"I'm Just Here to Play Games:" Social Dynamics and Sociability in an Online Game Site

Gregor McEwan[1], Carl Gutwin[1], Regan L. Mandryk[1], Lennart Nacke[2]

[1]Department of Computer Science,
University of Saskatchewan
110 Science Place, Saskatoon, SK, S7N 5C9
{first.lastname}@usask.ca

[2]Faculty of Business and IT,
University of Ontario Institute of Technology
2000 Simcoe St N, Oshawa, ON L1H 7K4
lennart.nacke@acm.org

ABSTRACT

There are many web sites that allow people to play board or card games against other human players. These sites offer tools and opportunities for social interaction, but little is known about how people really interact on these sites. To learn more about social dynamics on game sites, we analysed three months of log files from a large site to explore three themes: permanence (whether people formed a long-term association with the site); social interaction (in terms of shared activity and verbal communication); and formation of ties (whether people made contacts with others). Our analyses showed that while the site seems very social when we consider gameplay, the population was highly transient, and people talked very little. To explain these behaviours, we suggest that games and game-based activity should be considered as a legitimate form of human interaction. Our analysis provides new information and new ways of thinking about how game environments can be designed to support many kinds of sociability.

Author Keywords

Games, game sites, virtual social groups, sociability.

ACM Classification Keywords

H5.3. [Information interfaces and presentation]: *CSCW*

General Terms

Human Factors; Design; Measurement.

INTRODUCTION

The world-wide web has many game spaces where people meet to play parlor games (e.g. board or card games). Many of these sites are large and heavily used—for example, sites such as Yahoo Games, Pogo, and PlayOK host thousands of games at a time, and often have tens of thousands of players online at once. These large gathering places provide many opportunities for people to interact socially with others, both through shared activities and through verbal (usually chat-based) communication. The sites' persistence also provides opportunities for longer-term connections (e.g., people may play regularly with particular partners, form new friendships, or associate with subgroups).

CSCW'12, February 11–15, 2012, Seattle, Washington, USA.

Little is known, however, about social behaviour of people on these game sites. Previous work in CSCW has looked at other online communities (e.g., [3,6,15]), but game sites are a different type of gathering place than discussion forums, multi-user dungeons (MUDs), massively multiplayer online games (MMOGs) like World of Warcraft, or social virtual worlds (VWs) such as *There*. Game sites do not provide a persistent world (as with MUDs or MMOGs), but instead are based on playing individual short-duration games. In addition, interaction in parlor games is not driven by verbal communication, as it is in MUDs or social VWs (although games are certainly used as a setting for conversation in the real world). Understanding social dynamics in these kinds of online environments is important for designers to understand their user group and to inform decisions about providing social features in a site's interface.

To find out more about social behaviour among users of online game sites, we carried out an analysis of one large and popular site called PlayOK (www.playok.com). The site administrators provided us with logs detailing player activity and communication over a three-month period (totaling more than 400 million events); we also frequented the site, observed gameplay on a regular basis, and gathered responses from an on-line survey of 124 PlayOK players. Our primary analysis involved the activity logs, employing the 'social accounting' techniques that have been used in previous work [4,8]; observations and survey data were used to help interpret and fill out the log analyses.

Our study explored three themes that are frequently considered in work about online communities. These are: *permanence*, the idea that social groups benefit when people are long-term residents of a place (virtual or real) [2]; *social interaction*, which has been primarily considered in terms of verbal communication, but which can also include shared activity [7]; and *forming ties*, in which people meet others, associate, and make lasting connections (whether strong or weak) [7].

Our analyses show that PlayOK is quite different in terms of social behaviour depending on the questions being asked. When considering questions relating to playing games, people appear to be very social – for example, there are more than three million active members and more than 670,000

games played per day; many people (more than 10,000) play several games per day (more than 20), and people play much more frequently with a small group of opponents (on average, people play more than half of their games with only ten people).

In other analyses, PlayOK seems like a much less social place. Overall, people talk very little during games (72% of games have no chat messages, and 89% have three or fewer), and there is even less conversation outside of the games. Many interactions on PlayOK appear to be highly impersonal, with many one-time-only games; in addition, the interface automates much of the articulation work of the games, allowing people to play with no conversation. Last, the player population of PlayOK is highly transient – most people stay for only a few days, and only a small proportion of users stay active for more than a few months.

Although there are some exceptions to these findings (one person even met her future husband on PlayOK), the overall picture is one of a population whose only real contact with one another is through the games themselves. This poses a question that has not been widely considered previously in CSCW – how can an online gathering place survive for so long, and be so popular, with so few of the characteristics that are seen as vital to the health of a community?

This question leads us to consider the role of games as a social interaction mechanism. Our analyses suggest three ways in which games are interesting as social interaction, ideas that can help to explain how sites such as PlayOK succeed. First, play-based shared activity can be considered as a legitimate form of human interaction, where the social elements of the experience arise almost entirely from the game activity rather than from verbal communication. Second, the impersonal interactions that seem common in game sites (and that are facilitated by the games themselves) are still social connections that fill particular human needs, and that have parallels in a variety of real-world settings. Third, the 'unconnected interactions' of game sites like PlayOK are an opportunity and setting for people to engage in a pure kind of *sociability*, a surface-level but still-important part of human social engagement.

Although our investigation is preliminary, it seems clear that the kinds of interactions seen in PlayOK have as many benefits as potential drawbacks, and that game-based and activity-based interaction should be considered a legitimate type of social interaction. Our work shows the importance of considering a wider view of social interaction when designing for sociability in online game sites, and cautions that designers should not necessarily push towards more verbal communication or stronger personal connections.

RELATED WORK

We begin with an overview of virtual communities, then present studies of online games as virtual meeting spaces.

