Sociability on Location Based Mobile Games: An Ethnographic Research on Pokémon Go and Ingress in Istanbul

Cemile Tokgöz[1] & Burak Polat[2]
[1&2]Faculty of Communication, Marmara University, Istanbul, Turkey.

Abstract: *Physical space has become intertwined with digital information with the escalatory development of information and communication technologies such as ubiquitous computing, mobile and wearable devices, GPS technology, wireless networks, smart city applications and augmented reality. The relationship between urban space and location-based technology has transformed everyday life practices; and one of these life practices is playing game. Location based mobile games (LBMGs) are being played on streets and provide interaction with urban environments. Mobile devices become the interface between the player and urban space, and players experience the urban through the game narrative. Nowadays, the most popular LBMGs are Ingress and Pokémon Go. Although the both games were created by the same company and configured on the same map, they arouse different effects. LBMGs have a great potential to shape gaming experiences thus researching different effects of Ingress and Pokémon Go hold an academic importance. The difference between these two games can only be revealed by participating in game communities and conducting a qualitative research. Because of that, this study is built on an ethnographic research about Ingress and Pokémon Go; and the results of the research revealed the importance of sociability. In this study, firstly, LBMGs are defined and the influences of these games on everyday life are discussed. Secondly, the differences and similarities are examined between Ingress and Pokémon Go according to the analysis obtained from participant observation and in-depth interviews. Finally, the importance of sociability is emphasized and foresights are provided in the light of research results to contribute to the game studies.*
Keywords: *Location Based Mobile Games, Ingress, Pokémon Go, Sociability.*

1. Introduction

Physical space has become intertwined with digital information with the escalatory development of information and communication technologies such as ubiquitous computing, mobile and wearable devices, GPS technology, wireless networks, smart city applications and augmented reality. The relationship between urban space and location-based technology has transformed everyday life practices. Locative media, which is named by Karlis Kalnins in 2003, is an interdisciplinary research topic at the intersection of communication, urban sociology and ecological psychology. It merges digital information into physical places and functions as an interface between users and the urban space or game community. In this frame, the intersection of mobile technologies, urban space and new sociability practices, has become a significant research area.

The evolution process of location-based technologies between 2005 and 2009 has a commercial importance. Two factors were effective here. One of these is geo-location service of Google, and the other one is the widespread usage of smartphones. Geographic information systems were made available to ordinary users with Google Maps and API (Application Programming Interface) in February 2005 (Gordon & de Souza e Silva, 2011). Following this, location based services and applications have begun top art in everyday life.

Locative media has transformed socio-spatial interactions. While the technologies of 20th century are focused on visual culture, the technologies of 21th century have mobile, locative and

social characteristics (Wilken, 2012). The applications such as Google Maps, Facebook Place and Foursquare, reduce the distance between online and offline communication. So a new form of socialization emerges. Locative media applications are in two forms: LBSNs (Location Based Social Networks) such as Foursquare and Swarm, and LBMGs (Location Based Mobile Games) such as Ingress and Pokémon Go (Frith, 2013). LBMGs offer a rich data source for ethnographic research (Montola, Waern, & Stenros, 2009, s. 9).

In this study at first location based mobile games concept will be defined and Niantic's Ingress and Pokémon Go games will be presented and then an ethnographic research on both games' players in Istanbul will be shared to emphasize the impact of socialization on game's immersion.

Background
Location Based Mobile Games

Location Based Mobile Games (LBMGs) are located at the intersection of mobile devices, wireless communication, geographic data, urban space and game narrative. LBMGs are being played on streets and provide interaction with urban environments. Mobile devices have become the interface between the player and urban space, and players experience the urban through the game narrative. These games are temporally linear like real life, not divided into sessions, and spatially hybrid. Chee has stated that such games are played in the "third space" which includes both leisure time and working time, or both public and private spaces (Hjorth, 2013). According to McGonigal (2011) LBMGs transforms everyday objects and places into interactive areas.

LBMGs are usually community games such as Ingress, but they also have individual forms such as Pokémon Go. Because both are played on the streets, they influence socialization practices with people –outside the magic circle- on public space. According to Jegers (2007) LBMGs are mobile, hybrid and social. Associating the hybrid nature of LBMGs with only "playing in urban spaces" would be an inadequate explanation. The point to be emphasized here is that the physical space and cyberspace are connected more and more by processes of perception and actions in the game. Mobility, memory, personal history, in-game socialization, place, player identity and the reflections of them on game narrative strengthen the hybrid nature of LBMGs.

