# Casual Play, Hardcore Community: Social and Spatial Ecosystems in Location-Based Mobile Gameplay

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This is to certify that the thesis prepared

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complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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## Abstract

**Casual Play, Hardcore Community: Social and Spatial Ecosystems in Location-Based Mobile Gameplay**

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This thesis explores the social and spatial dynamics of two major Location-Based Mobile Games communities in Montréal. By conducting interviews and play sessions with fifteen active members of the local *Ingress* (Niantic, 2012) and *Pokémon Go* (Niantic, 2016) player communities, I identify that the social ecosystems that have developed around both games have generated forms of play that extend far beyond the limits of the games themselves.

In the first chapter, I draw from Celia Pearce's understanding of 'communities of play' and T.L Taylor's notion of 'power gaming' to posit that Location-based games communities and their social practices exist somewhere between those found in MMOGs and those found in Social Games. Further, as players are often involved in moderation, research, and organizational activities, I found that interviewees' engagement with their game of choice means that the typical boundaries between labour and play sometimes disintegrate entirely. Accordingly, I explore the emergent theme of cheating, highlighting how each community perceives, negotiates punishes forms of rule-breaking within their social spheres.

As locative gameplay takes place within both the realm of the physical and digital, it can be thought of as having simultaneous modalities of presence. Accordingly, the second chapter investigates how co-presence in locative play can generate tensions between players and non-players in the 'real world' and explores how spatial awareness of local play areas transforms through a process of mental mapping. Moreover, spatial experience often correlates with either habitual (everyday) play habits or situational (event-based) instances of play.

Like many other games' communities, the social and spatial ecosystems of *Ingress* and *Pokémon Go* are "messy, contested and constantly under negotiation" (Taylor, 153); yet conducting a qualitative analysis around active players within these communities has helped provided a research framework for a more nuanced understanding of how localized micro-communities operate, coordinate and experience locative play.

## Dedication

I would like to dedicate this thesis to my mother, Janine Marchessault, and my stepfather, Philip Hoffman, whose unyielding support, words of wisdom, and constant encouragement helped me through every stage of the Media Studies program. Thank you for always being my role models and for inspiring me to achieve my goals.

## Acknowledgements

Words cannot summarize my gratitude for the support, advice and kindness I have received from my peers, professors, and loved ones throughout the duration of this program.

Thank you, Mia Consalvo for the incredibly rich learning environment you have fostered at Concordia and at the mLab. Your supervision was above and beyond what I could have ever hoped for in a graduate program and I am deeply grateful for your reassurance, advice and guidance over the last two years. Thank you for welcoming me into the mLab where I had the opportunity to meet and work alongside a group of incredibly knowledgeable and generous students that I am honoured to call my friends.

Thank you to my amazing committee, Owen Chapman and Bart Simon, both of whom have inspired my research and provided me with incredible resources throughout the duration of this program.

I owe a deep gratitude to TAG research lab which served as both a workspace and a community in which I felt welcome to share ideas, participate in thought-provoking discussions, and get involved in some fantastic projects. TAG inspired me to engage with topics and projects ranging from videogame and VR curation, to Discoverability in the independent games sector in Québec, to exploring liveness in participatory theatre experiences. It also provided me with the chance to participate in activities, presentations, workshops, and conferences; all of which made my experience at Concordia rich and full of delightful surprises.

Last, but certainly not least, I want to thank my partner Simon for the endless support and for being a warm shoulder to lean on at the end of some very long days. From the depths of my heart, thank you for cheering me on through thick and thin, for pushing me to achieve my goals, and for letting me know when it was time to take a break. Your kindness and humour helped me overcome challenging workloads and keep a positive attitude when the future felt overwhelming and impossible. I am truly lucky to have had your support, reassurance and encouragement.

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# Introduction

On a warm, quiet August afternoon in 2016, a stampede shocked onlookers and pedestrians in a west-end neighbourhood of Montréal. Approximately forty people sprinted down a relatively calm street, phones in hand and excitement in their voices. As they reached a colourful pig statue outside a local business, they all came to a halt, stared at their phones and performed similar swirling and tapping gestures on their devices' screens. Suddenly a member of this group called out "I GOT IT!", followed by another "me too!" and another "same!", and slowly the crowd dispersed in hushed excitement. I was a part of this group; the stampeding and the excitement were all part of an announcement made at a nearby local play area that there was a rare Pokémon (a Snorlax) a few blocks away. This was the summer that *Pokémon Go* came out and while initially bystanders were baffled to see groups of phone-wielding players moving through city streets on a mission to catch 'em all, sights like this were soon commonplace. Indeed, after the game launched, hordes of players gathered in the parks, squares and intersections of major cities around the globe and play was suddenly a visible, prominent feature of public life.

When I began my research for this project, my goal was to examine the larger cultural impact of play in public spaces and Location-Based Games by identifying and analyzing design, content and user experience from different genres of locative media to determine how they can potentially be sources for spatial, historical, cultural and social pedagogy. Choosing to use a correlation of qualitative interviews with members of large-scale Location-Based games like *Ingress* and *Pokémon Go* and an in-depth textual analysis of different genres of Location-Based Games, I aimed to draw a line between the individual experiences of larger scale global games, and the pedagogical socio-cultural impacts of smaller scale locally produced games. Yet once I began recruiting interviewees and involving myself more actively in the *Ingress* and *Pokémon Go* player communities, I realized that there was a rich body of knowledge that could be drawn from player experiences of Location-Based Mobile Games that could reveal how participation within local player communities can often extend beyond gameplay through creative, organizational, and collaborative endeavours. This realization ultimately shifted my focus from an interest in analyzing locative games as a genre, to an interest in the players of these two Location-Based Mobile games. Moreover, as I began drafting my interview questions, I also reflected on my own experiences as

a player and chose to include personal experiences with this kind of gameplay in this thesis. For this reason, I positioned myself as a player during both interviews and play sessions as I felt my subjective knowledge provided me with a strong understanding of these player communities. This process led me to identify two major themes that I wanted to investigate in the interviews: The Social and Spatial ecosystems of Location-Based Games communities.

I employ the term ecosystem because of the ways that these two player communities operate autonomously and independently outside of the limits of the games themselves. The interviews revealed that player communities have transformed and grown as a result of forms of self-governance, collaboration and organization that were not established nor encouraged by Niantic. Rather, much like a living ecosystem, the larger player community is constantly in flux and relies on the activity and persistence of local leaders in smaller micro-communities. As I will explore in the first chapter of this thesis, these social ecosystems also influence play patterns and player conduct by establishing community generated events, habits and rules. Accordingly, moderation of cheating and rule-breaking is often handled internally by local players. Further, the second chapter will highlight how the social ecosystems influence how, when and why players engage with the spaces in which they play.

My overarching research questions for the first chapter are as follows:

1. How can we situate Location-Based Games communities in relation to other genres of videogame communities?
2. How does active involvement with local communities influence how players interact with their game of choice? How do local communities influence larger play patterns?

The second chapter will engage with questions related to spatial experiences:

3. How do Location-Based Games transform players' experiences and awareness of the spaces in which they play?
4. What are the differences and similarities between how players engage with play spaces in *Ingress* and *Pokémon Go*?
5. What relationships do locative games have with the spaces they represent and situate players? Do Location-Based Games impact these spaces?

## What is locative media?

This phenomenon emerged from a type of mobile media known as 'locative media', a term said to be coined by Karlis Kalnins in 2003 at the Art+Communication Festival in Riga. The term was used "as a descriptor for the artistic practices and intellectual discourse around location-aware technologies' potential to transform everyday life".[1] Further, it was an umbrella term "encompassing the body of work being produced by artists, theorists, and developers utilising these devices" which included mobile phones, PDAs, laptops, GPS trackers, to "reconceptualise and critique the relationship between people, networked communication technologies, and the everyday environment."[2] Indeed, locative media can be defined by the interaction of people, technology and physical space. Such interactions include navigation and orientation in wayfinding, visualizing what is otherwise invisible in physical locations, annotating locations with digital information, organizing social interactions, and pervasive gameplay.[3] While earlier forms of locative media were seen as more experimental and tied to artistic practice, the spread of smartphone technologies and the emergence of app-based markets (such as the Apple App Store and Google Play stores) have allowed locative media to become part of most smartphone users' lives. Locative media is also intertwined with cartographic practices as "mapping intrinsically offers interesting ludic possibilities through narrative, design, power, navigation and the inherent playability in mapping assemblages."[4] From exercise apps that immerse joggers in gamified narratives through location tracking, to interactive installations that reveal the hidden histories and cartographies of a city, to popular location-based mobile games that create micro-communities who gather to play together at public landmarks, locative media has also come to pervade many city spaces.

The focus of this thesis will be on a particular kind of locative media that falls under the category of 'pervasive games'. Pervasive games can be understood as games that motivate players' movements in the physical world, allowing for the discovery of previously unknown or

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[1] Dale Leorke and Christopher Wood, "'Alternative Ways of Being': Reimagining Locative Media Materiality through Speculative Fiction and Design," Media Theory 3, no. 2 (2019): 65, accessed August 1, 2020, https://hal.archives-ouvertes.fr/hal-02475392/document.

[2] Leorke and Wood, 66.

[3] Michiel de Lange, *Moving Circles: mobile media and playful identities* (Rotterdam: Erasmus University Rotterdam, 2010), 11, digital file.

[4] Leorke and Wood, "'Alternative Ways," 65.

undiscovered objects and/or locations, and occupy 'dead time'; that is, the time and space between point A and B in players' daily routines. As a result, "meaningful movement" is created through hybrid spaces in which "the digital space is augmented by movements in the physical world" and vice versa.[5] Though 'pervasive games' can encompass a variety of games, from the experimental 'street' or 'urban' games from the early-mid 2000s to massively popular Location-Based Mobile Games, the focus of this thesis is on the latter through interview-based ethnographic research on local Location-Based Mobile Games communities. The two games chosen are *Ingress* (2012) and *Pokémon Go* (2016), which were both developed by Niantic Labs.

[5] Michiel de Lange, "From always on to always there: Locative media as Playful Technologies," in *Digital cityscapes: merging digital and urban playspaces*, by Adriana de Souza e Silva and Daniel M. Sutko (New York: Peter Lang, 2009), 59.

## Methodological Approach and Research Design

The methodological approach of this thesis project was based on a pilot project conducted during a Games Studies course in Fall 2018. For that project, I held 30-minute interviews and play sessions with three active members of the Montréal *Pokémon Go* community. These interviews presented interesting findings which were analyzed using qualitative thematic dissemination and explored in two research papers. Based on the quality of findings from the pilot project, I chose to use a similar qualitative approach by conducting in-depth interviews and play sessions with members of local location-based games' communities in Montréal for this thesis project.

While quantitative methods have been used to examine *Pokémon Go* (see Loveday & Burgess 2017; Paavilainen et al., 2017; Wantanabe et al. 2017) and *Ingress* (Söbke et al. 2017; Davis 2016), I felt that in order to better understand the inner-workings of these two communities and to explore players' experiences with the game, the community, and the spaces in which they play, a qualitative method would be necessary. Further, I hope my qualitative investigation into the lives and everyday play patterns of these players will complement the existing quantitative research which has usually been conducted on a larger player-base.

Gair and van Luyn (2017) note that "qualitative research is about making a choice to uphold narratives over numbers."[6] Indeed, I aimed to privilege the voices, memories, emotions and actions of individual players, rather than provide a blanket analysis of a larger group of players to enable readers to "gain increased understanding from an 'insider' perspective".[7] Yet as community narratives are "complex and nuanced", I had to be cautious about making generalizations. Instead, as Gair and van Luyn describe, I engaged in "a double act of attempting to amplify narratives in an authentic manner, while at the same time understanding [my] own role in gathering, interpreting and representing these stories."[8] The play sessions, therefore, became extremely important as a means of extending the interactions beyond a line of questioning and focusing more on the experiences of collaborative gameplay. Positioning myself not only as a researcher but also as a

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[6] Susan Gair and Ariella van Luyn, *Sharing Qualitative Research: Showing Lived Experience and Community Narratives* (n.p.: Routledge, 2019), 1.
[7] Gair and van Luyn, *Sharing Qualitative*, 6.
[8] Gair and van Luyn, 2.

fellow player allowed for a more natural flow in the conversations that I hope will be reflected in my analysis.

I chose to recruit participants from both the *Pokémon Go* and *Ingress* player communities because both games were launched at least three years ago and as a result, the player communities were more likely to be made up of long-term players. While initially, I was interested in exploring newer location-based mobile games such as *Jurassic World ALIVE* (Ludia 2018) and *Harry Potter: Wizards Unite* (Niantic 2019), yet after exploring existing Facebook and Discord groups dedicated for players based in Montréal, I realized that most of the 'regular' players of these newer games (those who open the game on a daily basis) primarily play either *Pokémon Go* or *Ingress* and I found it difficult to identify groups of players that only played the newer location-based games. While this crossover effect was discussed in some of my interviews, I ultimately decided that an analysis and comparison of the most popular location-based games would provide a stronger baseline for understanding play habits, activities and personal perspectives of these games. Further, as I aimed to investigate how local communities have formed around the aforementioned games, examining communities that have been active for a longer period would allow for an exploration of how players coordinate with one another, and how they currently engage in moderation and collaborative practices in both online and offline spaces.

## Ethical Considerations

As my thesis research involved human subjects, Academic Ethics Approval from Concordia University was granted on October 4th, 2019. In my application, I noted that while there are no major risks associated with participation in the study, the inherent risks associated with daily life and movement in urban spaces would still be present as Location-Based Games often require players to cross intersections, climb stairs, etc. Further, to ensure the safety of my participants, extra caution was taken to ensure street signals were followed and the play sessions were all conducted at a walking pace. Interviewees were alerted of barriers in their path and any changes to ground levels (such as staircases) to prevent any possible injury.

Another ethical consideration that was accounted for was participant confidentiality. While I did not want to use interviewees' real names in my research, I provided them with two options related

to the disclosure of their in-game nicknames. They could either choose to be identified in the written thesis by their real 'in-game pseudonym' (nickname) or opt for complete confidentiality in which I would create a pseudonym for them. This reassured the players, who discussed more sensitive matters that they would not be indirectly identifiable.

## Recruitment

To recruit participants for interviews and play sessions, I identified the most populated and active online spaces for both *Pokémon Go* and *Ingress*. As I have been a member of the local *Pokémon Go* community since the launch of the game in 2016, I was already a part of two different Montréal Facebook groups, three local messenger chat groups for different neighbourhoods (downtown Montréal, Concordia, and NDG) and a Montréal-wide *Pokémon Go* Discord group. I posted calls for participants in two of the neighbourhood chats and the Discord group and received interest from eight different players.