Virtual Communities

Research into real-world, place-based communities distinguishes between neighbourhoods and communities, similar to the distinction between space and place in the CSCW literature [10]. Communities are neighbourhoods that have a *sense of community*. A similar distinction can be made in the online world between virtual neighbourhoods and communities [2]. Considering whether a virtual community is a community according to classic definitions (e.g., Park's 1936 definition [18]) is beyond the scope of our paper, so we refer to previous analyses of this issue, such as those by Driskell and Lyon [7] or Wellman and Gulia [22].

In social psychology research a widely accepted definition of a real world sense of community is McMillan and Chavis's [14], which is composed of feelings of membership, feelings of influence, integration and fulfillment of needs, and shared emotional connection. Blanchard and Markus [2] have extended this work into the online world to define a *virtual sense of community*, which is composed of exchanging support, creating identities and making identifications, and production of trust.

However, a characteristic of these community analyses is that they are dependent on measuring the internal state of members through psychological measures (i.e., questionnaires) and/or content analysis of communication within the community. In contrast, we investigate a virtual community via large-scale log analyses. Our approach is closer to the archaeological style advocated by Jones [12], or the social metrics used by Ducheneaut et al. [8]. We explore sociality in the game site through simple cultural artifacts, such as counts of games and chat messages.

Games as Virtual Meeting Spaces

The game research literature has examples of different types of online games being used as virtual meeting spaces.

Initial studies of social interaction in MUDs followed shortly after the first MUD was developed in 1979 (see [6] for a brief history of MUDs and CSCW studies of MUDs). Although many studies of MUD-based interaction were based on 'social MUDs', a study of a 'combat MUD' – where the game was the primary focus – showed that players acted together to play the game, but had limited social involvement with one another [15].

Virtual worlds, such as Second Life, are not games according to most definitions; however, they do provide an interesting platform to study online social interactions. Brown and Bell [3] examined how play and sociability are expressed in *There*, a persistent virtual getaway that provided various games in its offering of activities. Their analysis shed light upon the practice of socializing through action in a VW, known as 'performing' a friendship.

There are many examples of MMOGs being studied for their support for social interaction. For example, an early study of Ultima Online used questionnaires to investigate social dynamics [13]. In the Daedalus project (nickyee.com/

daedalus), a series of studies investigated the psychology of MMO role-playing games (MMORPGs). Studies of the MMORPG World of Warcraft (WoW) [23] showed a prevalence of lively chats that go beyond just playing the game (70% chatted regularly about real life). Conversely, other work showed that some players prefer to play alone within a social milieu, meaning that other players provide an audience, and give a sense of social presence [9].

Researchers have moved beyond social dynamics to study how relationships can be formed or supported in MMOGs. Nardi and Harris [16] used ethnographic and interview techniques to investigate relationships in WoW. They show that guilds conform to the properties of communities and also discuss 'knots' – unique groups that form to complete a task of relatively short duration. Recent work has extended the concept of maintaining relationships in MMOGs by studying the concept of intimacy in WoW [17].

METHODOLOGY

Our results are based primarily upon analysis of three months of system logs from the online gaming site PlayOK. The logs contained events such as logins, games and chat messages (Table 1). We also participated on the server, in a variety of different game types, to get a feel for the player experience. Finally, we ran a small online survey to see how other players experienced PlayOK.

The Game Site: PlayOK

PlayOK was established in Poland in 2001 and has grown at a steady rate, with 5.2 million unique accounts as of June 2010 (accounts are removed after one year of inactivity). PlayOK is a web-based game site that offers 38 different turn-based games, including board games such as Chess and Backgammon, card games such as Hearts and Canasta, and other games such as Dominoes and Ludo. Three games are single player, and we removed these from our analysis. All other games are player-vs-player only. Free registration is required to play and the site is ad supported. The games are partitioned by language and region, so not all games are available to every person.

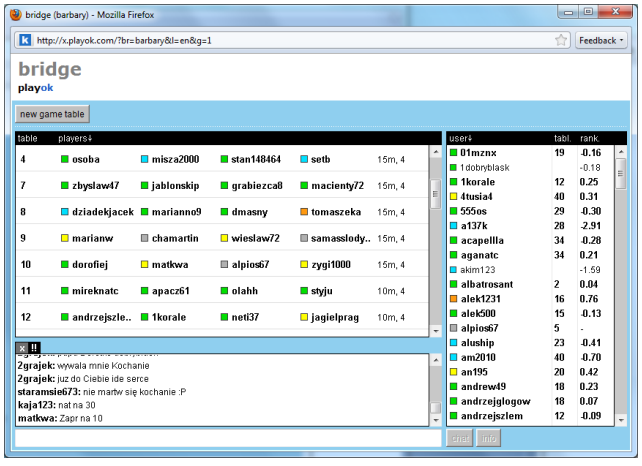

Figure 1: A bridge room: player list at right, table list at left, and room chat at bottom left.

After logging in and selecting a game type, the player is presented with a list of rooms. Selecting a room starts a java applet in a new window (Figure 1). In this window are a list of active game tables, a list of other people in the room, and a text chat. A game table is a virtual area for a single game, and each room can contain many game tables. Users can enter game tables currently in progress or create new tables.

Entering a game table opens a new window (Figure 2) with a view of the game, a list of people at the table, the names of the players (or empty places if the game is not full), and a chat area. If there is space at the game, and the game has not started, users can 'sit down' and become players.

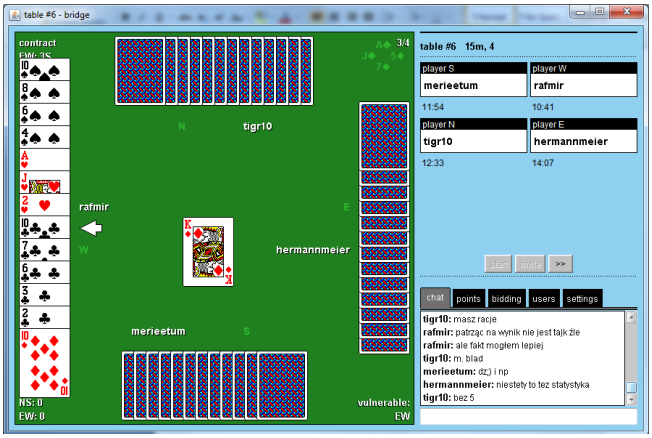

Figure 2: Bridge game table: player information at top right; chat area at bottom right.