The ancestor of LBMGs is GPS based treasure-hunting, geocaching. The examples of games with location awareness are Gowar, Alien Revolt, Mogi, Bot fighters and Zombies, Run! Ingress is a highly advanced location based game, and even more popular Pokémon Go was built on Ingress. With the help of LBMGs, players who play video games in their homes are going out again.

To clarify the definition of LBMGs, a new touch has been made to the definition of classical play. According to Huizinga (1955), a game has the following qualities:

A game has a magic circle that excludes everyday life;
A game has rules and provides freedom of action within the rules.
Players immerse into the game by ignoring the real world.

Hjorth and de Souza e Silva (2009) reviewed this definition in the focus of LBMGs. They emphasized these issues:

The boundary between reality and game is blurring, and the magic circle has temporally and spatially extend. Immersion has become associated with urban space and everyday life, not limited to a specific place.

Montola (2011) has underlined that the magic circle has expanded temporally, spatially and socially with the help of LBMGs. In addition, the boundaries between real – fiction or playful – serious have become permeable, and LBMGs reveal new trends in social norms and behavioral patterns in the public space.

Niantic's Ingress and Pokémon Go

Niantic, a former internal startup of Google (Alphabet Inc.), is a software development company that is specialized on augmented reality and location based mobile games such as Ingress and Pokémon Go. The company has designed, developed and released Ingress in November 2012 and Pokémon Go in July 2016. Both games have very similar architecture yet by means of narrative and game design both games lead a different gameplay experience.

Figure 4: Ingress and Pokémon Go Interfaces Ingress

Ingress is a location based mobile game designed, developed and released by Niantic Lab on November 2012. The game is harmonizing the physical space with digital information and promising its players to experience a hybrid reality application just as its motto pledges: "The World around you is not what it seems". The science fiction back-story and continuous open narrative of Ingress leads a competitive capture-the- flag game not necessarily between individual players but primarily between two opposing factions, the Resistance and the Enlightened. It is requested to select a party from the player by telling the story of the game in the very beginning of the gameplay. According to the narrative, scientists at CERN discovered a substance called Exotic Matter (XM) during the discovery of Higgs Boson; thus the enlightened fight believing their actions will uplift humanity and bring about the next chapter in human evolution whereas the Resistance believes that they are protecting humanity from Shaper ingression and preserving humanity's freedom.

In the gameplay XMs have spread to the world through "portals" which are landmarks such as monuments, squares, statues, parks, graffitis, important buildings, etc. For their teams' success players, also known as "agents" for Ingress, are got to capture and link the portals through an interface structured on Google Maps.

Pokémon Go

Pokémon Go is developed as a result of collaboration between Niantic and Nintendo. Pokémon Go has brought together decades of mobile media, locative arts, gaming, and Japanese culture (Hjorth & Richardson, 2017). The game combines mobile location technology and augmented reality with Pokémon narrative; it utilizes the player's mobile device's GPS ability to locate, capture, battle and train virtual creatures, called Pokémon, which appear on the screen as if they were at the same real-world location as the player.

After establishing a game account, players create and customize their own avatars. Once created, an avatar is displayed on a map based on the player's geographical location. Features on the map include Pokémon, Pokéstops and Pokémon gyms. As players move within their real world surroundings, their avatars move within the game's map and as they move wild Pokémon spawn. Unlike other installments in the Pokémon series, players in Pokémon Go do not battle wild Pokémon to catch them; during an encounter with a wild Pokémon, a player may throw a Poke Ball by flicking it from the bottom of the screen up toward the Pokémon. Catching different Pokémon species is fundamentally primary goal of the game and the other fundamental goal is to capturing the Pokégyms. Just like Ingress, Pokémon Go have factions (Valor, Instinct and Mystic) and again like Ingress in Pokémon Go there is a capture-the-flag goal that is achieved by battling in Pokégyms. Catching more Pokémon, battling and capturing more gyms are the sources of experience points (XP) for the player; with more experience points, players' level increase and with higher level, higher combat powered

wild Pokémon is encountered. To capture wild Pokémon, items like Pokéballs, which can be collected from pokestops, are needed. Like Ingress' Portals, Pokégyms and pokestops are the landmarks of the real world.