While I initially attempted the same recruitment process for *Ingress* players, the cautious nature of the game's player community made this rather difficult. As *Ingress* is 'faction-based' with two highly competitive teams, all online groups and discussion spaces are private, and membership must be reviewed by existing players. This process, known as '**vetting'**, requires players who are already members of the community to meet a player that wants to join the primary online discussion spaces (which are currently Slack and/or Telegram) in person. This person can then confirm that the player applying is 'legitimate' and is also a part of the faction they claim to be. The process is this thorough because there have been many instances where players from the opposing faction have acted as spies in these online spaces. Ultimately, I was connected to the local *Ingress* player community by one of the *Pokémon Go* players I was going to interview after she mentioned that she used to play *Ingress* before *Pokémon Go* came out. After she connected me with an *Ingress* player, this player referred me to six other players with whom I managed to schedule interviews. The following chart provides an overview of the participants interviewed for this thesis with information about their age, gender, game of choice, time played per week, the year they started playing, and other digital games they play on a regular basis. This chart can also be found at the end of the thesis for future referral.

## Interviewee Overview

| IN-GAME NAME | GENDER | AGE | OCCUPATION | GAME | PLAY TIME PER WEEK | STARTED PLAYING | OTHER GAMES PLAYED |
|---|---|---|---|---|---|---|---|
| **Gosuu** | Male | 42 | Customer Support Agent (full-time) | Ingress | 36 hrs per week | 2016 | Pokémon Go, Harry Potter: Wizards Unite |
| **LilPatate** | Male | 36 | Engineer (full-time) | Ingress | 10 hrs per week | 2017 | Pokémon Go, Harry Potter: Wizards Unite |
| **CuttedFinger** | Female | 35 | Support for Tech Company (full-time) and also doing a bachelor's degree in computer and Software Engineering (part-time) | Ingress | 5-10 hrs per week | 2014 | Mobile Games (Egg Game) & Zelda on the Wii |
| **LordFranklin** | Male | 64 | IT Consultant (part-time) | Ingress | 5-10 hrs per week | 2016 | None |
| **Ebyru** | Female | 30 | Currently on medical leave due to back injury | Pokémon Go | 30 hrs per week | 2016 | Some other mobile games (did not specify) |
| **R3DPUMA** | Female | 43 | Travel Agent (full-time) | Pokémon Go | 12-15 hrs per week | 2016 | None |
| **DoctorProximo** | Male | 46 | Unemployed | Pokémon Go | 10-12 hrs per week | 2017 | Mobile Games (Words with Friends, Yahtzee) |
| **BGold** | Male | 23 | Recently finished his Undergraduate Degree in Software Engineering | Pokémon Go | 60-80 hrs per week | 2016 | Fortnite & Binding of Isaac |
| **MonoAxon** | Male | 46 | Mortgage Broker (full-time) | Ingress | 5-10 hrs per week | 2015 | Mobile Games (Clash of Clans) |
| **Portalis** | Male | 31 | Business Analyst (full-time) | Ingress | 15-20 hrs per week | 2012 | Other LBMG (Pokémon Go, Harry Potter:Wizards Unite, Minecraft Earth & Orna) |
| **Oracle222** | Female | 46 | Bookkeeper (part-time) | Pokémon Go | 20 hrs per week | 2016 | None |
| **MonadoBoy** | Male | 24 | Graduate Student in Chemistry | Pokémon Go | 30 hrs per week | 2016 | Zelda, Xenoblade Chronicles and other Pokémon games |
| **Samorrita** | Female | 49 | Clinical Research Assistant at a Hospital | Pokémon Go | 25-30 hrs per week | 2016 | None |
| **Nakon** | Male | 44 | Scriptwriter at a AAA games studio (full-time) | Pokémon Go | 5 hrs per week | 2018 | PS4 & PC games as well as other Pokémon Games on the Nintendo Switch |
| **2Floyd** | Male | 35 | Engineer in the aerospace sector (full-time) | Ingress | 10-15 hrs a week | 2015 | Mobile Games and nintendo games with his kids |

## Interview Process

In total, I held interviews and play sessions with fifteen players from both communities — with seven players from *Ingress* and eight from *Pokémon Go*. I allowed each interviewee to select the time, date and location of their interview and encouraged them to choose a location in which they often play the game. As the interviews and play sessions took place throughout November 2019,

there were four instances where the play sessions had to take place indoors due to bad weather conditions. The analysis is therefore based on the intersections between each players' subjectivities, play styles, and perspectives on the community as a whole, allowing for an understanding of how their game of choice and the community that surrounds it is integrated into their daily lives and routines.

While initially, I calculated that the interviews would take approximately 20-30 minutes, they each averaged approximately one hour as some of the play sessions took place during the interviews. Further, inviting players to share stories and anecdotes about their play experiences often extended the time I had allocated for each section of questions. While I had prepared a list of questions to ask each interviewee with sections focused on general play habits, community involvement, and spatial experiences, there were often instances where an interesting comment made by an interviewee led to a larger discussion about a topic that I had not considered in my initial line of questioning.

The interviews provided data about play patterns, habits, perspectives of the game, involvement in local communities, and both social and spatial dynamics, and the play sessions allowed me to observe whether or not the way that the players played the game with me correlated with how they discussed their play styles. Moreover, as the play sessions took place in environments that players were very familiar with, certain landmarks, buildings, parks, and other spatial features sparked interesting stories and anecdotes.

## Data Processing and Analysis

In order to conduct a thematic analysis of the interview data, the audio from each interview was recorded and observational notes were taken immediately after the interviews; this allowed me to identify interesting moments and themes that were discussed. I then coded each interview using overarching themes and sub-themes. These overarching themes and sub-themes grew out of interview questions that each participant was asked, as well as keywords and ideas that emerged in more than two interviews. They are as follows:

1. General Play Habits
2. Perspective of the Game

3. Local Community Dynamics
4. Involvement in that Community
5. Relationship to Locations of Play

As the project is driven by specific research questions, the interview findings, and is based on my own experiences as a player and researcher, I used a 'bottom up' approach by drawing from the quotes, statements and tonal inflections made by interviewees and applied them to larger theoretical frameworks for analysis. Further, I identified emergent themes such as cheating, moderation and spatial tensions which presented opportunities for analysis that will be discussed in later chapters. In order to consistently code the interview recordings, responses were separated by relevant comments and significant quotes were placed into the relevant thematic section and timestamped. More general information and statements made by participants were summarized and noted. Recurring phrases, words and tones were flagged to determine the context in which they were being used.

## Positionality

It is important to note that, as mentioned above, I positioned myself as a player throughout the interview process and during my analysis. I was not approaching the topic of locative gaming solely as a researcher, but also as an 'insider' and member of the community. As I have been a *Pokémon Go* player since it launched in 2016, general information about in-game content, community and gameplay is often drawn from my own experiences. Yet, while I was very familiar with *Pokémon Go* as I began this research, I had never played *Ingress* and my analysis of the game is based on my learning process, with many of my interviews including moments of 'teaching' and mentorship where they would show me certain mechanics and techniques during our interviews.

# History of Niantic

As both *Ingress* and *Pokémon Go* were developed by Niantic Labs, it is important to understand the history and mission of the company before outlining the games individually. In the early 2000s, a group of computer scientists, gamers, cartographers, and AI researchers, "obsessed with geospatial technologies and applications", created *Keyhole*, a product that allowed users to zoom into digital 3D maps of the planet. Notably, *Keyhole* was acquired by Google in 2004 and renamed *Google Earth.* Following the acquisition, from 2005-2009 the team focused on "exploration and 3D modelling of hundreds of cities, countries, and planets, and over time introduced Google Maps, Street View, SketchUp, and Panoramio", and eventually founded Niantic Labs in 2010 as a startup within Google.[9] During this time, the company's goal was to "leverage mobile devices and understandings of maps to create a new kind of gameplay based on three core principles: 1) Exploration and discovery of new places, 2) Exercise, 3) Real-world social interaction with other people."[10] In 2012 Niantic launched *Field Trip*, a location-based mobile app which acts as a guide to hidden and unique things found in the world around a player. Later that same year they launched *Ingress*, the first of its kind, location-based, augmented reality mobile game "which transforms the real world into the landscape for a global game of mystery, intrigue, and competition."[11] In 2015, Niantic became an independent, private company with major investments from The Pokémon Company Group, Google, and Nintendo, to develop *Pokémon Go* which was launched in July 2016. Following the success of *Pokémon Go*, Niantic launched *Harry Potter: Wizard's Unite* in 2019 and is currently working on a Location-Based adaptation of the classic board game 'Settlers of Catan', called *Catan: World Explorers*, as well as up to 10 other unannounced projects.

## Ingress

*Ingress* was initially launched in November 2012 "during the rise and boom of Google+, which quickly became the home for learning more about the game and to obtain an invite."[12] Originally, players would have to receive an invitation and activation code in order to join the game. Over the

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9 "The Niantic Story," Niantic Labs, accessed August 5, 2020, https://nianticlabs.com/en/about/.

10 "The Niantic," Niantic Labs.

11 "The Niantic," Niantic Labs.

12 Connor Tumbleson, "The History of Ingress [Part 1]," Fev Games, last modified May 16, 2016, accessed August 18, 2020, https://fevgames.net/the-history-of-ingress-part-1/.

following months, updated versions of the game introduced more and more mechanics, including the ability for players to submit new Points of Interest as in-game portals. Over a year later, *Ingress* opened up to all who wanted to play and gradually used community feedback to make changes and additions to the game.

The premise of *Ingress* revolves around a scientific experiment that created a "cascade that released exotic matter (XM) around the world [after which] portals … formed in locations like statues, museums and other public spaces."[13] When three portals are linked together, a field will be created to protect the area between those portals from "Shapers", which are transdimensional intelligence (or aliens) that are infiltrating our dimension using exotic matter. Agents (players) are given the choice to join one of two factions: the Enlightenment, who are "attempting to help the Shapers infiltrate Earth … to bring a powerful enlightenment that will lift humankind", or the Resistance who are "defending the Earth from the Shaper ingression to protect humanity."[14] The faction element of *Ingress* makes it highly competitive as players must collaborate and strategize to capture and defend portals and create the largest fields possible. Though *Ingress* has gained a large following, it remains largely 'underground' with a core following of players. However, in 2018, Niantic released an updated version of *Ingress*, called *Ingress Prime*, which featured a much more simplistic design in order to encourage new players to join [Figure 1]. Unlike the original *Ingress* application, which did not offer a step-by-step introduction into the game world, *Ingress Prime* features an in-depth tutorial that teaches new players the game's basic mechanics. As many of my interviewees started playing *Ingress* before *Ingress Prime* came out, I will be referring to both *Ingress* and *Ingress Prime* using its original name.

[13] Lawrence Lagerlof to Quora web forum, "What is the story/plot of Ingress?," February 14, 2013, accessed August 3, 2020, https://www.quora.com/What-is-the-story-plot-of-Ingress

[14] Lagerlof to Quora web forum, "What is the story/plot of Ingress?."

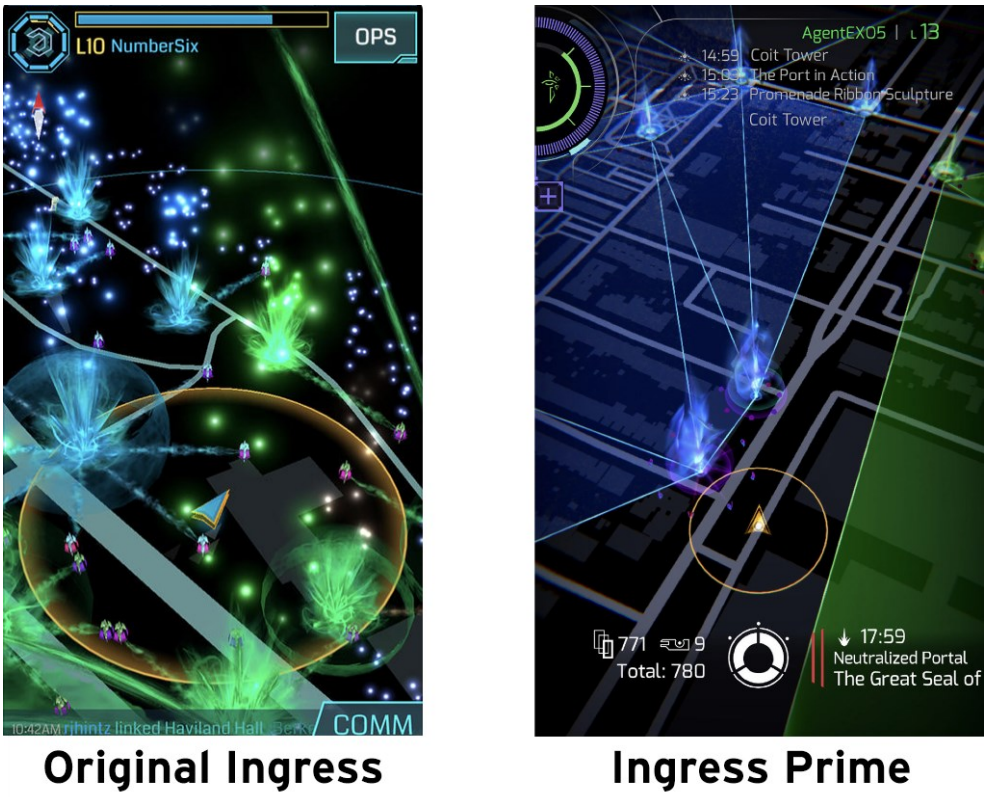


**Figure 1. Comparison between the original *Ingress* and *Ingress Prime* interfaces, TechCrunch 2018**

## Pokémon Go

The idea behind *Pokémon Go* grew out of an April Fool's Day Prank video published by Google Maps in 2014 [Figure 2]. The video featured a 'Where's Waldo' style map featuring Pokémon that could be 'found in the real world', alongside "people out in the actual world climbing mountains, riding camels across the desert and taking to the sea in order to find [these] Pokémon."[15] The video garnered great enough interest to spark the idea for *Pokémon Go*, which launched just over two years later in July 2016.

[15] Travis M. Andrews, "Pokémon Go: The April Fools' joke that became a global obsession," *The Washington Post*, July 13, 2016, accessed August 5, 2020, https://www.washingtonpost.com/news/morning-mix/wp/2016/07/13/pokemon-go-the-april-fools-joke-that-became-a-global-obsession/.