Log Files

The PlayOK administrator made daily log files available to the authors. Our data covers 8 April 2010 to 8 July 2010 (91 days) and consists of ~12GB of compressed text files. Table 1 summarises the structure of the events recorded in the log files. Logging was started specifically for this study and the only historical data is a count of monthly unique logins since 2001 (not shown here).

Login	User ID, Language, Contacts (list of user IDs), Registration date, # people on the game type
Logout	User ID, Time logged in, # people in the game type
Room Chat	Sender ID,Room name
Table Chat	Sender ID, Room name + Table number
Private Chat	Sender ID, Receiver ID
Join Room	User ID, Room Name, # people in the room
Leave Room	User ID, Room Name, # people in the room
Join Table	User ID, Room name, Table number, # people at table
Leave Table	User ID, Room name, Table number, # people at table
Invite	Inviter ID, Invitee ID, Table number
Game Start	Room name, Table number, Player IDs (w/ rankings)
Game End	Room name, Table number

Table 1: Log events (all events include a timestamp)

Survey

We also deployed an online survey which was advertised in each game room for three days. We had 124 responses, 87% male, ages 18 to >50. Respondents represented 22 game types; the largest group were chess players (27%). Most (51%) had been playing on PlayOK for over 3 years. Almost 25% spent more than 12 hours per week on the site.

We note that the number of respondents in the survey is very small in comparison to the total population. Therefore we only use the survey responses for anecdotes of experience that cannot be found in the log data alone.

ANALYSES OF SOCIAL DYNAMICS IN PLAYOK

Our analyses looked at three themes frequently used to describe communities and social groups – permanence, social interaction, and formation of ties. Our goal was to take a broad initial look at how people behave in PlayOK, employing previously-used 'social accounting' techniques.

For each theme, we identify specific questions that can be answered through our log-based analyses. In some charts that accompany our analyses, we show a subset of games to reduce visual clutter. We selected ten representative game types for this subset: four board games (chess, reversi, gomoku, and backgammon), four card games (canasta, gin, bridge, and ludo), and two other games (blogpoly and dominoes). These games cover a range of values of games played, chat messages sent, and number of players (see Figure 3). The actual analyses, except where explicitly indicated, always take into account all games.

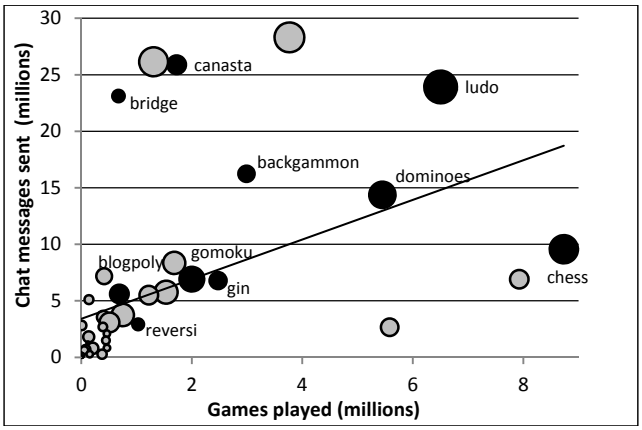

Figure 3: Game types by number of games and chat messages. Size shows population. Selected games are black and labelled.

Theme 1: Permanence

Because PlayOK does not have a persistent world like some on-line games, we explored the theme of permanence by looking at the degree to which people form a long-term association with the site – in real-world groups there is persistence of membership as people commit time to the group. We considered two specific questions: whether people remain in the PlayOK population for a long time; and whether people participate regularly.

How long do people stay active on PlayOK?

We used people's participation rates as an indicator of their degree of association. The logs told us each person's registration date, so we could examine participation rates for people of different 'PlayOK ages' (based on when they joined). Figure 4 shows numbers of active players during our logging period based on PlayOK age ("active" means logged in for more than 30sec at least once), and Figure 5 shows average activity levels. Both figures only record registrations before March 2010, to remove transients.

Figure 4 shows that the number of people who stay active on PlayOK declines steadily over time. However, there are a small number of people that still participate in the site after several years (including some who registered before January 2004, the first month that dates were recorded).

Figure 5 shows that average activity remains roughly equal regardless of registration date. This means that even older players still have significant activity on the site.

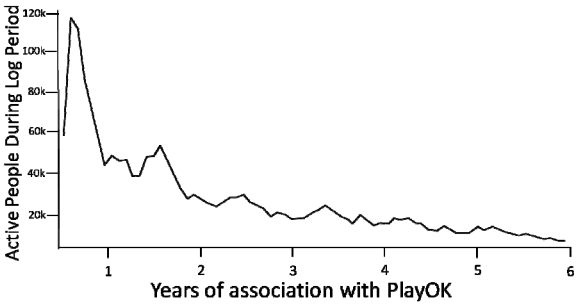

Figure 4: Numbers of people that showed activity during logging, by registration date since 2004.

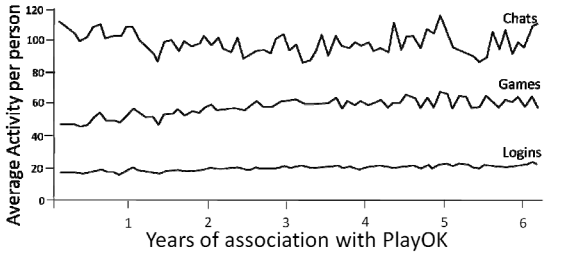

Figure 5: Average logins, games played, and chat messages sent during the login period, by registration date.

Do people participate regularly in PlayOK?

To investigate this question, we looked for two subgroups: stable players and transients. We defined stable players as those that had some activity every week, and transient players as those with all their activity within a three day window (not including people who could have been just starting their involvement with the site). Figure 6 shows proportions of stable and transient players.