On Sociability in Game Studies

Immersion into games is a perception or a state of consciousness of being physically present in the games' non-physical world. Immersion can be considered as a communicational convergence with the physical and psychological reality of the player and physical and social reality of the game. In other words to sustain immersion games should have successfully built a sociable structure within the game cognitively, communicatively, and collaboratively.

George Simmel (1949, p. 255) as one of the first researchers to seriously examine sociability emphasize that "a distinct social form that distils out of the realities of social life like the pure essence of association, of the associative process of a value and a satisfaction ... Sociability extracts the serious substance of life leaving only 'togetherness', the sheer pleasure of the company of others". Social, by its nature, is structured with the company of others and where the others exist there always will be the social; and LBMGs constitute a platform with a social structure for players to experience social interactions with other players. Duheneaut et al. (2004) states that sociability focuses on social interaction and how users of an online community interact with one another via the supporting technology (Ducheneaut et al., 2004). Both Ingress and Pokemon Go promises social interactions and an online community yet by their design they lead different social interaction experiences to players; thus their immersion differs. Preece (2000, p. 291-292; Koutra, et al. 2014) provides "Eight Heuristic Tools" that give depth to the meaning of the sociability in online communities; these eight heuristics (Shown in Table 1) can be fundamentally considered as a framework in understanding sociability concerns in communities. LBMGs as platforms of various social interactions are open to community building thus these heuristic questions are useful to understand their sociability.

User Questions	Sociability Concerns
1. Why should I join this community?	What title and content will communicate the community's purpose effectively and attract people?
2. How do I join or leave?	Should this be an open or closed community? How sensitive are the issues and participants? Do we want to control who joins?
3. What are the rules?	What policies are needed? Should a moderator guide and enforce rules? Do we need disclaimers or other statements of intent?
4. How do I read and send messages?	Is support needed for newcomers? Should the system facilitate sending private and group messages?
5. Can I do what I want easily?	What is the best way to ensure that the community is a congenial place, one where people can do what they want to do? What are the communication needs of the community?
6. Is the community safe?	Will the community need a moderator to ensure appropriate behaviour? What level of confidentiality and security is needed?
7. Can I express myself as I wish?	What kind of communication capabilities does a community with this purpose require, and how should they be supported?
8. Why should I come back?	What will entice people to return on a regular basis?

Table 1: Eight Heuristics on Sociability Methodology

Purpose and Scope of the Research

Collective action is a strengthened fact by sharing mutual space. Location-based mobile games have interfused the city as a permanent stage of social interaction and socialization practices of everyday life to the game community. The main purposes of this study are to determine the forms of socialization within the location based mobile games and to emphasize the importance of socialization for games' immersion on players. As the focus medium of the research, Niantic's Ingress and Pokémon Go has been chosen for the data availability as a result of their popularity. In this study different socialization forms' effects in both games are discussed.

Ethnographic Research Method and Data Collection

Ethnographic method is a qualitative method applied to determine human behavior's causality in a cultural aspect; by observing a community, it allows creating a portrayal on that community. The ethnographic method is an inductive method and requires observation of the space in which social relations occurs (Angrosino, 2008, s. 5-18).

Ethnographic method used to study forms of socialization at digital media of the information and communication technologies is called nethnography by Kozinets (2015). Kozinets emphasizes "online data have revolutionary effects on the ways of communication and collaboration of

individuals and societies."

For this study, especially when considering the socio-spatial elements of location- based mobile games, ethnographic method is suitable. The ethnographic and netnographic methods are used together since the selected research objects (Ingress and Pokémon Go) are open to collect data both at online and offline.

Two data collection techniques were used in this study: participant observation and in-depth interview. Participatory observation means that the researcher is a part of the community that is being observed; the researcher is able to analyze the community dynamics in depth by joining the community. Thus, for one-year period Ingress and Pokémon Go are experienced as a player to obtain participant observations.

For the researchers one of the most crucial biases of the participatory observation technique is losing the objectivity by acting emotionally as becoming a member of the community. To prevent this bias, it is appropriate to support the research with an additional data collection technique (Angrosino, 2008). In this study, in-depth interview was used as the secondary data collection technique. During the in-depth interviews to determine the main axis of the subject questions can be asked; yet researchers should be cautious for potential interventions, which may manipulate the answers. Thus, a semi-structured questionnaire was structured and applied to 5 Ingress, 5 Pokémon Go players.