**Figure 2. Still Image from Google Maps: Pokémon Challenge, an April Fool's Video published on YouTube in 2014.**

The original premise of *Pokémon Go* was drawn from the larger Pokémon franchise and invited players to explore the world around them, catch Pokémon, collect items, and battle in gyms. Once players reached level 5 they were asked to choose between one of three teams: Valor (red), Mystic (blue) or Instinct (yellow). Over time, Niantic added many more features into the game such as daily quests, events, raids, friendship, trading, PvP, and the Pokémon buddy system. Niantic's website boasts that by 2017, *Pokémon Go* had been downloaded over 650 million times, and Trainers had collectively walked over 15.8 billion kilometres — roughly the distance from Earth, past the edge of the solar system. Moreover, though many assumed that *Pokémon Go* 'died' after the initial 2016 'hype', *Pokémon Go* had a record year in 2019, taking in an estimated $900 million through in-app purchases.[16] It's clear that *Pokémon Go* has made a major impact on the direction of both Location-Based and Alternate Reality Games. While *Pokémon Go* is also considered an Augmented Reality Game (ARG), many players (myself included) do not use the Augmented Reality feature unless it is required for an in-game mission as it can be very awkward in public spaces to find an empty, flat space to use the ARG functionality, and interrupts the regularly used in-game actions that players have become used to. Rather, most players use the ARG functionality at home where there is more space to interact with their 'buddy' Pokémon and take interesting snapshots.

[16] Nick Statt, "Pokémon Go never went away — 2019 was its most lucrative year ever," The Verge, last modified January 10, 2020, accessed August 2, 2020, https://www.theverge.com/2020/1/10/21060877/pokemon-go-record-revenue-2019-niantic-labs-ar-growth.

## How do these games differ?

While both games are Free-to-Play, there are some major differences between the interfaces and 'accessibility' of *Ingress* and *Pokémon Go* that are important to highlight. Firstly, as mentioned, both narratives are quite straightforward. In *Ingress*, the underlying narrative is to save the world from the opposing faction by collecting 'Exotic Matter' using hacked portals and forming links between them, while *Pokémon Go* draws from the original franchise and series, encouraging players to 'catch em all' and explore with the aim of being the best Pokémon trainer. *Pokémon Go* players can easily pick up the game with little to no prior knowledge of the franchise or mechanics as the 'basics' are quite easy to understand and the interface is clean and colourful [Figure 3], yet my interviews revealed that *Ingress* is much less intuitive for new players.  .


**Figure 3. Screenshot of *Pokémon Go* Interface**

Yet it is evident that *Ingress* has a larger learning curve, because strategy, player level, and collaboration between players is key to success.[17] Indeed, while over the last two years, *Pokémon Go* has gotten quite a bit more complex as more features, mechanics and Pokémon were introduced, it is still a relatively straightforward and welcoming interface in comparison to *Ingress*, which is visually darker, more crowded with in-game POIs (portals) and often requires other players to 'mentor' new members of the community. While *Pokémon Go* has collaborative aspects, it can (for the most part) be played alone, yet *Ingress* is highly collaborative and competitive and requires teamwork for larger missions and operations. In fact, many *Ingress* players call *Pokémon Go* '*Ingress* Lite' as it is seen as a less intense and serious version of *Ingress*' locative play. Though *Ingress* and *Pokémon Go* have clear differences in terms of mechanics, narrative, and playstyles, I chose to research communities of play from both games in order to determine how the social and spatial dynamics intersect and diverge from one game to the other.

## Chapter Outline

I have structured my chapters thematically. The first chapter will focus on the social aspects of Location-Based Gameplay. It will analyze literature on 'communities of play' in order to compare social elements from player communities surrounding MMOGs and Social Games' to the social experiences described by interviewees. It will then examine how active players engage in Community Moderation and Self-Governance to extents that ultimately influence larger play patterns and group dynamics in both offline and online situations. These patterns suggest that active members of both communities monitor and control acceptable forms of play in relation to rule-breaking, sometimes creating tensions and gatekeeping within the close-knit communities. The second chapter of the thesis will turn to Spatial experiences that emerge over time through locative gameplay. Accordingly, the chapter tackles questions related to how, when, and why players engage with the spaces in which they play. It will also examine if and how spaces are impacted by players and by comparing habitual and situational play patterns, it will investigate whether or not players' experiences of space are transformed and/or enriched by their game of choice.

[17] Greg Kumparak, "Niantic overhauls Ingress to make it more welcoming for new players," Tech Crunch, last modified November 5, 2018, accessed August 1, 2020, https://techcrunch.com/2018/11/05/what-is-ingress-prime/.

## Literature Overview

Though the popularization of locative and pervasive games was seen as a novel phenomenon in the early 2000s, the presence of play in public spaces was not a 'new' occurrence. Indeed, many scholars (Montola et al., 2009; de Souza e Silva 2009; de Lange 2010) note that play has always been a feature of large urban spaces, most often through interactions with dedicated 'playful' infrastructural features such as playgrounds, sports arenas and parks. It could also be found in "avant garde practices, from early folk games and parkour to the playful interventions of French avant-garde movement the Situationist International (S.I.) and Fluxus artists."[18] Further, in his analysis of spatial practices of pervasive games, Markus Montola notes that public play can be traced to several activities, groups and subcultural movements. He states:

> [Pervasive Games] have their roots in the neighborhood games of childhood; in the campus-wide games and stunts of college; in the nerd-culture of live-action role-playing and Civil War reenactments; in the art-culture of Happenings and Situationism, in urban skate parks, paintball fields and anywhere people gather to play in large numbers and spaces.[19]

Yet while play in public spaces can be found in many instances throughout history, de Souza e Silva and Sutko (2009) contend that the integration of location tracking and awareness in portable mobile devices has introduced new forms of gameplay in public spaces. Notably, a kind of digital-physical play that creates a *hybrid space* defined by the relationship between physical movement, public play and digital interfaces. For de Souza e Silva, this 'hybrid space' allows for social activities "that typically unfold online [to] intersect with embodied physical space through mobile devices" and therefore location-based games "are the ultimate expression of this convergence of the digital and physical, providing 'perhaps the strongest evidence of bringing networked communities into hybrid space'".[20] Moreover, Montola identifies that pervasive games exist "in the intersection of phenomena such as city culture, mobile technology, network communication, reality fiction, and performing arts" and asserts that they are diverse and can include "individual games ranging from simple single-player mobile phone games, to artistically and politically

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[18] Dale Leorke, *Location-Based Gaming: Play in Public Space* (London, UK: Palgrave Macmillen, 2019), 4.

[19] Markus Montola, Jaakos Stenros, and Annika Waern, *Pervasive Games: Theory and Design* (Boca Raton, FL: CRC Press: Taylor & Francis, 2009), 54.

[20] Adriana de Souza e Silva, "From Cyber to Hybrid," *Space and Culture* 9, no. 3 (August 2006): 266, https://doi.org/10.1177/1206331206289022.

ambitious mixed reality events".[21] The intersection of digital and spatial engagement in locative games certainly differentiates them from earlier forms of public play.

Indeed, as location-tracking and global positioning systems (GPS) are relatively new technologies, with their first large-scale integration into mobile devices emerging in the late 1990s, most academic research around this topic began in the early 2000s when "a period of experimentation with location-aware technologies, digital storytelling, and interactive media art"[22] led to the first instances of locative and pervasive play. Drakopoulou (2010), for instance, identifies that from 2001-2004, both commercial and experimental Locative Games often used a correlation of GPS, Bluetooth (short-range data exchange), SMS (short messaging service), Wi-fi, and voice calls to "create people-situated interaction in public, to alter the experience of walking in the city, and to recontextualize location".[23]

While many authors have examined terminology around these media (Montola et al., 2009; de Souza e Silva and Sutko 2009; Duggan 2017; Leorke 2019), the term 'locative game' is sometimes used interchangeably with 'pervasive game' and these kinds of games can be further broken into subcategories including Location-Based Mobile Games (LBMGs), Urban Games, ARGs (Augmented Reality Games), Mixed Reality Games, Hybrid Reality Games (HRGs), Transreality Games, and Cross-Media Games. Yet according to De Souza e Silva and Sutko, these categories "are not exclusive but rather define different aspects of the relationships between game space, game interfaces and game time".[24] Further, the authors highlight two characteristics that separate locative games from both traditional videogames and physical (non-digital) games: "(1) they use the city space as the game board, and (2) they use mobile devices as interfaces for gameplay".[25] These media have created new ways for digital play and virtual interfaces to converge with physical movement through city spaces and site-specific attributes and features.

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[21] Montola, Stenros, and Waern, *Pervasive Games*, 7.
[22] Leorke, *Location-Based Gaming*, 3.
[23] Sophia Drakopoulou, "A Moment of Experimentation: Spatial Practice and Representation of Space as Narrative Elements in Location-based Games," *Aether: The Journal of Media Geography*, March 2010, 66, Academia.
[24] Adriana de Souza e Silva and Daniel M. Sutko, eds., *Digital Cityscapes: Merging Digital and Urban Playspaces* (New York: Peter Lang, 2009), 3.
[25] de Souza e Silva and Sutko, *Digital Cityscapes*, 3.

Dale Leorke's (2019) book *Location-Based Gaming: Play in Public Space* provides an extensive historical analysis of both the technological and cultural development of location-based gaming and unpacking their implications for player labour, creativity, social interaction, and urban planning. He also focuses on the negotiation between locative play as artistic, localized, experimental practices, and locative play as a form of commercial, large-scale and 'productive' activity. Thus, he identifies two different phases of location-based gaming; while the first phase correlates with the pre-smartphone era (2001 - 2008) where smaller-scale experimentations with locative technologies primarily occurred, and equates the second phase with the emergence and popularization of smartphones (2008 - present) where new mobile technologies allowed for larger, commercial locative games.

Further, e Souza e Silva and Gordon (2011) have explored the history of mobile locative gaming by examining the commercial interest in these media as products. They state that "location-based services (LBS) comprise the fastest growing sector in web technology businesses with a forecasted profit growth from $515 million in 2007 to $13.3 billion in 2013." Similarly, Leorke's chapter, *Location-Based Gaming's Second Phase (2008-present)* provides an overview of the rise of mobile gaming and the emergence of the app ecology. He identifies that the earliest Location-Based Mobile Games were early Geocaching Apps dating back to 2009, and then traces the emergence of other games including *Turf Wars* (MeanFreePath 2009), *Shadow Cities* (Grey Area 2011), *Please Stay Calm* (Massive Damage, Inc. 2011), *CodeRunner* (RobotChicken Interactive 2011), *Life is Crime* (Red Robot Labs 2012), *Zombies, Run!* (Six to Start & Naomi Alderman 2012) and *Ingress* (Niantic 2012). He argues that it was the commercial success of three of these games *(Shadow Cities*, *Life is Crime* and *Ingress*) that paved the way for a "slew of subsequent location-based gaming apps", eventually leading to *Pokémon Go* in 2016 which "catapulted location-based games well into the mainstream consciousness".[26] Indeed, while the development of these games coincided with the sophistication of mobile media, they also proved that public interest in pervasive play was growing.

The explosion of mobile games has largely been associated with a form of gaming called 'casual' which are defined as different from 'hardcore' games because "(1) their fiction preference tends

[26] Leorke, *Location-Based Gaming*, 111-112.

to be positive, (2) casual games require less initial knowledge to play, and (3) they demand lower time investments."[27] Accordingly, Hjorth and Richardson (2014) have identified that mobile gameplay involves the "shifting modalities of place, presence, and being-in-the-world" punctuated by "interruptibility" which ultimately creates a form of 'play' that extends beyond the limits of the game and the screen.[28] De Souza e Silva and Hjorth (2009) state that while "generally, when the term mobile gaming is used, it refers to games played on the cell phone screen", location awareness and global positioning system (GPS) devices embedded in mobiles "turn[ed] them into interfaces to navigate physical spaces" and socialize with other smartphone users in real-time.[29] Indeed, as mobile phones became more popular and technologically sophisticated, so too did "mobile gaming".

## Locative Gameplay and the Magic Circle

The concept of 'the magic circle' is often brought up in academic discourse surrounding locative and pervasive games. Coined by Johan Huizinga, "the magic circle" of a game is considered to be the temporal and spatial boundary separating the ordinary from ludic and real from playful.[30] Duggan (2017) outlines how this conceptual boundary around the game can be considered as 'closed' when a game constitutes a set of rules, or 'open', when a game is subject to a broader approach. Yet Salen and Zimmerman (2004) have contended that while at a basic level "to play a game means entering into a magic circle, or perhaps creating one as a game begins",[31] the magic circle should be read more metaphorically, "as a conceptual boundary of game and real, as shorthand for the idea of a special place in time and space created by a game."[32] Further, Consalvo (2009) challenges scholarly understandings of the magic circle, suggesting that instead of players being inside or outside of a dedicated play area, "players exist or understand 'reality' through recourse to various frames (their daily life, the game world, their characters' alleged knowledge

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[27] David B. Nieborg, "Crushing Candy: The Free-to-Play Game in Its Connective Commodity Form," *Social Media + Society* 1, no. 2 (September 22, 2015): 4, https://doi.org/10.1177/2056305115621932.

[28] Hjorth and Richardson, *Gaming in Social*, 18.

[29] Adriana de Souza e Silva and Larissa Hjorth, "Playful Urban Spaces A Historical Approach to Mobile Games," *Simulation & Gaming* 40, no. 5 (October 2009): 603, https://doi.org/10.1177/1046878109333723.

[30] Katie Salen and Eric Zimmerman, *Rules of play : game design fundamentals* (Cambridge, MA: MIT Press, 2004), 92.

[31] Salen and Zimmerman, *Rules of play*, 95.

[32] Salen and Zimmerman, *Rules of play*. Quoted in Montola, Stenros, and Waern, *Pervasive Games*, 7-8.

and past) and move between those frames with fluidity and grace."[33] This analysis is in line with how locative gameplay has been considered in relation to this 'contractual' magic circle. Montola (2009) highlights how play and life are often intertwined, and therefore the magic circle is often 'blurred' when it comes to pervasive games. He states that "a pervasive game is a game that has one or more salient features that expand the contractual magic circle or play socially, spatially or temporally."[34] Montola points out that because pervasive gamers "inhabit a game world that is present within the ordinary world", the games are simultaneously dependent on and enriched by the environments in which they take place and therefore expand the game world on a spatial level.[35] Further, the spatial expansion described above often leads to what Montola calls 'social expansion' where outsiders become involved in the game in some way, from spectatorship to full participation. While locative gaming creates a co-presence between physical and digital play, it also creates a co-presence between players and non-players through social expansion. Finally, he connects spatial and social expansion to 'temporal' expansion, stating that pervasive games often subvert "the proper boundaries of time" as gameplay usually "moves from the center of attention to periphery and back again".[36] He contends that because of these three 'expansive' aspects, the "magic circle of a pervasive game is a blurry, porous structure [and] it is often impossible to differentiate between the ordinary and the ludic" which often powerfully complement each other.[37]

## Social Aspects of Locative Games

Another strand of scholarship that has emerged out of the study of location-based games revolves around their ability to incite social interactions as well as both local and global communities. De Lange notes that the emergence of mobile media in the early 2000s led to the belief that ICTs weaken or even obliterate the importance of time and physical place (the "local") in social relations which were formerly based on physical proximity and face-to-face interactions.[38] Scholars coming

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[33] Mia Consalvo, "There is no magic circle," *Games and Culture* 4, no. 4 (2009): 415, https://doi.org/10.1177/1555412009343575.