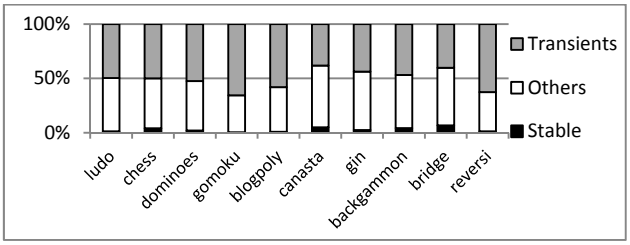

Figure 6: Population types, by game type.

The figure also shows a large proportion of 'other' people. This category covers a wide variety, such as irregular players, transients who participated a little longer than our threshold, or stable players who missed a week or two.

Our definitions are conservative and yet the proportion of transient players is very high. The smallest proportion of any game is 35% and for most games the majority of players are

transient. This affects the establishment of behavioural norms, connections between people, support structures and other foundations of stable social groups.

Theme 2: Social Interaction

We carried out two investigations to look at people's social interaction in PlayOK: game interactions (doing things together), and verbal communication (talking together).

How much do people play together in PlayOK?

Real world social groups often do things together (e.g., a cycling club rides, a board game club plays games). The activity is an important part of social interaction, so we analysed how much people play games in PlayOK.

Figure 3 (above) gives a visual indication of the number of games, number of chat messages, and number of people in each game type. There were more than 60 million games played in three months. The game type with the most number of games was chess, which had approximately 8.7 million games during our logging period.

Figure 7 shows games per person for the three months of logging. There is a lot of variation: for example, more than 50,000 people played ten games, and more than 3,000 played 100 games. However, there is a large group that plays only a few games (e.g., transient players), and the largest group of people played only one game on average. In addition, there is variation by game type in the number of games played – Figure 8 shows some of the variability.

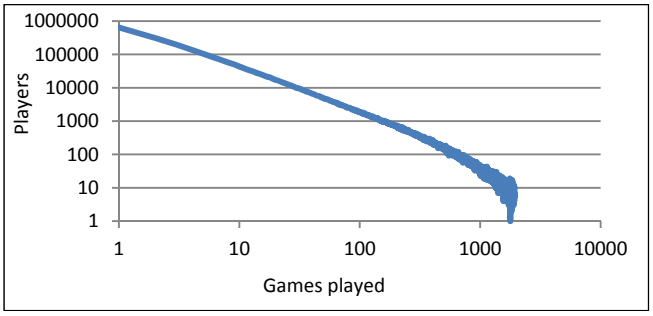

Figure 7: Histogram of games per player over the log period.

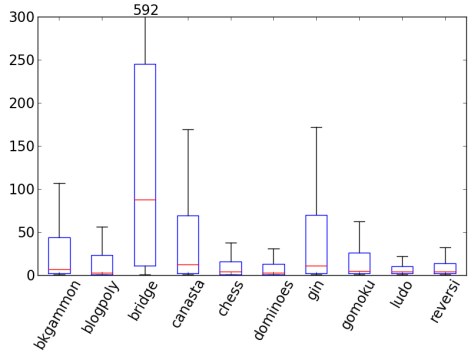

Figure 8: Games per person for sample game types. Whiskers show most extreme data less than 1.5*IQR fsrom the quartiles.

Verbal communication in PlayOK

A common characteristic of social groups is that when people get together, they talk. Verbal communication in PlayOK occurs through three types of text chat: room messages to everyone in a game room (Figure 1), table messages to the people at a single game table (Figure 2), and private messages to a particular person (not shown).

Although the total number of chat messages over our study period was large (Figure 3), this is an artefact of the large population of the site; our overall finding is that there is very little verbal communication on PlayOK. There was an average of 81 messages per person over the three-month period, less than one per day. In addition, 32% of the population did not talk at all during the log period.

On average, there were 3.2 messages sent per game (across all game types). There was wide variation in the amount of verbal communication in different games, with some card games having high numbers of messages per game (e.g., bridge: 28.8; or cribbage: 24.7), but with most games having very few messages. Overall, more than 72% of games were played without any chat messages at all. Figure 9 shows a partial histogram of messages in games. Our observations showed a distinct lack of several types of verbal interaction that one might expect in a social space: ordinary conversation, 'polite' communication such as greetings or departure messages, and the 'articulation conversations' normally seen at the start and end of a game (e.g., who will sit where, who will deal the cards, etc.).

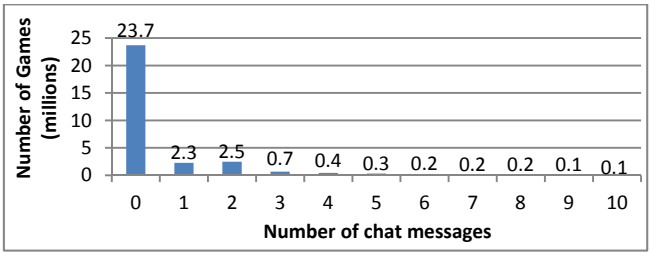

Figure 9: Histogram of number of chat messages per game.

Theme 3: Forming Ties

We looked at two questions to explore the ways that people can form ties and associations with others in PlayOK: how do people find opponents when they want to start a game; and do people play (or talk with) the same people over time.

How do people find opponents in PlayOK?

The primary interaction on PlayOK is playing games, and so we wanted to find out how the games were started, giving us insight into the beginnings of potential social ties.

There are four ways people can get together to start a game:

1. There is an established gaming relationship;
2. A conversation leads to a game;
3. One player invites another to a game;
4. A player creates a table and waits for opponents.

Our survey responses clearly establish that all of these strategies exist. One person reported only ever playing with the same group of friends (category 1). Another reported that he configures a table with specific settings, and waits for someone willing to play (category 4). Categories 1 and 2 are social while 3 and 4 rely solely on the interface.

