronger from this. When two players meet, their monsters battle each other.

study, some of the informants invented such roles for themselves. For example, one of the informants said that if he knew he was being stalked as part of a game, he might start to play along, in a way hiding or running to make it more difficult to follow him.

One entertaining structure is the one where non-player participants to assign sanctions to the players. The options might include refereeing the player activity, possibly in a fashion similar to the voting done in reality TV shows. The design may also allow non-players to express their opinions on the whole game very tangibly and quickly, by allowing them to retaliate if they feel upset by the game. In *Yum Yum Sheep*, the non-players could choose to gather around a player in order to have many sheep overpowering the monster instead. The informants commonly perceived this as a fun option.

#### **4.3. Invitation to Spectatorship**

The easiest and least controversial form of social expansion is to offer outsiders the possibility to watch the show. The spectator role is particularly redeeming in the ambiguous state, since an activity that invites people to watch is typically interpreted as less dangerous or subversive than one that is performed in secrecy. Spectator roles can also be offered through Internet and other mass media, and depending on the nature of spectator position, even after the game has concluded.

In socially expanded games, spectators can have a role in the game design. In *Killer*, the explicit purpose of the players is to conduct their murders without witnesses. This makes *Killer* an interesting spectator game, for it tries to avoid spectators.

#### **4.4. Invitation to Refuse**

As previously mentioned, if the game offers some opportunity for an active or spectator role, it also implicitly offers the option to refuse the game. However, unless the game provides some way for the refusing person to also leave the influence of the game, the offer to refuse becomes vacuous. This was perhaps the most serious design flaw of *Vem gråter*. As the game was staged in an area where people had to spend time working or studying, they were not able to completely leave the influence of the game. From this perspective, *Prosopopeia* was much less problematic as the players were constantly on the move, or else in prepared and isolated game locations.

The most straightforward approach to this problem is to avoid the unconscious and ambiguous states altogether, striving for full awareness about the gameness of the experience of the game for both participants and non-participants. A perfectly viable alternative is to hide the game. Many alternate reality games (such as *The A.I. Game*) are predominantly played through web sites that only the players can find, and through email and phone calls that only reach the actual players.

The significance of providing an invitation to refuse is demonstrated especially in the reality games. As the conscious state of contextual awareness is deliberately

avoided, the participants might not realize that the experience is fictional – and thus it is not. It is impossible for a person who is not playing to quit playing.

## 5. Conclusions

We have investigated the subject of social expansion in pervasive games based on a host of game examples, and seen how social expansion offers numerous interesting alternatives for pervasive game design. The core issue is to provide interesting role offers both to players and bystanders; and our examples show that such role offers can be constructed even when the full game context is not known.

As the wider genre of pervasive gaming develops further, the various roles of non-player participants need to be investigated further as well. Some variations can be seen already; in *Yum Yum Sheep* they form the objectives of the game, in *Killer* they represent obstacles. In *Prosopopeia* the non-players provided a detailed landscape concealing many elements the game was built upon; players had to spot the fabricated parts of reality in order to succeed in the game.

The use of social expansion has proven an effective and enjoyable strategy to deeply engaging game play, and the transition between roles often form an intriguing part of the gameplay. The potentially most interesting design alternatives are the ones that make the game feel more tangible, real and immersive by compromising the magic circle the most. However, these are also the potentially most problematic designs. We intend to address this by further exploring the ethical challenges of social expansion, in particular from the non-player perspective.

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