[34] Markus Montola, "Exploring the edge of the magic circle: Defining pervasive games," *Proceedings of DAC*, 2005, 3.

[35] Montola, Stenros, and Waern, *Pervasive Games*, 12.

[36] Montola, Stenros, and Waern, *Pervasive Games*, 14.

[37] Montola, Stenros, and Waern, *Pervasive Games*, 22.

[38] Joshua Meyrowitz, *Sense of Place: The Impact of Electronic Media on Social Behavior* (New York: Oxford University Press, 1985), 308 quoted in Michiel de Lange, "From always on to always there: Locative media as Playful Technologies," in *Digital*

from media and communication studies have inquired into what happens to social relations when we can communicate while on the move, focusing specifically on how they transform how "we communicate, interact with space, and with others who are both nearby and remote"[39] (see Campbell 2013; Goggin and Wilken 2013). Yet more recent literature suggests that the rapid emergence of location-based and mobile media has not obliterated practices of socialization, rather social interactions now occur in hybrid spaces (de Souza e Silva & Sheller 2008). Koskinen et al. (2019) approach sociality by conducting surveys with middle-aged *Pokémon Go* players concerning the kinds of 'memorable experiences' they valued. They found that the players interviewed seemed to highly valued a sense of community, cross-generational play, and making new friends while playing or serendipitously meeting people they already knew.[40] Yet the majority of research conducted relating to player communities in Location-based games has been quantitative and primarily survey-based. These papers focus specifically on the social aspects of location-based games such as *Bliine* (de Lange 2009), *Pokémon Go* (de Souza e Silva 2016; Hjorth and Richardson 2017; Vella et al. 2017), *Zombies, RUN!* (Witkowski 2015), *Reality Ends Here* (Watson 2012), *Canal accessible*, *BioMapping* and *Disappearing Places* (San Cornelio and Ardévol 2011) and *Invisible City: Rebels vs. Spies* (Sintoris et al. 2013), each considering the social, environmental, and cultural implications of location-based play in urban locales.

However, Hjorth and Richardson's book *Gaming in Social, Locative and Mobile Media* provides an extensive analysis of space, play styles and cultural positioning concerning social interactions. Further, while they do not directly analyze locative games, Willson and Leaver's *Social, Casual and Mobile Games* outlines how games played on devices such as smartphones and tablets have created new forms of social collaboration and interaction that occur, sometimes simultaneously, in offline and online spaces. Leorke (2019) approaches social interactions in locative games by noting that they establish a "demarcated space for distanced and detached playful behaviour, allowing players to interact with strangers in ways they wouldn't normally".[41] Others have challenged locative games' potential for fostering communities (Davies & Innocent, 2017;

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*cityscapes : merging digital and urban playspaces*, by Adriana de Souza e Silva and Daniel M. Sutko (New York: Peter Lang, 2009), 1.

[39] Adriana de Souza e Silva and Mimi Sheller, "Introduction: Moving toward adjacent possibles," introduction to *Mobility and Locative Media: Mobile Communication in Hybrid Spaces* (Hoboken: Routledge, 2014), EBSCOhost (831957).

[40] de Souza e Silva and Sheller, *Mobility and Locative*, 7-8.

[41] Leorke, *Location-Based Gaming*, 5.

Winegarner 2016) and have investigated whether these games might actually "encourage intrusive behaviour and disconnect players from those around them".[42] This line of questioning will be explored in the second chapter of this thesis.

## Spatial Aspects of Locative Media

As the majority of locative games require play in public space, many scholars have investigated how physical movement, player coordination and urban interactions often lead to unique forms of engagement with spatial environments. Indeed, de Souza e Silva and Sutko (2009) note that "walking through urban spaces while playing games on a location-aware, Internet-enabled, mobile device encourages unprecedented ways of exploring and navigating urban *and* digital spaces."[43] Further, Hjorth and Richardson conceptualize that *critical cartography* in locative gameplay experiences can be understood as"the idea that we shape maps and our geo-cultural terrain as much as they shape us".[44] They argue that as "media become more mobile and playful, and games embed geo-locative data, we increasingly interweave our everyday experience of place with playful virtual environments" and identify that these media often transform "banal and familiar surroundings [into] significant game loci".[45] Similarly, Michiel de Lange describes how "hybrid space offers read/write possibilities beyond the initial legibility and official reading of a site" where players "have the power to inscribe places with their own personal experiences."[46] Further, the real-world maps in these games "simultaneously function as (urban) navigational interfaces and game boards"[47] and therefore players' experiences of 'spatial legibility' which is "the way urban environments appear as coherent and recognizable patterns."[48] Indeed, the map-based aspect of locative games has had some interesting implications on how playful interfaces can re-negotiate cartographies and local knowledge.

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[42] Leorke, 48.

[43] de Souza e Silva and Sutko, *Digital Cityscapes*, 1.

[44] Larissa Hjorth and Ingrid Richardson, "Pokémon GO: Mobile Media, Play, Place-making, and the Digital Wayfarer," *Mobile Media and Communication* 5, no. 1 (2017): 3, https://doi.org/10.1177/2050157916680015.

[45] Hjorth and Richardson, "Pokémon GO: Mobile," 4.

[46] de Lange, *Moving Circles*, 177-178.

[47] Sybille Lammes and Clancy Wilmott, "The Map as Playground: Location-based Games as Cartographical Practices," *Convergence: The International Journal of Research into New Media Technologies* 24, no. 6 (December 8, 2016): 253, https://doi.org/10.1177/1354856516679596.

[48] Ingrid Richardson, "Urban Gaming: Mobile Media, Spatial Practices and Everyday Play," in *The Routledge Companion to Urban Media and Communication*, ed. Zlatan Krajina and Deborah Stevenson (n.p.: Routledge, 2019).

Also, while mobility and locative media have been considered in relation to urban ecology, hybrid reality and urban planning (Licoppe & Inada 2016; de Souza e Silva & Sutko 2009; Tierney 2013), and in relation to embodied space (Farman 2012), recent research on mobile communication technologies have also focused on changes in social and spatial practices of everyday life through the use of locative media (Hjorth and Richardson 2014, 2017; De Lange 2009). Accordingly, theoretical conceptions of 'space and place' have been integrated into an analysis of locative media through both case studies of locative games (Sintoris 2013; De Lange 2009; Watson 2012), and thorough examinations of artwork and installations (San Cornelio & Ardévol 2011). Licoppe and Inada (2016) have discussed how the integration of mobile media and ICTs into everyday experiences and routines has shifted public spatial understandings and Farman (2012) highlights how embodied spaces are now often mediated by mobile environments. Moreover, Leorke notes that Farman (2012), Flanagan (2009) and Gazzard (2011) have each examined different ethical implications of location-based games, especially when players bring game interfaces (usually in the form of a mobile device) into public spaces in which "potential disjunctures and inequalities... might emerge between players and non-players".[49] Finally, Hjorth and Richardson emphasize how "we increasingly interweave our everyday experience of place with virtual environments" as "media become more mobile and playful, and games embed geo-locative data",[50] which ultimately leads to a co-presence of both virtual and physical, in daily movements and routines.

Though there has been a surge of scholarship in the last ten years surrounding locative media and pervasive games, with a special focus on themes of spatial and social experiences, I believe that investigations into the relationship between these two categories - space and community - remains under-examined. Moreover, most of the research focused on player experiences and locative communities of play has used quantitative methodological approaches, and my thesis argues that qualitative research provides a much more nuanced understanding of how these communities interact, self-regulate and collaborate. By basing my larger analysis off players' personal reflections, thoughts, and anecdotes, I draw connections between players' everyday experiences and find thematic patterns that can be linked to pre-existing literature on Locative Games.

[49] Leorke, *Location-Based Gaming*, 4.
[50] Hjorth and Richardson, "Pokémon Go: Mobile," 6.

# Chapter 1: Location-Based Games and Communities of Play

Though communities of play are vast and diverse in relation to game genres, platforms, player demographics and many more interconnected factors, I posit that Location-Based Games communities intersect with two major gaming genres: those generated by Casual, Mobile and Social games and those which emerged within the virtual ecosystems of Massively Multiplayer Online Games (MMOGs). These two very different community types emerged during different periods, with MMOGs more closely associated with the late 1990s and early 2000s and Casual, Mobile and Social games with the rise of mobile applications and Free-to-Play game monetization models in the 2010s.

Yet there are several aspects of locative games communities that simultaneously make them similar to and differentiate them from these existing online and offline games communities. Locative communities of play can be identified in the space between the social hierarchies, metagoals, rules and temporal commitment found in MMOGs, and the social mechanics, interruptibility, and repetitive levelling structures found in Casual, Mobile and Social games. Yet while it can be argued that these two different genres of gameplay do intersect in some ways, by outlining research surrounding each one exclusively, I highlight that while Locative Games draw mechanics from Casual, Mobile and Social game structures, their players have ended up engaging with their game of choice in ways that align more closely with communities of play that surround MMOGs. Moreover, my interviews reveal that active players of both *Ingress* and *Pokémon Go* engage in forms of **Community Moderation** and **Self-Governance** to extents that ultimately influence larger play patterns and group dynamics in both offline and online situations. These patterns suggest that active members of both communities monitor and control acceptable forms of play concerning rule-breaking, sometimes creating tensions and gatekeeping within the close-knit communities.

## Social, Casual and Mobile Games

The popularization of Free-to-Play (F2P) mobile games has been widely attributed to the birth of the Apple app store in 2009[51] and the implementation of "in-app-purchases" which allowed developers to remodel the way that a game can make a profit.[52] Instead of asking players to pay a set (premium) fee or a subscription plan to access a game, F2P mobile games allows players to download free content and after they are introduced to the game, they can pay for certain features or tools in the game. Nieborg has noted that the F2P model involves "acquisition, engagement, retention, and monetization"[53] and that F2P developers consider themselves a service business where monetization no longer comes solely from players but also form partnerships with social platforms and advertisers, as well as from player longevity.

As previously stated, F2P games have largely been associated with a form of gaming called 'casual' which are often defined as different from 'hardcore' games because "(1) their fiction preference tends to be positive, (2) casual games require less initial knowledge to play, and (3) they demand lower time investments."[54] While games like *Ingress* and *Pokémon Go* seemingly fit into many of these categories with simplistic underlying narratives and repetitive social mechanics, Hjorth and Richardson caution that this "casual/hardcore dichotomy provides an incomplete interpretation of 'small' or app-based gaming on mobile devices".[55] Further, they contend that because the genre of gameplay is designed to take place "between the interstices of everyday life"[56] whether that be during a player's commute, before bed, or in a waiting room, players can engage with these games as much or as little as desired. Indeed, Jesper Juul notes that casual games "allow us to have a meaningful play experience within a short time frame, but do not prevent us from spending more time on a game", meaning that 'casual' games like *Ingress* and *Pokémon Go* can involve the same level of time commitment, if not more, as traditionally defined 'hardcore' games.[57] Moreover, because mobile gameplay often involves the "shifting modalities of place,

[51] Larissa Hjorth and Ingrid Richardson, *Gaming in Social, Locative and Mobile Media* (London, UK: Palgrave Macmillen, 2014), 5.
[52] Nieborg, "Crushing Candy," 6.
[53] Nieborg, "Crushing Candy," 6.
[54] Nieborg, "Crushing Candy," 4.
[55] Hjorth and Richardson, *Gaming in Social*, 45.
[56] Hjorth and Richardson, 5.
[57] Jesper Juul, *A Casual Revolution: Reinventing Video Games and their Players* (Cambridge, MA: MIT Press, 2010), 9.

presence, and being-in-the-world", it is punctuated by a sense of 'interruptibility', creating a form of play that extends beyond the limits of the game and mobile screen.[58] Thus, in the case of both *Ingress* and *Pokémon Go,* the 'playtime' described by players is porous, including social and research endeavours such as creating and managing online groups and chats, sharing information about in-game content, organizing events and operations in the 'real world', and even moderating tensions between players and ensuring they follow community-established rules. Accordingly, Hjorth and Richardson note that 'casualness' does not refer to "minimal time, or trivial social or financial investment from the player... in fact, it camouflages much of a player's temporal, social, and affective labour."[59] In these kinds of games, play blends with a plethora of other seemingly non-playful activities.

Social gaming provides a digital space for "competitive, social, cultural and commercial exchange"[60] within the intersection of online and offline player identities. The 'social' aspect of Casual, F2P and/or Mobile games can be traced to the emergence of Social Network Services (SNS) such as Facebook, which cultivated games that involved micro-activities such as "turn-taking, gift exchanges, trading and text communications".[61] Consalvo notes that though social games were initially primarily attributed to Facebook, due to their increasing diversity they are often referred to as **social network games**, "to highlight their fundamental reliance on a technological platform (much like referring to console games) rather than making sweeping statements about sociality and its presumed lack in other types of games."[62] Yet for this analysis, I also refer to mobile games that are not solely contained on social media platforms as the popularity of social network games (especially Facebook games) waned greatly as a result of the expanding mobile market and the explosion of mobile games.

Though many Social Games feature a single-player component, they are often coupled with basic multiplayer mechanics that allow for faster progression through interactions with friends, family,

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[58] Hjorth and Richardson, "Pokémon GO: Mobile," 18.
[59] Hjorth and Richardson, *Gaming in Social*, 45.
[60] Melissa De Zwart and Sal Humpfreys, "The Lawless Frontier of Deep Space: Code as Law in EVE Online," *Cultural Studies Review* 20, no. 1 (March 2014): 77.
[61] Hjorth and Richardson, *Gaming in Social*, 115.
[62] Mia Consalvo, "Using your friends: Social mechanics in social games," *Proceedings of the 6th International Conference on Foundations of Digital Games (FDG '11)*, 2011, 188, http://doi.org/10.1145/2159365.2159391.

colleagues and even strangers. These interactions vary between games, yet many involve the process of adding other players as friends and exchanging 'gifts'. Though avatars are created in some cases (as seen in Zynga games such as Farmville and Mafia Wars), player profiles are linked to their Facebook accounts, thereby creating a bridge between in-game and real identity. Yet, beyond the integration of the mechanics mentioned above, the 'community' aspect of Social Games are typically contained within the games and social platforms themselves. Further, Consalvo contends that the social mechanics found in popular social games are "quite limited in how they allow players to be social with one another" as sociality is often framed as "a 'click' that helps one player, or requests [for] help from others"[63] revealing that motivations for social interactions are not based on collaboration or community building.