We classified every game (skipping the first two weeks, since category 1 relies on historical information). The game was marked as category 1 if the players had played >2 games together previously. Otherwise, it was marked as category 2 if there were >2 messages exchanged in the last five minutes, or category 3 if there was an "Invite" within the last two minutes; everything else was marked as category 4. The thresholds were chosen to be favourable to the sociable categories (1 and 2).

Figure 10 shows the categories for our sample game types. Although most types have a substantial proportion of games played with previous opponents (see next analysis), the majority of games are started with no previous interaction between the players. For example, nearly 80% of backgammon games are category 4 (wait for opponents). These results show that the UI can act as a replacement for the extra-game interaction typically needed to start a game.

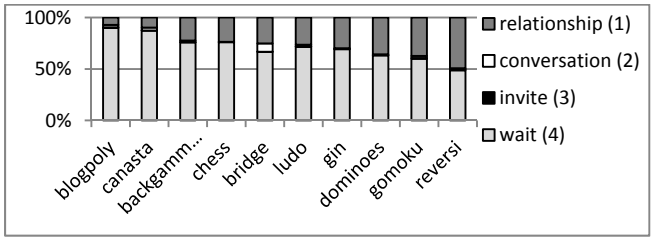

Figure 10: Different categories for starting games.

Do people play (or talk) more with a small group?

A common property of larger groups is that people associate more with a smaller subset of people. To look for group-forming behaviour in PlayOK, we looked at the amount people played with each opponent, at the time between repeated games with an opponent, and at the rate people added new opponents over the log period.

Frequency of playing against different opponents. Figure 11 shows the frequency of repeat games played against each player's top ten opponents. People do play against their most frequent opponents more often–the average frequency for the most likely opponent was 17.5%, whereas the mean across all opponents was 0.01%. This suggests that PlayOK players are maintaining small sets of favourite opponents with whom they spend most of their time. The favourite groups are small, however, and the graph quickly tails off.

A similar situation exists for chat partners (see Figure 12), showing that players are again maintaining sub-groups of partners, though once again the groups are small.

Recency effects. In real-world groups, people will often do something with a person a second time after meeting them (if the first encounter was positive). To look for this effect, we counted the number of games between repeated games with the same opponent. Figure 13 shows that there is a significant increase in likelihood that people will play the same person in their next game, but the likelihood drops off rapidly for later games. The increased likelihood of playing the next game with the same opponent can be partially explained by the convenience of already being at the game table, which makes it easy to start another game. Despite this, players' subgroups of favourite opponents and chat partners remain small.

Last, we examined the rate at which people played new opponents. People added new opponents at a near-linear rate throughout the three months; this implies that even though people play regularly with a small subset, they also consistently play with new and unknown partners. Overall, 65% of a player's opponents are seen for only one game.

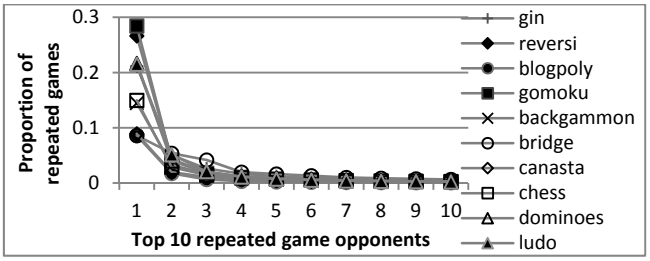

Figure 11: Mean opponent frequency by game.

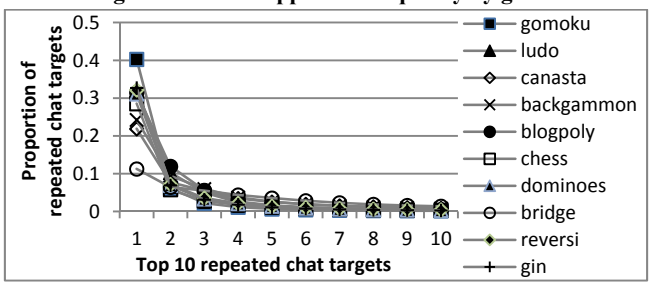

Figure 12: Mean repeated chat-partner frequency, by game.

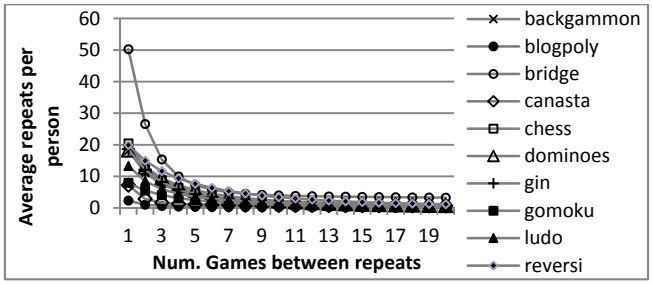

Figure 13: Repeated Opponents, by game.

DISCUSSION

Summary of Findings

Our analysis of PlayOK showed several main results that inform our investigation of the three themes.

Permanence: PlayOK has a highly transient population, with most people leaving very soon after joining; there is a general reduction in player numbers over time. However, a small number of players stay for long time periods.

Social interaction: shared activity is ubiquitous in PlayOK, with people playing numerous games with a variety of partners; however, verbal interaction is not common, with 72% of games occurring without any chat messages at all. In addition, the majority of games are started without any social history or interaction.

Forming ties: people do form some ties to other players, in that they play and chat more frequently with a small subset; however, they also often play with opponents outside this set – 65% of opponents are only seen once.

In the next sections we consider explanations for some of these results, and then turn to the questions of what the results mean for our understanding of sites like PlayOK, and whether there are potential benefits in a site where interactions are relatively impersonal and activity-based.

The Nature of Social Interaction in PlayOK

By most characterisations of communities or social groups, the PlayOK site is a failure – the people on the site don't talk to one another, don't stay long enough to make a commitment to the group, and only make a very small number of lasting connections with others. We begin by considering potential reasons for the lack of conversation.