	Player	Age	Sex	Job
POKEMON GO	P1	29	Male	Media Strategist
	P2	27	Male	IT specialist
	P3	32	Female	Architect
	P4	31	Male	Academician
	P5	31	Male	IT specialist
INGRESS	I1	22	Male	Student
	I2	43	Male	IT specialist
	I3	42	Male	IT specialist
	I4	32	Male	Designer
	I5	30	Female	Academician

Table 2: Demographics of Participants

An Ethnographic Research on Pokémon Go and Ingress LBMGs as a Socializing Tool

The existence of social interaction in games is inevitable just like everywhere that human beings are. Especially LBMGs are digital games that are important for socialization because these games are played in public space and allow face-to- face communication. LBMGs can be flexibly deployed by users as a means to facilitate social interaction (Hjorth & Richardson, 2017).

Salen and Zimmerman (2003) grouped the social interaction in the game on two levels. The first one is the communication that the player creates with the other players after entering the magic circle; this is called internal interaction. The second is the form of social interaction that is carried from outside the magic circle such as friendships established before or outsiders in public space (Salen & Zimmerman, 2003).

LMBGs have a bilayer game narration; the first layer is the narration that is created by the game designers and the second layer is the narration that is created by the players while playing the game. The first layer of the game narration sets the procedures of the cognitive level of communication within the game. Peculiarly the second narration layer sets an unpredictable simulation potential of the real world within the game; the second layer constitutes a communicational convergence with real world by player's interactions with other players and the city.

In-game sociability practices affects players' game decisions thus socialization affects the games' course of events; in other words players rewrites the game narrative by socialization. Every socialization types within the game lead a dynamic narrative thus socialization is crucial for immersion. In this study, socialization practices are considered as a major parameter, which influence gameplay practices of both Ingress and Pokémon Go. A socialization practice that is observed for Niantic's both games mostly are making new friends in the game community, playing together with existing friends, and interactions with total strangers from out of the magic circle.

In-game Socialization: Making New Friends in the Game Community

According to de Souza e Silva and Sutko (2008), the everyday actions of the individual become a magical playful experience of the game community with the help of LBMGs. The mobility of a player in the city transforms from "my everyday routine" into "our collective action" (de Souza e Silva & Sutko, 2008). The player improves socialization experiences by gaining the habit moving together through the game. Ingress players have expressed the socializing influence of game as follows:

> *"I joined the game community to defeat my asocial behaviors, and it was very easy to communicate with these people who have a common point. It is nice to know each other and we connect with each other with our successes in Ingress operations."*

> *"I was not a social person before this game. I usually had sat at home in the evenings, and had only a few friends. But now I have many friends from Ingress game community."*

Because that Ingress is a strategy game and has two groups in battle, players in the same group, such as Resistance or Enlightened, usually come together to set an operation strategy. In addition, there is a need for team play to pass some levels. So collaboration emerges, and friendships develop because of playing together in Ingress. When it comes to Pokémon Go, the participants say:

> *"Battles are taking place in Gyms in Pokémon Go. I think, activities in Gym are more important for players who play as a team. But these player groups are already friends before the game like high school friends. Players of the same team play together, take over the Gym, and raise their XPs."*

The above statement associates collective play with existing friendships. However, nevertheless, there are players who make new friends with the help of Pokémon Go.

> *"I care about the role of the teams in game. For this reason I tried to find others from yellow team. I made an announcement from Ekşisözlük. We met in Kadıköy and played together. I met these people through the game. Pokémon Go socializes the players."*

According to Humphreys (2017): "Pokémon Go players hunt among others in public places, join teams, or battle for gyms, they may engage in tactic interactions with other players." In the above example, the player has made an effort to socialize. He tried to communicate using other media except the game, because Pokémon Go does not have in-game communication tool. Such interactions are usually related to existing friendships in Pokémon Go. Every player may not make such effort. It is possible to base this distinction on the types of players in the Bartle's (1996) taxonomy.

> *"In the streets other players who guess I play Pokemon would say, 'There is a Charizard at the corner'. Apart from that, the game does not socialize. The players are using social media to socialize."*

> *"While playing the game, players are doing the similar gestures. It is possible to distinguish Pokémon Go players in the crowds. So when I saw a few other players, I saluted and talked. But this is a very limited socialization. Then I tried to find players who are on the same team with me via social media. As a result Pokémon Go technically socializes, but you shouldn't expect meaningful socialization."*

Pokémon Go does not have an in-game communication tool. Despite that, Ingress players communicate with chat feature of the game. So collective play is inherent in Ingress. Therefore, making new friends and playing as teams have been observed in Ingress more than Pokémon Go.