While *Pokémon Go* currently features gift-giving, friendship levelling, Pokémon trading and PvP battling within the game, these social mechanics were not initially part of gameplay in *Pokémon Go*. Rather, almost two years after the game's initial launch, in June 2018, the capability to become 'Friends' with other players was introduced into the game. This is perhaps coincidentally related to Niantic's acquisition of *Evertoon,* a social mechanics startup, in November 2017. Following this acquisition, Niantic's CEO, John Hanke stated "as our products and platform evolve, they will help build social systems that will benefit our entire community" and soon after, the social mechanics mentioned above (gift-giving, friendship levelling, Pokémon trading and PvP battling) were rolled out. Similar to games found on Social Networking Platforms, gift-giving is encouraged as it allows friendship levels to build. The higher the friendship level is between players, the better. Not only do players receive increasingly robust amounts of XP as their friendship levels grow (3000 for good friends, 10,000 for great friends, 50,000 for ultra friends, and 100,000 for best friends), higher friendship levels allow players to do Pokémon trades for significantly less 'stardust' (in-game materials), help do more damage and award extra bonuses if friends raid together. Moreover, levelling up your friendship all the way to best friends with other players is quite a big time commitment — with the minimum requirement being 90 days of interactions between two players. Therefore, friendship and gifting were introduced to encourage more players to interact with the game on a daily basis and it is estimated that 2.2 Billion gifts were sent in the

[63] Consalvo, "Using your," 195.

first three months after the friendship feature was rolled out.[64] Yet while more 'social' actions can now be performed in the game, many players have turned to coordinating with their *Pokémon Go* friends on external platforms, with entire Discord servers being created for players seeking a player on their friends list. Another seemingly social feature of the game that was introduced in early 2019, is PvP (player vs player) battles, and the Battle League in early 2020, yet much like the gifting mechanic, there is no further interaction between players beyond single matches, and much like in Social Games, there is no opportunity to communicate in real-time.[65]

While the acquisition of *Evertoon* helped Niantic develop the various social mechanics for *Pokémon Go* that are now integral to gameplay, *Ingress* did not get the same treatment. Though in 2018, Niantic released *Ingress Prime*, a more accessible version of *Ingress* with a much simpler interface and map, the very limited 'social' features in the game have barely changed since the game's initial launch in 2012. Rather, the game features three primary 'inter-player' mechanics: a built-in chat called 'COMM' between players (individual, faction and cross-faction), an activity board where players can see what other players are doing in real-time, and a regional and global scoreboard featuring the top 25 players of both factions. Though players can click on and examine other player profiles to see their level and total AP (Access Points), badges, and completed missions, there is no social in-game interaction between players beyond the chat function. As a result, my interviewees explained that the vast majority of all social interaction in *Ingress* has always occurred outside of the game on other communications and social media platforms.

Similarly, though *Pokémon Go* has integrated many social features within the game, there was, and continues to be, a flourishing social life around the game long before such integrations. It is in these external spaces, and those in the offline, 'real world' of play that communities for both games can be located. While the games serve as conduits to enact play, gameplay, in general, is expansive and community-oriented in Location-Based Games and encompasses a complex system of social structures and interactions located both within and around the spaces of these games. The

[64] Mansoor Iqbal, "Pokémon GO Revenue and Usage Statistics (2020)," Business of Apps, last modified July 30, 2020, accessed August 7, 2020, https://www.businessofapps.com/data/pokemon-go-statistics/#1.
[65] Consalvo, "Using your," 195.

boundaries of these spaces become increasingly fluid as players extend the game both online and offline through the use of external platforms.

While my *Pokémon Go* interviewees discussed using Facebook, Messenger and Discord for communicating, organizing and collaborating, for the *Ingress* interviewees, their communities are primarily located on Slack, Telegram and Google Hangouts. One player explained that "operation security is very important [and] there are some channels in our slack that are private… if we do an operation, we don't announce it to everyone or even say it in the [in-game] COMMS because we know that [the Enlightened Players] are monitoring".[66] Further, she stated that as *Ingress* is much more competitive and strategy based, players choose to use platforms that have more extensive security measures and that are 'invite-only' to ensure they are not infiltrated by players from the opposing faction. While competition between teams was present when *Pokémon Go* first came out, the reconfiguration of the gym system and the introduction of raids made it much more collaborative so having open groups and chats benefited players in the long run.

Though the 'social' mechanics embedded within *Pokémon Go* and *Ingress* appear to be drawn from those traditionally found in Social Games, these mechanics are very limited and come secondary to the communities that exist outside and around both games. Though *Pokémon Go* has made efforts to implement in-game social mechanics, the emergence of an active community occurred long before these features were introduced. Since the game's 2016 launch gameplay has extended into both offline, real-world interactions, missions and events, as well as within dedicated third-party online spaces, and these activities are not built into the digital games themselves. Rather, this kind of self-cultivated community is similar to those found in an entirely different genre of game: those which flourished within Massively Multiplayer Online Games (MMOGs). Indeed, while the in-game social features found in *Pokémon Go* and *Ingress* are similar to the mechanics embedded in many Social, Casual and Mobile Games, the social ecosystems that developed around the games are much more akin to the complex and autonomous communities that emerged out of various MMOGs in the late 1990s and early 2000s.

[66] CuttedFinger, interview by the author, Montréal, Québec, November 11, 2019, 9:50.

## Communities of Play: MMOGs and Virtual Worlds

In her foundational text *Communities of Play: Emergent Cultures in Multiplayer Games and Virtual Worlds,* Celia Pearce investigates the kinds of emergent behaviours players are likely to exhibit when their play styles come into contact with certain game software. She coined the term "communities of play" as an extension of "communities of practice" which is defined as "a group of individuals who engage in a process of collective learning and maintain a common identity defined by a shared domain of interest or activity" and notes that the differentiation is made because play practices warrant their understanding of "how communities form and are maintained".[67] She contends that studying communities of play can allow for a deeper understanding of how social ecosystems are mediated by and grow around specific technologies and games. While there has been recent literature exploring social aspects of Locative Gameplay, there is very little that focuses on the individual experience of players belonging to micro-communities of play. For this reason, it is useful to frame an understanding of how Location-Based Games communities fit in to broader understandings of videogames and sociality by employing the ethnographic research conducted by scholars on MMOGs.

Though the ethnography Pearce conducted to explore player behaviour was held in the context of virtual ecosystems in MMOGs, virtual worlds, and metaverses, she asserts that "the communities formed [in virtual worlds] are as real as any that form in proximal space".[68] Pearce highlights that while a game is traditionally understood as "a formal system for structured play constrained by a set of rules that prescribe the means of achieving a *specified goal*", the activities and motivations of player communities in MMOGs extend beyond such goals. Players move beyond goals such as 'levelling up' or winning/losing as they often augment the "prescribed goals with **metagoals** of their own", all the while operating within defined social hierarchies.[69] She notes that these spaces afford opportunities for "informal sociability and their potential to function in terms of social capital".[70] Similarly, T.L. Taylor's exploration of communities in *Everquest* highlights the sociality of the space which extends beyond communication between players and weaves "between

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[67] Celia Pearce, *Communities of Play: Emergent Cultures in Multiplayer Games and Virtual Worlds*, ed. Tom Boellstorff and Bonnie A. Nardi (Cambridge, MA: MIT Press, 2011), 5.
[68] Pearce, 17.
[69] Pearce, 17.
[70] Pearce, 27.

on-and-offline life".[71] Like Pearce, she asserts that play is intertwined with the social worlds of these communities and 'active' players inevitably "undergo a socialization process and over time learn what it means to play far beyond what the manual or strict rules articulate."[72] She notes that the socialization process in MMOGs entails learning the 'rules' beyond those prescribed by the game, stating "players … are taught not only how to play, but how to be"[73] which involves a kind of mentorship that occurs between players within these spaces. Further, Taylor asserts that for players, the 'real world' and 'game/online world' are intertwined in many ways, with no common boundary separating the two. It is clear, as outlined in both Pearce and Taylor's investigations, that the social and interpersonal aspects of MMOG communities often dictate how players engage with their game of choice. Moreover, Taylor notes that these activities and relationships also extend into the 'real world' through Fan Fairs and public events. She observes that these fan events blur the boundaries between "game and nongame space, off-and-online lives, avatars and 'real' identities and bodies."[74] Though Taylor describes how communities engage in 'real-life' interactions through such events, this blurring of game and nongame space and identity occurs in temporary, situation-based environments and is not inherent to the games themselves.

Alternatively, Location-Based Games require a constant blurring of such boundaries, as real-world interactions are necessary for many in-game mechanics and features. While identities can be somewhat masked in online player interactions, players will ultimately encounter each other face-to-face in many offline locations through play. Indeed, after the launch of *Ingress Prime* in 2018, Niantic CEO, John Hanke stated that the "40,000 *Ingress* user groups that popped up globally during the game's launch showed us how real-world communities could work — this [is our] idea of MMO guilds in the real world".[75] Thus, it appears that the 'real-world' aspect of location-based games communities do not solely form in online spaces, nor proximal space, but rather grew out of **hybrid space**; that is, a correlation between online and offline engagements and interactions.

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[71] T. L. Taylor, *Play between Worlds: Exploring Online Game Culture* (Cambridge, MA: MIT Press, 2006), 31.
[72] Taylor, 32.
[73] Taylor, 35.
[74] Taylor, 1.
[75] Dean Takahashi, "How Niantic designers tackled Ingress Prime reboot," Venture Beat, last modified November 11, 2018, accessed August 9, 2020, https://venturebeat.com/2018/11/11/how-niantic-designers-tackled-ingress-prime-reboot/view-all/.

## Social Dynamics in *Pokémon Go* and *Ingress*

While Niantic has consistently updated *Ingress* and *Pokémon Go* since the launch of both games, adding new content, events and 'social' incentives, many interviewees highlighted that the games themselves are not the primary motivation for continued play or involvement in the community over time, with one player noting that "the technology, the game and the story can only go so far."[76] Rather, interviewees stressed that while initially, the gameplay itself for both *Ingress* and *Pokémon Go* was exciting because it was a new genre of play they had never encountered, it was the social aspect that made their game of choice meaningful. LilPatate, a player who has done a great deal of community organizing around in-game events in *Ingress*, explained that he thinks "the game is great because of the community, not because of whatever Niantic does. For the community to be great, we have to do it ourselves… you can't wait on other people to do stuff and expect it to get done."[77] For LilPatate and many others, the social aspect of locative play fuels continued interest and engagement with the game.

Similarly, MonoAxon, another *Ingress* player, describes why he has remained extremely active as a player; he stated that "at first I resisted the whole idea of meeting the community [because] I figured, it's just a game, I'll do my own thing". Yet after some time, he began "to realize that the power of the community is incredible for multiple reasons". He outlines these reasons as "1) to meet people, 2) so that they can explain [the game to you], 3) so that you can go to designated locations and get stock (in-game items), and 4) so that they can assist you in levelling up."[78] Indeed, T.L. Taylor highlights that "social connections, collective knowledge, and group action are central to the individual's experience".[79] While gameplay can certainly be a solo activity for both games, with some players choosing not to engage with any larger community, playing alone limits the number of activities and actions an individual can partake in. This is especially true for *Ingress*, where coordination between players is necessary to create large fields by hacking portals and sharing keys. Indeed, as Gosuu notes, "there is a worldwide community for *Ingress* players and [if

[76] Gosuu, interview by the author, Montréal, Québec, November 2, 2019, 22:10.
[77] LilPatate, interview by the author, Montréal, Québec, November 2, 2019, 7:30.
[78] MonoAxon. Interview by the author. Montréal, Québec. November 2019, 23:00.
[79] Taylor, *Play between*, 9.

you want to reach] a certain level, you play as a part of a team, you get involved in a lot more sophisticated things" such as operations and missions.[80]

Further, while *Pokémon Go* affords a greater deal of 'multiplicity' when it comes to gameplay, both coordination and communication between players outside the game are needed for the in-game social features such as trading and special tasks such as raids which are often necessary to complete larger research tasks and quests. This coordination, which for *Pokémon Go* player R3DPUMA is mainly on a couple of local Messenger Chat groups, is often essential for the motivation to travel somewhere for a raid or event. She expresses that "sometimes I get into a rut where I don't feel like leaving the house but [if] I see that there is a raid and *everyone is going* it will motivate me to leave the house".[81] Being part of these local chat groups not only keeps players informed of other players movements, but also provides incentives for players to engage with the game as it can be disappointing to show up for a raid with no one there to help.

Similarly, *Pokémon Go* player MonadoBoy describes that his investment in the game dwindled after the first year because he felt there was not much to do, yet when raids were introduced, "I had a reason to interact with other players [and] once I experienced that, that was what got me back [into the game] because suddenly I was meeting these people that I wouldn't have ever met otherwise."[82] Both players' drive to engage with *Pokémon Go* has been heightened by the experience of coordinating with and meeting other players in the real world. Though this can perhaps be attributed to the introduction of raids within the game itself, coordination through social platforms appears to be key to ensuring that players show up at the right Gym and at the right time to participate in the raids. In the Montréal-wide discord chat, there are even channels for every single neighbourhood in the city [Figure 4] that are linked to active Facebook Messenger groups. In these cross-platform spaces, people will often post raids looking for more players and indicate the time the raid will 'pop' (when the raid egg hatches and the raid begins) and the predicted amount of accounts that will be present [Figure 5]. This occurs to ensure that players do not have to 'wait around' hoping that others will join them in a raid.

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[80] Gosuu, interview by the author, 15:00.
[81] R3DPUMA, interview by the author, Montréal, Québec, November 12, 2019, 20:12.
[82] MonadoBoy, interview by the author, Montréal, Québec, November 20, 2019, 3:11.