No time for talk. In some games, the low message rate can be partially attributed to the speed of the game – many games in PlayOK are timed (e.g., chess or backgammon), and turns happen rapidly (on the order of seconds). In these situations, there is little time for typing chat messages.

Game moves as conversational turns. Many chat messages in PlayOK were not part of a clear verbal conversation, but comments on an action that had just occurred in the game. For example, a player in a Euchre game wrote "and yet there's no value in it", an odd statement given that this was the only chat message for several minutes. This comment followed the winning of a trick, and appears to be about taking a valueless trick. There may be other kinds of 'conversations' going on than those simply made up of chat messages. In particular, game actions could be viewed as conversational turns as much as they are game turns – much in the way of Clark's 'manifesting actions' [5]. These structures are not verbal utterances, but can play the role of an utterance, and can be responded to with a subsequent statement. In our example, taking a trick in Euchre is also a statement (i.e., "I am taking this trick"), providing context for subsequent statements (verbal or otherwise).

Game structures replace social conventions. The game interface provides mechanisms that render unnecessary certain kinds of conversations that are used in the real world to organize a game session. For example, the interfaces for games in PlayOK list the players and place them in locations at the game table, meaning that the players do not need to ask each other's names or talk about who will sit where. The interface also shows user profiles (e.g., country and rating) and game history, which frees players from having to use verbal communication to find out this information. In addition, the interface provides mechanisms for aspects of game control, such as inviting a player to join a game, or starting a game once players have joined. Our results show that the majority of games start with no social interaction at all and simply rely on the interface. Last, players' entry and departure from a game table are automatically indicated as system messages in the chat transcript; these messages may take the place of standard "hello" and "goodbye" conversations in real-world settings.

Language barriers. PlayOK was created in Poland and the user base is still predominantly European, spread across many countries. This results in a many languages being represented, and so playing the games could be viewed as the shared language. With no common spoken language, there is no possibility of verbal conversation.

Given the lack of conversation, it is of particular interest how this site has managed to succeed so well in terms of two more basic measures of health: PlayOK is doing very well in terms of both longevity (more than ten years) and population (over five million active members). We use our experiences with PlayOK and survey responses to explore possible explanations for its health.

In particular, we will explore the idea that the kinds of patterns seen in the PlayOK logs are legitimate forms of social interaction – even without extensive conversation, formation of subgroups, or long-term commitments. In this exploration, we consider three main ideas: first, that the interactions *within* the games on the site are a kind of social interaction; second, that the impersonal and anonymous interactions on PlayOK are legitimate social interactions that fill particular human needs, and that have parallels in a variety of real-world settings; and third, that the 'unconnected interactions' of game sites like PlayOK are a setting for *sociability*, a kind of interaction where personal issues and deeper implications are explicitly pushed away, and where the goal is to interact with other humans in an intentionally superficial, but explicitly social, fashion.

Actions in games as social interaction

Multiplayer games clearly involve interactions with other people – such as the moves in board games, or the bidding and trick-based play in card games. These interactions have not been widely considered in definitions of community or in analyses of social dynamics, but they are legitimate forms of human contact which create a shared experience through an (albeit stylized) form of human interaction.

There are two ways in which game actions stand as social interaction. First, as described above, actions in games are much like conversational turns – for example, each move in a chess game is like an utterance, and good players can read as much into a particular move as people do when they interpret a verbal utterance. If we consider games as providing people with a new language, we must reconsider the apparent dearth of conversation seen in our analysis, since 'speaking the language of the game' through play can represent a rich form of communicative interaction.

Second, the activity-based interactions of games can also be considered as a different kind of human social interaction, one based on the creation of an experience rather than one based on the establishment of shared knowledge, trust, or common bonds. The experience created by the game is, after all, a primary reason why people play – as noted by Stenros

and Waern [20], gameplay as activity and as interactivity feature prominently in many classic definitions of games (such as those by Huizinga or Caillois, see [20] p. 3). Gameplay is an *enacted experience* – an experience that occurs only because it is created by the players themselves [20]. Recognizing the central role of this kind of experience gives legitimacy to the "I'm just here for the games" attitude evident in many of the survey responses – that is, the games are enough to make a complete experience, even without other types of social interaction such as talk or friendships. As Stenros and Waern state, "for players of a game, the purpose of playing is […] *paratelic*: the activity of playing a game is not a means to an end but the end in itself" (p. 5). Thus, saying "I'm just here for the games" does not necessarily make players anti-social, but rather focuses on the created experience that the game enables.

Previous research into online game interactions has also noted this concept of gameplay as a surrogate for verbal interaction. In an ethnography of a combat MUD, Muramatsu and Ackerman [15] saw little traditional interaction and noted that non-game conversation was rare, but instead observed that players acted together to play the game through conflict and cooperation. Brown and Bell [3] call this type of activity "performing" a friendship in their study of the virtual world *There*. They argue that acting together around objects (called "social action") builds up a shared history of collective experiences. Ducheneaut et al. [8] also consider social activity in their analysis of an MMORPG and discuss the conflict between "instrumental" and "social" play present in many online games.

This type of social interaction *around* the game should be differentiated from social interaction *mediated* by the game [21]. In many situations a game is a means to an end, and a social end at that (e.g., getting together to play cards, where the game is really just an opportunity to be together with one's friends); however, the discussion above indicates that it is also valid to see the games themselves *as* the social activity, and therefore an authentic end in themselves.

Impersonal interaction

Player interactions in PlayOK are often anonymous and impersonal, and most players do not appear to make any lasting social connections with others on the site. Although impersonal interaction is sometimes seen as a sign of a failed community, there are real-world parallels suggesting that there may be more going on here than meets the eye.

Three examples of impersonal interaction in the real world can help to indicate some of the nuances. First, 'gay bathhouses' have existed for many years, where homosexual males go to obtain sex without emotional commitment or extensive social interaction [1,11]. These establishments have been the subject of much discussion, sometimes about the superficiality and lack of connection also seen in the game sites [11]; nevertheless, bathhouses are a lasting and successful part of many communities [1].