Playing with Existing Friends

In LBMGs players can play with their friends already know as well as meet new people in the game community. According to McGonigal (2011, s. 91), existing friendships deepen and strengthen in game community.

> *"I had a close friend from the university. After I moved to Istanbul, I started seeing my friend less. Now we are in touch more often with the help of Ingress. I can see in- game actions of my friend in Bursa by setting the range to 100 km, and I can send him a message from in-game chat of Ingress."*

> *"I know some couples who play Ingress together. They say that the quality of time they spend together increases thanks to the game."*

> *"I did not make new friends through Pokémon Go, but I increased sincerity with a friend. We meet and play together." P_3: "I did not meet someone just to play Pokémon Go, but I played with a few friends of mine, especially my home mate."*

For both games participants emphasize that playing with existing friends leads higher intimacy levels. In comparison with video games, face-to-face interaction potential and real time location based game design makes LBMGs more suitable playing along with friends.

Outsiders: Interaction with Strangers from out of the Magic Circle in Public Space

LBMGs have revealed new forms of interaction with strangers in public space. According to

Montola (2011) LBMGs expand magic circle temporally, spatially and socially. Some games can give missions about strangers to players, and it is the example of social expansion. But there is no such direct relationship with outsiders in Ingress and Pokémon Go. However, players can draw attention in public space and strangers interact with them. For example, Ingress agents seem mysterious to the outside with their headphones, power bank cables that is coming out of their bags, and weird behaviors around some spaces.

> *"Once a friend of mine was stopped by the police. The police got his phone and looked our group messages. There are words like 'to explode' in our game jargon, for example "explode the museum". The police misunderstood these conversations and detained our friend.*
> *"One day I was waiting the 4 minutes waiting time near a portal in Cihangir. A woman came and said: 'Did you hear the cat? I said yes because I cannot explain my real purpose. After that I found myself in a group that lifted the car to save the cat."*

According to the statements of the participants, the interaction between players and outsiders in Ingress is generally unpleasant.

Collective Action, Coordination, Collaboration
Collective Play: Team versus Individual Play

Ingress encourages the players to collective play because it is a game in which the aim is to capture the city. Ingress has puzzle structure and it is impossible for a player to combine all pieces alone, and every portal has only one owner. But Pokémon Go produces the same Pokémon to each player in the same place. So Pokémon Go does not encourage the players to collective play like Ingress does. De Souza e Silva (2016) confirms the lack of sociability of Pokémon Go: "However, while Pokémon Go does happen in hybrid spaces, players lack agency to modify the hybrid game space, and socialize with each other within the game."

> *"After a while the players who play Ingress alone are bored. It is impossible to play for a long time while playing alone. I like the collectivity in Ingress. Team play is so enjoyable."*
> *It is hard to say that the yellow, blue and red teams in Pokémon Go are literally providing a team game.*
> *"Actually, it doesn't change with joining teams. We are looking for different pokémons again, and try to crack to eggs again."*
> *"There is not much in-game socialization in Pokémon Go. But it is necessary.*
> *Pokémon is like a single player game."*
> *"I think, collective play in Pokémon Go is possible only among existing friends.*
> *Difficult to build collaboration because in-game interaction is limited."*

In fact, with the "lure" feature it is possible to attract pokémons and thus other players to one place. Even if the players meet each other in this way, it does not completely mean collective play. "Players can neither chat with each other in the game nor create in-game content." (de Souza e Silva, 2016, s. 3). Ingress has in-game chat, and players can create portals.

> *"When I first started the game, I thought it would be good if there was a chat feature to get information about playing and collaborate with other players."*

Coordination

Like Rheingold's smart mobs approach, Ingress players are also a community that can quickly come together, coordinate and pass collective action. This feature allows the player the freedom to communicate with his/her desired players. Creation of operation strategies and distributed of tasks are examples of coordination.

> *"For a half-hour operation is required at least 24 hours of work. Selection of portals, delivery of portal keys, selection of players, etc. We are using an IT infrastructure for these organizations."*
> *The collective action makes the player feel like a part of the whole and develops problem-solving practices together.*
> *"It's nice to think something together. We come together for Ingress and solve a problem collectively."*

When a player joins Ingress, the old players meet with newcomers with the in-game chat feature. Existing players explain the game and help to pass levels.