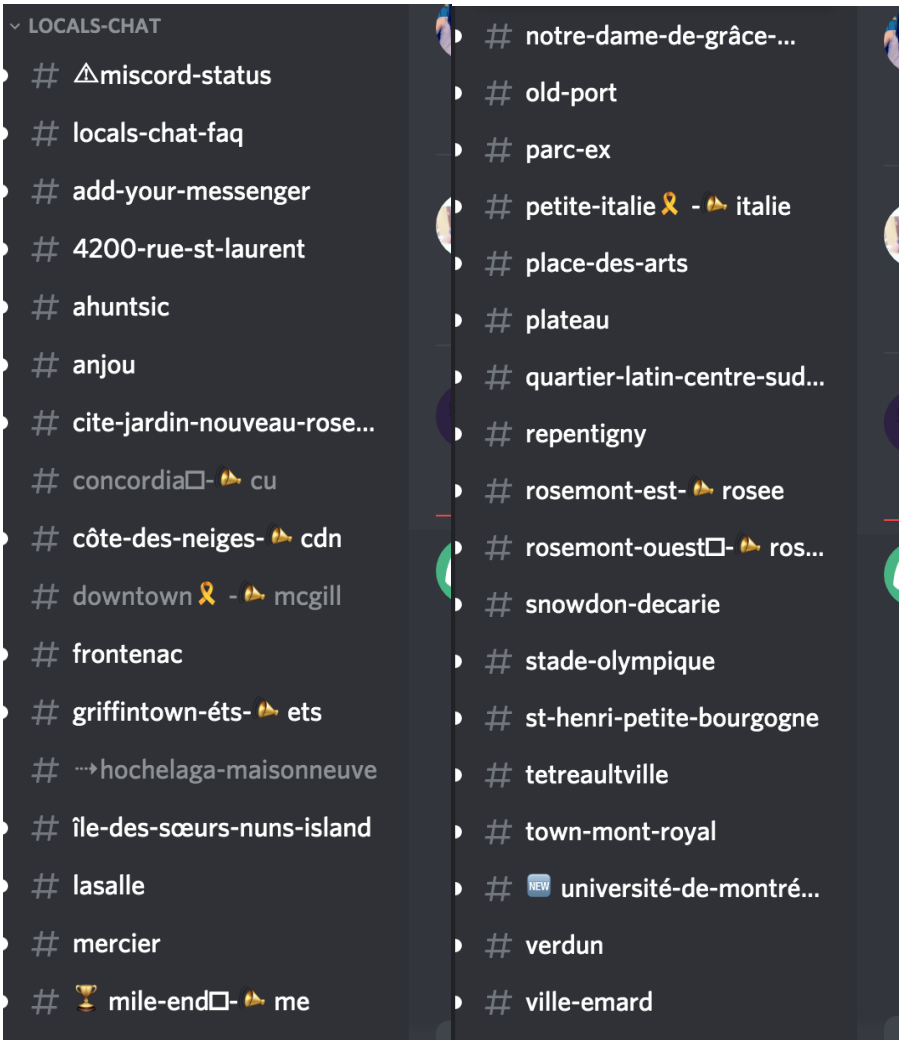


**Figure 4. Screenshot from the *Pokémon Go*: Montréal Discord Server displaying local chat channels for different neighbourhoods in the city.**

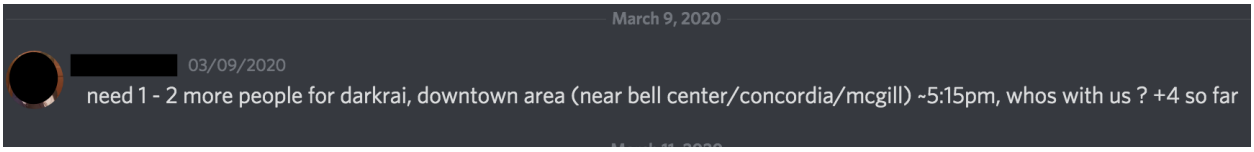


**Figure 5. Screenshot from the *Pokémon Go*: Montréal Discord Server displaying a player looking for more participants for a local raid.**

## Communities of Care

While player coordination and communication certainly influences play habits and group dynamics, consistent membership in localized communities of play also often entails the formation of emotional and personal relationships. Pearce notes that the balance between the role of the individual and their part in a group in MMOGs often creates forms of "intimacy, a sense of

acceptance and belonging particular to a play community"[83]. For many of the players I interviewed, this kind of constant coordination and interaction not only motivates play and engagement with the community as a whole but has also provided them with a sense of **belonging**.

One interviewee equated the game to an antidepressant, stating that the "best thing that happened with *Pokémon Go* is when people in the community started making messenger [groups] and then we started to connect more" which helped with coordinating raids after she would finish work so that she would know where to go to play before going home. Further, this sense of belonging was echoed by another player (Oracle222) who is originally from China, she stated:

> I feel like because I'm an immigrant, I don't feel… merged into the local society… I am more like an outsider [and] I don't have local friends. I have [the] Chinese community but I don't know the people around me. But since I [began] play[ing] this game, I get to see younger people and [people of] different backgrounds. We have a common topic and talk about other things too. I feel much more [like I am a part of] the community here now.[84]

Similarly, 2Floyd, an *Ingress* player from France who moved to Québec in 2014, described how the game has helped him integrate into the local community and "learn about the geography of Canada"[85], and Samorrita, a *Pokémon Go* player from Lebanon, extensively discussed how she has met many people around the Notre-Dame-de-Grace (NDG) neighbourhood solely because of her involvement in the game. In both *Pokémon Go* and *Ingress'* communities, players take on different roles within their local groups that coincide with aspects of their daily lives including occupations, routines, and neighbourhoods. Further, though interactions in the real world may only be limited to discussions surrounding the game and strategizing, twelve of my fifteen interviewees expressed having developed personal bonds through playing and interacting with members of their community. This relates to Pearce's assertion that play is ultimately a form of expression as "it opens up avenues for personal and social development that provide alternatives to real-life roles"[86] and therefore interpersonal relationships are often built as an extension of the play activity.

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[83] Pearce, *Communities of Play*, 133.
[84] Oracle222, interview by the author, Montréal, Québec, November 20, 2019. 3:13.
[85] 2Floyd, interview by the author, Montréal, Québec, November 2019,15:49.
[86] Pearce, 24.

A sense of 'openness' through inclusivity was described by three interviewees, in particular, two from *Pokémon Go* and one from *Ingress*, who each noted that the game welcomes players of all demographics. *Ingress* player Portalis stated "in 'real life' there is racism, ageism, etc, but I don't see that at all in this kind of videogame community — yes there is certainly some bullying but it's all related to gameplay and [not peoples' identities]... I'm not sure if it's because it's the type of game that attracts a more 'open-hearted' [person] or the opposite — where the game might make you more open-hearted".[87] The perception that *Pokémon Go* and *Ingress* have drawn more diverse communities was reiterated by multiple interviewees, with one saying "at first I thought, 'I'm too old to play this game' but then looked around and saw people from all age groups, backgrounds, races, education, and jobs."[88] Similarly, DoctorProximo reflected on his first raid experience in *Pokémon Go*, noting:

> During my very first raid, there was a grandma with a tablet and two phones, and I had never seen a person playing with multiple devices like that and here is someone my grandmother's age doing just that! There were another dozen people who showed up for the raid and they were all [different ages]... teenagers to adults. I was just so surprised at what a wide variety of demographics [were playing the game].[89]

In 2017, a survey found that 60% of all *Pokémon Go* players were ages 18-34 and that 57.4% of *Pokémon Go* players were male – indicating close parity for the game even a year after its release.[90] However, the limited amount of statistical research on race and ethnicity found that in 2016, a larger number of US-based players were White (63%), while Black players only made up 8% and Hispanic players made up 18% of the player-base. A more recent analysis of racial demographics has not been conducted, making it difficult to assess whether or not the game's audience is racially diverse. *Ingress,* on the other hand, appears to be predominantly populated by white, male players, with an online survey conducted in 2015 with 1250 players finding that 79.9% of respondents identified as Caucasian. The same study also found that 70.7% of players identified as cis male and 26.5% identified as cis female.[91] These statistics highlight that *Pokémon Go* appears to have a

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[87] Portalis, interview by the author, Montréal, Québec, November 18, 2019, 12:11.

[88] Samorrita, interview by the author, Montréal, Québec, December 2, 2019, 26:30.

[89] DoctorProximo, interview by the author, Montréal, Québec, November 14, 2019, 37:30.

[90] Iqbal, "Pokémon GO Revenue," Business of Apps.

[91] Beth Winegarner, "The 2015 Ingress demographic survey," *Medium*, last modified September 2015, accessed August 4, 2020, https://medium.com/@bethwinegarner/the-2015-ingress-demographic-survey-6e7181790069.

more diverse player-base, while *Ingress'* players more closely align with the designed identity surrounding the 'stereotypical' image of the gamer.

Shira Chess has described this kind of 'designed identity' as "a hybrid outcome of industry conventions, textual constructs, and audience placements in the design and structure of video games"[92] which she attributes to the cultural placement of "the white, cis-, heterosexual, young, abled, and middle-class male"[93] as the primary player base of 'hardcore' games. She then states that the 'casual player stereotype' is therefore positioned as the countertype of this hardcore player "who likes 'positive and pleasant fictions,' has not played many games and is willing to invest only minimal time"[94] and is often pictured as a middle-aged, cis-, heterosexual, abled, middle class, Caucasian female. Yet the Location-based games communities interviewed for this project appear to be devoid of such commonplace perceived binaries. It is therefore significant that both *Ingress* and *Pokémon Go* interviewees expressed similar perceptions and anecdotes about diversity, openness and inclusion within their local player communities. It appears that Location-Based Games in some ways dismantle the preconceived perception of what a 'gamer' is, perhaps because the player base is somewhat diverse as exemplified in the *Pokémon Go* surveys, but I would posit that it is more likely because face-to-face interactions are rare in the contexts of other kinds of games, exposing a wider range of player groups to each other. Further, this could relate to a player-base that is made up of people with widely different 'gaming' backgrounds. In all of my participants, only 4 stated they actively play (non-mobile) videogames; whereas 6 others stated they have only played mobile games, and the last 4 stating they had never played a videogame before *Pokémon Go* or *Ingress*. This range of player experience suggests that perhaps the perspective of diversity within the community is influenced by a wider audience of players, with different gaming experiences and backgrounds encountering one another in the real world.

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[92] Shira Chess, *Ready Player Two: Women Gamers and Designed Identity* (Minneapolis, MN: University of Minnesota Press, 2017), 31.
[93] Chess, 6.
[94] Chess, 13.

As mentioned, the primary platforms players use for sharing, coordination and moderation, include Facebook, Messenger, Discord, Telegram and Slack which are spaces through which players communicate in either private or public groups and chats. While *Ingress* has faction and inter-faction communications (COMM) functions built into the game [Figure 6], players use third-party sites and apps to communicate 'securely'. On the other hand, *Pokémon Go* has no in-app communication functionality so players have turned to external platforms since its 2016 launch. While these groups and chats are used for many social and research endeavours, several dedicated players use them for sharing information about in-game content and updates, organizing events and operations in the 'real world', and for moderating tensions between players and ensuring they follow community-established rules. These players are involved in forms of local community moderation practices that benefit the community as a whole, yet are also often expected to manage tensions between players and handle issues such as cheating and toxic behaviour.

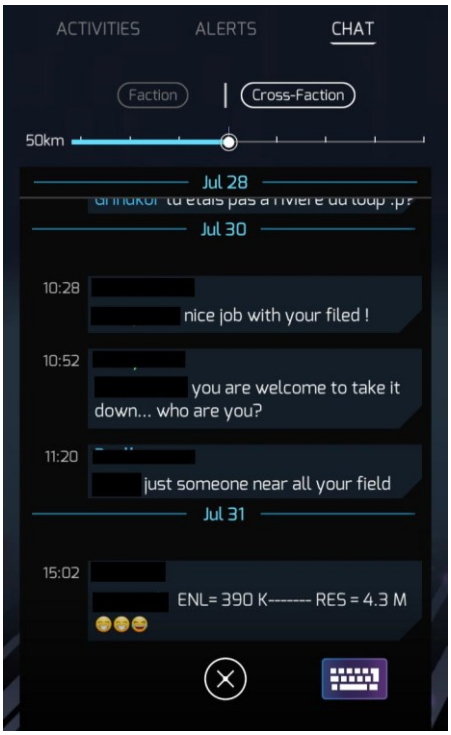


**Figure 6. Screenshot of in-game 'COMM Chat' in *Ingress***

Among my fifteen interviewees, nine individuals described being actively engaged in a variety of these moderation and organizational activities; five of which were *Ingress* players and four, *Pokémon Go* players. For *Ingress*, the 'moderation' activities described include:

- Organizing operations (known as opps)
- Managing faction chats on Slack and Telegram
- Moderating tensions between players
- Creating strategic maps for future operations
- Reporting spoofers and suspicious player activity
- Coordinating with visiting players from abroad
- Submitting potential game loci on Niantic's wayfaring platform
- Organizing 'real-world' events
- Driving players around for operations

For *Pokémon Go* player moderators, similar activities are part of their daily 'play' activities. The following moderation and organizational activities include:

- Managing chats, Facebook and Discord groups
- Creating informative graphics and documents for other players
- Moderating tensions between players
- Making merchandise for events
- Organizing local tournaments
- Live Streaming special Events and Battles
- Submitting potential game loci on Niantic's wayfaring platform
- Creating directories of local chat groups

For these players, there is little to no distinction between play and labour when it comes to their game of choice. This lack of distinction has been described by T.L Taylor, who defines players who engage in activities such as moderation, research, event planning and merchandise creation as **'power gamers'**. Taylor emphasizes that power gamers are "those who play in ways that seem to outside observers as 'work'."[95] While terms like 'playbour' "where activities regarded as gaming or playing are further infused with aspects of professionalism",[96] and 'prosumer' where "consumers or 'users' become the main source of content creation, evolving into … active

[95] Taylor, *Play between*, 10.

[96] Maria Törhönen et al., "Play, Playbour or Labour? The Relationships between Perception of Occupational Activity and Outcomes among Streamers and YouTubers," *Proceedings of the 52nd Hawaii International Conference on System Sciences*, 2019, 2561, https://doi.org/10.24251/HICSS.2019.308.

producers and consumers of digital content",[97] can in some ways be applied to the activities conducted by my participants, the notion of the power gamer aligns much more closely with the way players described their roles within the community. Playbour and prosumer are useful concepts to frame a deeper understanding of what a 'power gamer' is, yet studies often relate these terms much more closely to forms of playful labour geared towards some kind of monetization and/or public circulation. Indeed, Törhönen et al., outline examples of playbour, noting that they tie into video game economies, such as "gold farming and real-money trading, computer game modification (modding), esports, live video streaming and pre-recorded video broadcasting."[98] While one of my interviewees was involved in live streaming, the majority of the labour done by player moderators was geared towards and created for the local community, as opposed to a wider audience or for the developer. Also, none of the daily activities that occupied playtime involved financial gain or notoriety. Taylor's concept of power gamer can help us "understand the limits of using terms like 'fun' and give us ways to talk about how play sometimes feels like work, and may even be painful, repetitive, or boring".[99] This kind of engagement with a game means that the typical boundaries between labour and play sometimes disintegrate entirely. Moreover, the already hybrid and 'interruptible' nature of location-based games means that play is already fragmented by other actions, obstacles, and occurrences in the real world.