Second, there are activity-based groups that exist primarily for the shared activities they enable (e.g., a pick-up sports game facilitated by a recreational centre). Interactions between participants in these groups can be anonymous and highly impersonal. Although players in a pick-up sports game or on PlayOK may choose not to socialize with their team or opponents as part of the experience, these activity-based groups fill a role of providing a venue to perform shared activities without the need for social investment.

Third, there are situations where people make contact with others, but where the interactions are highly abstracted and where the participants have no interest in forming longer or deeper associations. One example is the amateur radio community, where people explore the airwaves and look for other stations to contact. These interactions are brief and impersonal (often limited to the exchange of station IDs), but are still an important part of this group's activities.

In addition to these physical-world examples, impersonal interaction has also been observed in virtual settings, for example Ducheneaut et al.'s [8] observations of healing and entertainment in the Star Wars Galaxies MMORPG.

The important thing about these examples is not to say that impersonal interactions are necessarily good or bad, but that they exist in real-world settings, and serve a variety of needs. Human-human interactions have a 'degree of anonymity' continuum, and the different points along this continuum are valuable for different purposes. In particular, both effort and risk on impersonal interactions are reduced – people in PlayOK can move quickly to the activity of the game, without worrying about whether they will 'get on' with their opponent. This idea that surface-level interactions have an important role leads to the idea of sociability.

Game sites as settings for sociability

In addition to being at least somewhat impersonal, game-based interactions are highly structured by the rules and environments of the games themselves. This kind of interaction can be thought of as a form of *sociability*, a concept described by the sociologist Georg Simmel [19], and later used to describe online environments such as MMOGs [8] and social VWs [3].

Simmel describes sociability as "association for its own sake" without the burdens that often accompany interactions in society. In sociable interactions, the deeper and more contentious aspects of human relationships are intentionally left out, and people interact in a formalized or rule-governed fashion that ensures that the interaction is successful and satisfactory for all participants. For example, the rules of 'polite conversation' ensure that settings such as a conference reception can proceed smoothly and safely for all parties – contentious issues such as religion or politics are left out of the discussions.

Although Simmel is interested in situations where conversation is the main mechanism for interaction (and this has been the primary application of the idea in previous

CSCW analyses [3,8]), sociability can also be considered in the setting of a game site, where game-based interaction largely replaces verbal communication, and where the rules of the interaction are formally constrained by the rules of the game. Although Simmel does not explicitly consider games, he touches on this connection in several ways. He calls sociability the "play-form of association" (p. 255) and suggests that it is an abstraction of other real-life interactions, making sociability a kind of practice for other situations and settings. This echoes the correspondence between games and real life – many games are abstracted representations of real-world activities. For example, board games such as chess are derived from the tactics of war; bidding games like bridge are abstract versions of negotiation and bargaining; and board games such as diplomacy simulate the development and maintenance of political alliances. As Simmel says, "And what joins art with play now appears in the likeness of both to sociability. From the realities of life play draws its great, essential themes: the chase and cunning; the proving of physical and mental powers, the contest and reliance on chance and the favor of forces which one cannot influence" (p.255).

Game environments can therefore be thought of as sociable settings where the distance between the activities and the real world is somewhat greater, and the 'play-form' is more concrete. This idea comes through again in Simmel's discussion of the importance of equality in sociability: these situations involve people "who give up so much of their objective content […] that they are sociably equal, and every one of them can win sociability values for himself only under the condition that the others, interacting with him, can also win them" (p. 257). This sounds very much like the way that games ensure the equality of players, each of whom has an equal chance to win (although, it is clear that game environments are not as interested in equal *outcomes* as Simmel's sociable settings are).

Although researchers have considered sociability in other online environments, and even online game environments (e.g., [8]), the idea of games as a setting for a more extreme kind of sociability – with the activity-based interaction and formalized interaction boundaries that games provide – has not been considered previously. Although we do not argue that these environments provide all of the social interaction that a person needs, it seems clear that there are some deeper and more interesting characteristics in game sites than previously thought, and that game play can represent a different kind of interaction that should be considered further in future analyses.

Benefits of Impersonal and Activity-Based Interaction

There are several potential benefits to the kind of interaction and structure that is seen in a game site:

First, impersonal and anonymous interactions implies that as long as there are enough people in the environment, it is always possible to get the experience – that is, it doesn't any longer matter *who* is there, as long as *someone* is there. The large number of people on the site means that it is generally easy to find a person to play against; although less personal, the scale effects of the Internet greatly increase the interaction possibilities. For the same reason, longevity is also not important – the high turnover rate of a site like PlayOK is not a problem. The anonymity of the site may also allow people to test their abilities in a less risky fashion than in a real-world setting – for example, it may be easier to challenge a high-ranked player in an anonymous setting.

Second, the structures and rules imposed by games mean that each game provides its own 'language,' overcoming language and cultural barriers. As long as a person knows the rules of the game, she can play with anyone else. Given a situation where people share little linguistic or cultural common ground, the ability to rely on the game structure for organizing and regulating the interaction is critical.

Third, game sites support a wide range of interaction styles, from anonymous players through to groups of friends. This may be important as it provides a large player base so that even well-connected players can gracefully transition to anonymous play when their friends are not online. Although largely ignored during anonymous play, game sites also provide the communication tools needed to interact more personally with friends and acquaintances.

Fourth, the low barrier to entry in terms of time, effort, and emotional investment matches the general idea that the sites are primarily for fun. Similarly, the low cost of interaction afforded by the social actions in games played for fun means that the interaction is safe – there is little likelihood of social awkwardness, rudeness, giving or taking offense, or the raising of sensitive political or religious topics.

Fifth, the maintenance and recognition of social standing is still possible in a game site through the player rankings that are listed on the site. This idea that the large player population can be seen as an audience for a high ranking is similar to previous studies where people appreciated being in a large milieu (or showing off to that large audience) even though they did not interact with them [9].