> *"When I started Ingress, the old players who were living close to me helped me to pass the levels. Now I support newcomers. This collective consciousness is nice."*

According to McGonigal (2011) feeling as a part of a whole connects player to the game and feels happy.

"The number of participants is very high in big operations. For example, there were totally 88 agents from every city for Turkey operation. Everyone is asking for help and wants to be a part of something."

"It feels so good to do something together. Once in a big operation our teams were congratulated from six different countries. It makes me feel happy like a success in real life not in a game."

Coordination is a must for Ingress because of its collective game experience and its strategy genre. Coordination makes players feel as a part of a whole. Doing something together, achieving a success together makes players happy thus coordination keeps the players within the game. In this manner, Ingress presents more exquisite socialization practices than Pokémon Go.

Effects of Socialization and AR on Immersion

The game keeps the player in the magic circle with its charm, delightfulness and suspensefulness; this type of experience of engaging with a game for a while is called immersion. Murray has identified immersion of digital games by these sentences (Montola, Waern, & Stenros, 2009, s. 115):

"The experience of being transported to an elaborate simulated place is pleasurable in itself, regardless of the fantasy content. We refer to this experience as immersion. Immersion is a metaphorical term derived from the physical experience of being submerged in water".

There are several types of immersion. Cognitive immersion as one of an immersion type is immersion of the game by appealing the player's sense organs. In digital games to strengthen this cognitive aspect, visually and aurally real-like designs have been developed. Studies on augmented reality mostly are related to immersion phenomenon. High quality graphics and sounds in games are aimed to provide a sense of reality by manipulating the perceptions of the player thus more immersion may occur.

Innovative feature of Pokémon Go is its AR (Augmented Reality) component and this feature makes it a HRG (Hybrid Reality Game). Pokémon Go allows users to see pokémons through their mobile phones on the physical space, and this feature makes the game more attractive.

"I heard the game from social media. Especially the idea of catching pokemon in the living room was appealing. It was very fun at the beginning, but then I started to turn off the AR feature because of the low battery."

"It was great to see the pokemons where we are and to take photos of my friends with pokemon."

According to de Souza e Silva (2016): "Although Pokémon Go resembles older HRGs, it also lacks many HRG elements." Participants' statements confirm this, for example one of them said:

"Augmented reality feature of the game is not satisfactory."

Ingress' interface is relatively minimal; yet in this game the immersion is caused by social interactions rather than interface design. The sociability of Ingress provides a potential face-to-face communication between players in real-time, in real- space and the game design leads a potential collective action, which fundamentally results, with immersion.

2.   Conclusion

LBMGs that are played in public space and allow face-to-face communication, owe their dynamic narratives to sociability. In this study of sociability practices in LBMGs, an ethnographic research has been conducted on Ingress and Pokémon Go, and it has been revealed that the two games differ from each other in this respect. While sociability has stimulated the player to stay in the game for a long time, the absence of sociability also creates a monotone gaming experience, causing quit the game.

Although Pokémon Go demographically appealed to a much broader audience, a significant part of Turkish players quit the game after two or three months. Ingress has appealed a more homogeneous but loyal players who play for a long time and make the game a part of their everyday lives.

The experiences of participating in the game community and making new friends are more in Ingress because of collective play practices. Especially chat feature captures the new player and feels a part of a game community. However, in Pokémon Go, individual play or playing with existing friends is more common. In Pokémon Go the existence of the teams does not create a complete sociability, and making new friends is only possible through alternative communication platforms such as social media, because of absence of in-game chat feature.

Pokémon Go strengthens the immersion visually with the help of graphics and augmented

reality feature, but collective play is limited in Pokémon Go. However, there are collective play, coordination for the game strategy and collaboration among players in Ingress. Thus Ingress players feel themselves as a part of a whole, and this feeling holds the player in the game. Sociability is more immersive than visual features.

All of sociability practices in LBMGs such as making new friends, playing with existing friends or interaction with strangers in public space, expand the boundaries of magic circle socially. This study emphasizes the importance of socialization's impact on making games a part of everyday life practices of the players. Niantic have integrated sociability in Ingress' core game design and in long run Ingress have more committed players; by contrast for Pokémon Go the lack of sociability is the prominent cause of unsustainably game play.

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