Like Taylor's power gamers, the labour produced by *Pokémon Go* and *Ingress* players "is a collective collaboration in the production of valuable game knowledge and presents a fascinating example of player sociality."[100] One power gamer, R3DPUMA, described 'playing' between 4-8 hours daily. She is one of the admins of the 'official' Montréal *Pokémon Go* Facebook Page (which currently has over 18,000 members), and of three different local 'raid and trade' chat groups. She also helped organize most of the events around the Montréal Safari Zone in 2019 and usually coordinates with players for the monthly community day. She stated that "I always feel like I work for Niantic but they are not paying me" because of everything she does for the community every week.[101] Another *Pokémon Go* player, BGold reflected that "I don't only consider time in the game

[97] Törhönen et al., 2560.
[98] Törhönen et al., 2560.
[99] Taylor, *Play between*, 10.
[100] T. L. Taylor, "Power Gamers Just Want To Have Fun?: Instrumental Play In A MMOG," *DiGRA '03 - Proceedings of the 2003 DiGRA International Conference: Level Up* 2 (2003): 10.
[101] R3DPUMA, interview by the author, 2:29.

as playing, I also consider all the reading … I do, and all the stuff I watch… as still playing and research and everything". He continues by stating that he estimates his 'playtime' to be "60-70 hours a week give or take, of like keeping up with everything, playing and all that stuff. And then managing the chats and that other stuff too."[102] Like R3DPUMA and BGold, the amount of work done for the game and the community as a whole every week was factored into the estimated playtime per week for many interviewees.

Community generated labour is very necessary for both *Pokémon Go* and *Ingress* as Niantic's community management approach is notoriously unreliable,[103] meaning that players have had to take on the responsibility of managing and fostering the communities that they are a part of. Each of the nine players that described moderation and community management activities fits into Taylor's notion of 'power gamers' and their involvement in their local communities resides "between the worlds of play and work".[104] One difference between the 'power gamers' that Taylor identified in *Everquest*, and those in *Pokémon Go* and *Ingress*, is the perception that 'regular' or 'casual' players have towards the power gamers that they interact with on a regular to semi-regular basis. Taylor identifies that in MMOGs, there is a "sense that somehow power gamers are just too dedicated, almost bordering on the (psychologically) pathological",[105] yet the interviewees I spoke with that were not involved in any form of extracurricular moderation or organization had very positive attitudes towards those who did. Words like 'leader', 'hardcore player', 'serious' and 'admin' were used to describe players that fit into Taylor's power gamer category, and players voiced that they turned to these 'local leaders' if they had questions or concerns about something in their community. Furthermore, while Taylor notes that power gamers are seen as 'borderline cheaters' in MMOGs, "as they often push systems to their limit by trying to 'break' them or find points at which the game architecture is internally contradictory or malleable", finding and sharing in-game tips, tricks and bugs with the rest of the community appears to be another positively received feature of power gamers in *Pokémon Go*. Tayor recognizes that power gamers' "reliance on social networks and their contribution to broader collective knowledge locate[s] them

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[102] BGold, interview by the author, Montréal, Québec, November 16, 2019, 5:40.
[103] Suzi Nelson, "How 3 Unforgivable Community Management Mistakes Cost Pokémon GO Millions in Active Users," *Digital Marketer*, last modified August 9, 2016, accessed August 10, 2020, https://www.digitalmarketer.com/blog/pokemon-go-community-management-mistakes/.
[104] Taylor, *Play between*, 10.
[105] Taylor, "Power Gamers," 4.

as decidedly networked players",[106] highlighting their consistent contribution to larger networks of knowledge sharing, which in turn assures that social spaces remain up-to-date and active. In the case of *Ingress* and *Pokémon Go*, even though for player moderators, play and labour are interconnected, it is important to investigate the relationship that these power gamers have to all the 'work' they produce and the communities they maintain.

Interestingly, reflections about possible exploitation or 'free labour' barely came up in my interviews; rather, those involved in forms of community moderation framed their experiences as personally and professionally beneficial. *Ingress* player, CuttedFinger, described how she helped organize community involvement around a large in-game *Ingress* event held in Montréal, called 'The Anomaly', explaining that "I had to gather a group of hardcore players [to] organize everything… and [we did] a lot of promotion, created 'swag', and created information and guides for out-of-towners and visitors." She reflects "I've learned a lot about how to organize people who are in a large group [and] learned what to expect from certain people."[107] Another *Ingress* player, Portalis describes that he and some other players "rented a class in a school once and did a live stream for anyone in Québec that wanted to attend, showing them how to use the Intel and [create] maps and stuff, then we [published] some training materials". He emphasized that his experiences helped him grow and "[learn] that I have leadership skills and training skills."[108] For these players, there is a kind of 'payoff' for their active engagement in tasks involving moderation and organization. They perceive that the effort put into the community not only makes it stronger by encouraging collaboration, but also provides them with soft skills that are potentially transferable to professional environments outside of the game.

## Keeping the Peace: Play and Emotional Labour

While most of the 'power gamers' interviewed identified their role as player moderators as having a very positive impact on their lives both in and outside of the game's community, there was an equal amount of negative experiences related to the kind of moderation roles they had committed to. When examining the role of (employed) community managers, Aphra Kerr and John D.

[106] Taylor, 13-14.
[107] Portalis, interview by the author, 13:00.
[108] Portalis, 14:45.

Kelleher have found that their role is usually extremely dynamic and requires a combination of complex, creative, and challenging tasks and must also "manage problematic player behavior and communications".[109] When asked about 'community dynamics' and 'negative experiences' the majority of my interviewees referred to local 'drama', bullying and cheating as the main sources of tensions in their own experiences as players. Further, while the six players who had not engaged in any kind of community moderation practices commented much more vaguely about 'drama' between players, with some describing that they had experienced some 'disagreements' with other players due to 'clashing personalities', the 'power gamer' players elaborated extensively on specific issues and players tensions they have had to handle, sometimes putting themselves at risk of emotional or physical abuse. Further, as they are seen as having leadership roles in their local communities, players tend to turn to them when problems between players arise. This means that the 'power gamer' players are expected to police the community and take action against players who are behaving inappropriately, all the while having to suppress their subjectivities and feelings towards certain situations. In the context of a professional organization, Lazányi points out that while the "emotional labour [associated with moderation] has a predominantly negative influence on individuals … it is often mostly beneficial to the employer or organization."[110] Indeed, though the larger community in both *Ingress* and *Pokémon Go* benefit from having leaders who are responsible for 'making tough calls' and decisions regarding toxic situations, these individuals are often emotionally exhausted and drained.

When asked about his involvement with the local community *Ingress* player, LilPatate, expressed frustration around player complaints, stating, "when someone complains about a player from the other team, they usually complain that the community leaders aren't doing anything about it. But since when am I responsible for policing the community? How is that my job? Sure I can chat with someone but what do you really want me to do about it?"[111] Further, he stated that he has even had to file a police report with some other players because of violent threats coming from one player and stated that "when *something* goes down between players in the community, it affects everyone

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[109] Aphra Kerr and John D. Kelleher, "The Recruitment of Passion and Community in the Service of Capital: Community Managers in the Digital Games Industry," *Critical Studies in Media Communication* 32, no. 3 (May 27, 2015): 188, https://doi.org/10.1080/15295036.2015.1045005.

[110] Kornelia Lazanyi, "Organizational Consequences Of Emotional Labour In Management," *APSTRACT: Applied Studies in Agribusiness and Commerce,* 5, no. 3 (2011): 127.

[111] LilPatate, interview by the author, 42:00.

else, kind of like radiation poisoning".[112] Another *Ingress* player, Portalis expressed that he stopped playing as much specifically because he felt emotionally exhausted from having to handle and being involved with player tensions. He stated that he still plays *Ingress* because of the community "but unfortunately, it's also the reason why I play less". He explained:

> People would look to me to handle a certain situation within our community and so sometimes there are some hard decisions to make. If you have a bully on your own team that not only is bullying the other faction but even your own community everyone [comes] to you and says 'if this guy doesn't stop, I don't want to be part of the community anymore'... [and] after so many messages one day I [have] had to tell someone 'unfortunately, you're not welcome here anymore so he got kicked out and switched factions and helped [the other faction] against us….[113]

Kerr and Kelleher note that (employed) community managers take on the emotional labour of remaining impartial by performing "diplomatic apolitical subjectivities to mediate a range of problematic user behaviors."[114] Yet in the case of player moderators, it is often difficult to act as a leader of the community, while simultaneously being a present member and player of that same community. Moreover, the distance and anonymity that 'official' community managers have through systems put in place by the company they work for is nonexistent for player moderators in location-based games communities. Being a leader within the community is therefore potentially dangerous as individuals are encountering the players they are responsible for 'managing' toxic players that they encounter in real-life situations.

For *Pokémon Go*, all but one of the interviewees (including those who are not engaged in any form of 'power gaming') felt that there used to be more 'drama' in the past, attributing the 'peace' to the restructuring of the gym system and the introduction of both raids and social features. The recent 'altercations' described by players were primarily attributed to people not waiting for other players before joining raids and other minor logistics miscommunications rather than serious threats or harassment as described by *Ingress* players. In 2017, Niantic restructured the gym system [Figure 7 & 8] as it was incredibly difficult to take over a gym (from experience, it could take hours sometimes), because players would add multiples of high defense (HP) Pokemon and some

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[112] LilPatate, 33:40.
[113] Portalis, interview by the author, 25:30.
[114] Kerr and Kelleher, "The Recruitment," 190.

had discovered a bug in the game which they exploited to level up gyms quickly, known as 'bubble-strat-ing'.[115] Before this gym restructuring, there was intense competition between the three teams in *Pokémon Go*, leading to animosity when players would 'guard' gyms (ensure that no other teams could claim them for more than a few minutes), and engage in rule-bending to ensure it did not get taken over. Yet while the introduction of collaborative play in *Pokémon Go* led to a decrease of tensions and competition between teams, my interviewees identified that another major problem persisted: cheating.


**Figure 7. Image of old Gym system in *Pokémon Go* featuring 10 slots filled with high level Pokemon occupying the same Gym.**


**Figure 8. *Pokémon Go*'s updated Gym system featuring a maximum of six Pokemon with no duplicates allowed.**

[115] Rene Ritchie, "Why Pokémon Go's Gym system became so broken Niantic has to replace it," *iMore*, last modified May 11, 2017, accessed August 10, 2020, https://www.imore.com/pokemon-go-new-gym-system.

## Playing 'Legit'

Cheating in videogames has always been a factor of digital play, taking many forms depending on the game's genre, player-base, economy, and mechanics and has been extensively analyzed in terms of ethics and compared to other kinds of subversive play, such as trolling or griefing. Mia Consalvo's extensive work on cheating in videogames considers a variety of different genres, focusing on both player and industry perspectives, as well as numerous case studies to understand how cheating is enacted, perceived and managed. She investigates how cheating is negotiated by players themselves, noting that while "rules keep a game distinct from other games as well as other parts of life… [players] have the options of following the rules, refusing to abide by the rules overtly, or secretly not abiding by the rules (although appearing to do so) and thus cheating."[116] Yet from a player and fan perspective, negotiating, subverting or challenging game and or company rules is not necessarily linked directly with cheating, or gaining an advantage over other players. Rather, Consalvo identifies that modding, content creation and other 'paratextual' activities can be seen as an example of such negotiations that are not perceived as outright cheating. Instead, what constitutes cheating is different in each community of play. Yet Consalvo notes that for players, the common consensus was that "cheating was more than just breaking a rule or law; it was also those instances of bending or reinterpreting rules to the players' advantage."[117] Indeed, gaining an advantage over other players was perceived as an unfair way to engage in gameplay. Accordingly, in Location-Based Games communities, cheating comes in many forms yet there are certain 'kinds' of cheating (or rule-breaking) that are much more seriously frowned upon by community members.

Violating Niantic's Terms of Services includes: (1) accessing Services in an unauthorized manner (including using modified or unofficial third party software); (2) playing with multiple accounts for the same Service; (3) sharing accounts; (4) using any techniques to alter or falsify a device's location (for example through GPS spoofing); and/or (5) selling or trading accounts.[118] While according to Niantic, these are all equally 'bannable' offences, the severity of each offence is considered and handled differently by members of both *Pokémon Go* and *Ingress*.

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[116] Mia Consalvo, *Cheating: Gaining Advantage in Videogames* (Cambridge, MA: MIT Press, 2007), 7.
[117] Consalvo, 87.
[118] "Niantic Terms of Service," Niantic Labs, last modified May 15, 2019, accessed August 10, 2020, https://nianticlabs.com/terms/.

*Pokémon Go* player, R3DPUMA, for instance, voiced that "people have different views of how this game should be played, from the beginning it's very rare that people in Montréal play 100% legit."[119] This can be illustrated by the fact that all but two of my *Pokémon Go* interviewees had more than one account that they play on and during the play sessions four of these participants played on more than one account with multiple devices [Figure 9]. Further, all eight of my *Pokémon Go* interviewees said that they frequently use third-party software to help with their gameplay. These services include maps that track the locations of spawns around the city and IV (individual value) checking apps such as *PokeGenie* or *Calcy IV* to help identify rare catches. Further, one interviewee shared her account with another player during our interview to be able to do trades from a distance. While all of these practices technically violate Niantic's ToS, they are very commonplace for active players and are not frowned upon by the larger community. Instead, they are described as 'grey zones' and even exploiting in-game bugs is accepted by most players.

In an analysis of players and cheating practices, Consalvo has pointed out that "even as digital games can code in rules for players to follow, there are also 'soft rules' that are negotiated".[120] For *Pokémon Go* players, external 'tools' which do not violate the integrity of the game are therefore acceptable as "lines are drawn more closely around the game itself and further from 'outside' elements".[121] Accordingly, one player noted that "using maps, having multiple accounts, account sharing, timezone trick" is accepted because "we don't judge the way someone plays but if they bully people or harm other people in the community then we act against it."[122] In an analysis of toxic behaviour in Eve Online, Marcus Carter notes that cheating appears to be an issue when linked to "problematic and subversive behaviour between players in multiplayer games".[123] Though there are many 'grey zones' when it comes to rule-breaking in *Pokémon Go*, both spoofing, which is considered the worst form of cheating in both of the games, and toxic behaviour are the main issues that are acted upon by player moderators.

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[119] R3DPUMA, interview by the author, 27:30.
[120] Consalvo, *Cheating: Gaining*, 87.
[121] Consalvo, 87.
[122] Consalvo, 87.
[123] Marcus Carter, "Massively Multiplayer Dark Play: Treacherous Play in Eve Online," *The Dark Side of Game Play*, June 5, 2015, 196, https://doi.org/10.4324/9781315738680-12.