Finally, there is a value to the players in challenging a human opponent. While PlayOK does not offer the ability to play against a computer opponent, it is easy to find single-player computerised versions elsewhere. Artificial intelligence opponents can play as well as advanced human players in most games. We speculate that playing against a human allows for more diverse play experiences, greater opportunities for learning and improvement in strategy, and potentially a greater feeling of accomplishment after a win. Although PlayOK does not provide player-vs-AI games, comparing to these types of games could offer further insight into the issues that we have raised here; we plan to investigate this in future work.

Implications for Design

One hypothesis that we considered in the early part of the project was whether the user interface of a site like PlayOK

constrained possibilities for social interaction, and whether redesigning some of these tools could help to make the site more social. Although it does appear that the interface is somewhat awkward for social interaction, it does not seem likely given our other analyses that this is the main reason for the behaviours we observed. In fact, it may be counterproductive to improve the representations of people, or enhance the system's capabilities to better support communication; doing so might reduce the value of the site as an abstracted and sociable setting as described above. For example, providing an audio channel for verbal communication in every game might cause problems for sociability rather than benefiting social closeness.

Our analyses suggest the importance for these game sites of maintaining easy and anonymous entry, so that players can get in and play. However, supporting seamless transitions from anonymity to pseudonymity may also be important so that players can become more involved in the community in terms of their rank, profile, game history, and contacts.

CONCLUSION

We carried out a three-month log analysis of the PlayOK online game site to determine how people behave socially in this kind of environment. We organized our study around three themes: permanence, social interaction, and formation of ties. We found that while the site seems very social when we consider games played and subgroups of opponents, other analyses showed that the population was highly transient, and that people engaged in very little verbal communication. To explain how a game site can continue to be large and popular without some of the hallmarks of social groups, we explored the idea that games and game-based activity can take a larger role in our view of human interaction. We discussed three ways in which group behaviour in PlayOK can be seen as legitimate and valuable, including ideas about games as social interaction, the value of impersonal interaction, and game sites as settings for sociability. These ideas may prompt designers to think differently about the way that game environments can be designed in order to support a wide variety of social interactions and many kinds of sociability.

ACKNOWLEDGEMENTS

Funded by NSERC's Strategic Grants program, and the Networks of Centres of Excellence program (GRAND).

REFERENCES

1. Bérubé, A. The History of Gay Bathhouses. *Journal of Homosexuality 44*, 3 (2003), 33.
2. Blanchard, A., and Markus, M. The experienced "sense" of a virtual community. *SIGMIS Database,* 35, 1, 2004, 64-79.
3. Brown, B. and Bell, M. Play and Sociability in There: Lessons from Online Games for Collaborative Virtual Environments. In R. Schroeder and A. Axelsson, eds., *Avatars at Work and Play*. Springer, 2006, 227-245.
4. Bernheim Brush, A., Wang, X., Combs Turner, T., and Smith, M. Assessing differential usage of usenet social accounting meta-data. *Proc. CHI 2005*, 889–898.
5. Clark, H. *Using language*. Cambridge University Press, New York, 1996.
6. Dourish, P. Introduction: The state of play. *JCSCW,* 7, 1, 1998, 1–7.
7. Driskell, R. and Lyon, L. Are Virtual Communities True Communities? Examining the Environments and Elements of Community. *City & Community,* 1, 4, 2002, 373-390.
8. Ducheneaut, N., Moore, R., Nickell, E. Virtual "Third Places": A Case Study of Sociability in Massively Multiplayer Games. *JCSCW,* 16, 1-2, 2007, 129-166.
9. Ducheneaut, N., Yee, N., Nickell, E., Moore, R. "Alone together?": exploring the social dynamics of massively multiplayer online games. *Proc. CHI 2006*, 407–416.
10. Harrison, S. and Dourish, P. Re-place-ing space: the roles of place and space in collaborative systems. *Proc. CSCW 1996*, 67–76.
11. Haubrich, D., Myers, T., Calzavara, L., Ryder, K., and Medved, W. Gay and bisexual men's experiences of bathhouse culture and sex. *Culture, Health & Sexuality,* 6, 1, 2004, 19-29.
12. Jones, Q. Virtual Communities, Virtual Settlements & Cyber-Archaeology: A Theoretical Outline. *JCMC,* 3, 3, 2006.
13. Kolo, C. and Baur, T. Living a Virtual Life: Social Dynamics of Online Gaming. *Game Studies,* 4, 1, 2004, 1-31.
14. McMillan, D. and Chavis, D. Sense of community: A definition and theory. *J. Community. Psych.,* 14, 1, 1986, 6–23.
15. Muramatsu, J. and Ackerman, M. Computing, social activity, and entertainment: A field study of a game MUD. *JCSCW,* 7, 1, 1998, 87–122.
16. Nardi, B. and Harris, J. Strangers and friends: collaborative play in world of warcraft. *Proc. CSCW 2006*, 149–158.
17. Pace, T., Bardzell, S., and Bardzell, J. The rogue in the lovely black dress: intimacy in world of warcraft. *Proc. CHI 2010*, 233–242.
18. Park, R. Human Ecology. *Am. J. Soc. 17*, 1, 1936, 1-15.
19. Simmel, G. The sociology of sociability. *Am. J. Soc.,* 55, 3, 1949, 254–261.
20. Stenros, J. and Waern, A. Games as activity: Correcting the digital fallacy. In M. Evans, ed., *Videogame Studies: Concepts, Cultures and Communication*. Inter-Disciplinary Press, Oxford, 2011.
21. Stenros, J., Paavilainen, J., and Mäyrä, F. The many faces of sociability and social play in games. *Proc. MindTrek 2009*, 82–89.
22. Wellman, B. and Gulia, M. Virtual communities as communities. In M. Smith and P. Kollock, eds., *Communities in cyberspace*. 1999, 167–194.
23. Williams, D., Ducheneaut, N., Xiong, L., Zhang, Y., Yee, N., and Nickell, E. From Tree House to Barracks. *Games and Culture,* 1, 4 (2006), 338 -361.