**Figure 9. An interviewee playing *Pokémon Go* on multiple devices, a practice known as 'multi-accounting'.**

Spoofing is a form of cheating where a player either uses software that tricks a device's GPS into locating it elsewhere or where a player downloads a modified version of *Pokémon Go* or *Ingress* that features joystick and teleportation options [Figure 10]. Interestingly, however, there were two *Pokémon Go* interviewees, both of whom did not engage in power gaming practices, who had a more lenient view of spoofing. Nakon, a player who only started playing *Pokémon Go* in 2018, voiced that "if you are not hurting anyone else and you're not really religiously abusing the game, I'm not gonna get worried about it, I'm not going to be anxious or upset about it because it's not worth it… it's not my sort of circus."[124] These more relaxed and distanced attitudes towards spoofing may relate to the players' lesser involvement in the day-to-day moderation and management of their local communities. The other player who seemed not to care as much about spoofing as a problem and described known spoofers as 'air support' for raids because they swoop in at the last minute and are nowhere in sight. She stated that "people should be able to play the game how they want" and that "they are dramatic about it for no reason".[125] Again, it is perhaps the fact that these players do not have to take on the labour of dealing with complaints, or maybe because they are involved in the practice themselves. Yet even if these players engage in spoofing, it is still clearly an activity that they would not discuss or admit in the context of an interview as there is a lot of shame surrounding it and players have been ostracised and blocked from their local communities if they are caught doing so.

[124] Nakon, interview by the author, Montréal, Québec, November 30, 2019, 20:26.
[125] Ebyru, interview by the author, Montréal, Québec, November 12, 2019, 35:00.


**Figure 10. A modified version of *Pokémon Go* featuring a joystick and teleportation options. *7Labs*.**

In *Pokémon Go* these actions are most often taken against players when a known spoofer or group of spoofers engages in toxic behaviour such as harassment and/or bullying, or impedes another person's gameplay through spoofing. One interviewee, BGold, who manages some of the Downtown and Concordia Chats, and organizes local tournaments stated that he is always expected to 'handle' players that are known for spoofing. He stated that:

> I've gotten verbal and cyber messages from a couple of [players]. So have a couple of other people that have gone against their pro-spoofing aggressive mentality. It [had] gotten to a point where a bunch of us came together and were thinking of filing a couple of police reports against them for harassment.[126]

Frustrations around spoofing and the job of moderating 'known spoofers' was voiced by many interviewees. MonadoBoy stated that spoofing primarily bothers him when he has put a lot of effort into going out to raid and a bunch of spoofers just teleport there from the comfort of their

[126] BGold, interview by the author, 41:05.

homes. He states that “there was a big wave of spoofers during the winter and a lot of the people, myself included, were very angry about that, because we were going out in the freezing cold and actually raiding and you'd have like five people jumping in with you that weren't even there.”[127] Yet rather than blocking these players from the larger group chat, he and other admins made a private chat to ensure that spoofers didn’t know where they would be raiding next. Further, he explains that “if we do catch someone that's in a lobby... that we don't see will just be like oh, this person's a Spoofer, let's jump out and make a private lobby of our own.”[128] Though Niantic has a system for reporting spoofers, it is unidirectional and was described as ‘completely unreliable’ by three of the player moderator interviewees. Thus, as no satisfactory ‘official’ actions can be taken against spoofers in *Pokémon Go*, there are many other ways that players identify, shame and ban known spoofers from local communities.

For *Ingress*, the community established rules regarding cheating are much different than in *Pokémon Go*. As previously mentioned, gameplay in *Ingress* is much more competitive and strategic than it is in *Pokémon Go,* and as a result, having multiple accounts, account sharing, and using third-party software are almost entirely unacceptable according to all seven of my *Ingress* interviewees. While players actively communicate and strategize on Slack and Telegram, they also use an app called IITC (*Ingress* Intel Total Conversion) which is a modified version of Niantic’s official *Ingress* Intel Map. Though this official map displays all existing links, portals and fields, as well as a scoreboard showing current faction activity on a global level, my interviewees described it as quite limited as it is very slow to load and does not allow for pre-planning of operations (i.e editing the map to see how a faction could create certain fields). As a result the IITC, a versatile APK app was developed that could simultaneously be used for monitoring of local activity, and for planning future operations. While technically this app violates Niantics ToS, players justified their use of the app as a reaction to the problems with Niantic’s official one.

On the other hand, *Ingress* players emphasized that their community does not under any circumstance allow multi-accounting, account sharing, or using other third-party apps to help with gameplay. Unlike in *Pokémon Go*, where having more than one account and sharing accounts can

[127] MonadoBoy, interview by the author, 13:19.
[128] MonadoBoy, interview by the author, 13:40.

help with collaborative play efforts such as raids and trading, the competitive nature of *Ingress* means that having more than one account would give certain players a very unfair advantage over others. MonoAxon, an *Ingress* player, voiced that "in *Ingress*, the one rule is one device, one account, one person"[129] and explained that while players could easily create more than one account, members of the community would notice as activity and location are tracked and displayed in the game. Further, spoofing appears to be taken extremely seriously and has caused a lot of tension in the last year or so. Interviewees explained that it is a big issue because the primary goal in *Ingress* is to create large fields by connecting different portals. To do so, players plan big operations where they must physically travel to certain locations to collect and/or exchange keys, hack portals and create links. This can sometimes entail hours of driving to a certain pre-planned location. For instance, *Ingress* player Portalis described one situation where he drove 12 hours North to a remote area of Northern Québec to create a link that would form a very large field, only to have a spoofer reclaim the portal and destroy the link immediately once he had returned to Montréal.

Like *Pokémon Go*, community members in *Ingress* expect players in leadership positions to address and deal with players who are suspected of spoofing and/or cheating in another manner. As a result, some of my interviewees described rising tensions both within their faction and between local factions. *Ingress* player and community moderator, CuttedFinger explained that:

> Right now there are a lot of complaints from the other side that [The Resistance] has cheaters. [This has] created a lot of tension in our community because people are accused of cheating and they feel personally hurt by it. [My perspective is] if you see somebody cheating just report them, don't talk to them if they are annoying you. Posting this publicly doesn't help. I don't think the cross-faction chat works very well, especially because I don't think both parties are neutral.[130]

Here, she highlights that players tend to try and publicly shame other players by posting accusations on public forums and in the cross-faction chats. An example of this was brought to my attention by 2Floyd, who stated "there has been a ton of finger-pointing at each team even though it's just a handful of players that are cheating. The better solution would be to keep reporting them and not blaming whole teams of players because there have been cases where legit players [leave]

[129] MonoAxon, interview by the author, Montréal, Québec, November 2019, 17:40.
[130] CuttedFinger, interview by the author, 19:18.

because people have a grudge against them."[131] Unlike in *Pokémon Go*, Niantic has created a more efficient 'reporting' system for players called 'Trusted Reporter'. This platform allows players to submit images and written reports about players suspected of spoofing. One of my interviewees stated that it has been very beneficial for reporting and banning known spoofers as Niantic is fairly quick to respond to such reports. While opinions about spoofing and other forms of rule-breaking are a bit more varied in *Pokémon Go*, *Ingress* players emphasize that any form of cheating has had very detrimental effects on the community as a whole.

## Scraping for Spoofers: The Broker's Guild Scandal

A striking example of this is the **Broker's Guild Scandal**, an event that every single one of my *Ingress* participants brought up, either vaguely or in great detail. In Fall 2017, a group called 'CleanIngress' was contacted by a whistleblower on the Resistance team and published an investigation called "Inside the Brokers Guild" which exposed a Resistance-only Slack channel used by over 800 *Ingress* players worldwide. This Slack channel was linked to a scraping software that could track all the portals belonging to a specified player, including capture dates, the longest-held portals for a given region, heatmaps of players' activity, including 'home' portals and frequently visited portals. It could also indicate that were created over 20 km in under 30 minutes, mod deployment, and enemy agents acting outside their predefined home area.[132] The aspect of this that caused a lot of controversy within the community was that this whistleblower also provided screenshots of players communicating to coordinate the 'kill of an Enlightened guardian'.

The Guardian Badge, which has since been removed from *Ingress* by Niantic, was a reward for players who could maintain ownership of a specific portal for 150 days straight. This was a very rare badge to obtain, even without players from other factions sabotaging someone. It was revealed that players from the Resistance Faction were tracking members of the opposite team (the Enlightened) and destroying their portal days before they achieved the Guardian Badge. The *Ingress* Terms of Service "specifically prohibit the use of 'automation software, bots, spiders, crawlers, data mining tools, or hacks, tools, agents, engines, or devices of any kind' to 'extract,

[131] 2Floyd, interview by the author, 37:24.

[132] "RIOT," *Inside The Brokers Guild: The inner workings of an Ingress scraping network* (blog), entry posted October 18, 2017, accessed August 11, 2020, https://brokersguild.wordpress.com/.

scrape, or index the Services or Content (including information about users or gameplay)' which caused Niantic to take action against some of the players identified on the list by sending multiple cease and desist letters to these players.[133] Moreover, those who weren't sent these letters were no longer able to work as POCs (point-of-contact) players at any major *Ingress* events. Soon after this, CleanIngress published a similar post, but this time against a group of Enlightened players who called themselves the Drunken Frogs, revealing that they too were engaging in similar data scraping violations. Beyond the action taken by Niantic, players who happened to be on the list were targeted by other players and many of them were "threatened at home and at work [and suspected] … that their property had been damaged because their name was on the list".[134] The reactions by community members proved to be the hardest for many players as they were now associated with malicious behaviour and cheating, and according to my interviewees, were often ostracised from the community, blocked from local chats, and even harassed and threatened.
According to my interviewees, local players who were found to be involved in either The Broker's Guild or The Drunken Frog scandals were heavily targeted in the cross-faction COMM chat and other local chats, and many even stopped playing the game as a result. Indeed, one interviewee, LordFranklin, highlighted that involvement in these groups was so negatively seen because in *Ingress*, "there was [already] a very fine line between stalking and intel" because most local players know others' play areas and routines. Players in the Brokers Guild were therefore seen as 'cyberstalking' as "you could [simply] put in a name of a player and it would tell you where the Guardian Portal was."[135] Both he and four other interviewees identified that malicious targeting and sabotage of players' Guardian Portals was seen as the worst part of a players' involvement in the sandals.

One of my interviewees, Portalis was at the heart of the Broker's Guild Scandal and was one of the 800 players identified as being involved in the Slack group. While he still plays *Ingress*, he described being 'punished' by members of the community who were suspicious of him long after the group was exposed. At the time he was a 'leader' in the community and chose to 'step back' because of how he was being treated. Yet interestingly, during our interview, he provided a

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[133] "RIOT," *Inside The Brokers Guild: The inner workings of an Ingress scraping network* (blog).
[134] "Brokers Guild Scandal Day 730," *NiaOops* (blog), entry posted October 19, 2019, accessed August 11, 2020, https://niaoops.com/blog/2019/10/19/brokers-guild-scandal-day-730/.
[135] LordFranklin, interview by the author, Montréal, Québec, November 12, 2019, 37:25.

thorough explanation of why he was part of this group, stating that he only used the scraping tools to "hunt for spoofers". He explained:

> I [only scraped] data to be able to identify patterns among spoofers [in order] to detect them if they jump from one place to another. I would calculate the distance [they jumped in the game to see if it is] possible by foot, car or airplane. If it was possible for the time in an airplane, I would go look at the flight history [to see if ] their flight matched those moments and we gathered so much data and so much intelligence that we could not only predict the next move but [could also] tell with a lot of accuracy if the [player] was cheating or not.[136]

While for Portalis, using the Broker's Guild was justified as solely 'productive' and an extension of his player moderation duties, he still experienced backlash from his local community primarily because of associating with players engaging in Guardian Hunting. He explained that he had even managed to get 250 players banned from the game by tracking and recording their suspicious movements. This kind of moral justification reflects how rules can be bent to fit the rule-breaker's own moral code. Yet as Portalis was associated with a group that engaged in malicious behaviour, it was extremely hard for him to regain respect from the community and he described spending months attempting to redeem and justify himself both in-person and in-game. While he did not receive any penalties or bans from Niantic, he experienced repercussions from the community itself and without being able to participate in the community, Portalis stated that there would be no reason to play at all.

Marcus Carter's investigation into 'Treacherous Play' within the *EVE Online* community examines what he calls 'Dark Play', where players engage in treachery, dishonesty, and interactions that "would be considered unethical or immoral outside of the game context"[137] In Carter's study, he explores why players might engage in actions such as theft, conning, betrayal, trickery, misdirection and false promises for personal and financial gain, he identifies that "players are not forced nor required by the design of the game to engage in treachery".[138] He further notes that treachery and cheating often go hand-in-hand in *EVE Online* and motivations are often related to personal empowerment and competition in the game. Moreover, he states that because "betrayal is such an unusual tactic available to players in multiplayer games", players were usually

[136] Portalis, interview by the author, 25:32.
[137] Carter, "Massively Multiplayer," 191.
[138] Carter, 208.

unsuspecting and unaware they were being targeted. Similarly, the Broker's Guild Scandal gained a great deal of attention because those who engaged in Guardian Hunting were perceived to do so purely out of ill-intent for their targeted players. Yet unlike in *EVE Online*, there is nothing to gain from this kind of 'Dark Play' in terms of in-game or financial rewards, from targeting, tracking and attacking other players' Guardian Portals. The intent was therefore seen as purely personal which is why those who were identified to be involved experienced varying degrees of retaliation from the community at large.

## Conclusions: Where do Location-Based Games Communities fit in?

Though comprehensive research has been conducted on videogames, with an ever-growing body of research focused on game content, cultural production, game development, and games as cultural objects, there is still work that needs to be done around these games' communities of play. Indeed, Mia Consalvo notes that "as we seek greater knowledge about the cultural impacts of videogames, the experiences of players themselves demand attention"[139] and I believe that more smaller-scale, qualitative 'deep dives' into player experiences, motivations and habits can help develop a stronger understanding of this medium as a whole.

I have found that Location-based games communities and their social practices exist somewhere between those found in MMOGs, which entail extensive social hierarchies and time commitment, and those found in Social Games, where social mechanics are key to progression in the game and time spent playing is often brief and intermittent. Warner and Raiter's analysis of social ecosystems in two different virtual worlds highlights that "MMOGs expand the typical social context of electronic play to include identity development, community building, establishing rules of conduct, and efforts to manage conflict that occurs within game communities."[140] Interaction between players is key to determining how, when and why they engage with their game of choice on both a social and spatial level. While Location-based games communities themselves allow for players to commit as much or as little time and energy as desired to the game and all the activities

[139] Consalvo, *Cheating: Gaining*, 84.

[140] Dorothy E. Warner and Mike Raiter, "Social Context in Massively-Multiplayer Online Games (MMOGs): Ethical Questions in Shared Space," *International Review of Information Ethics* 4, no. 12 (2005): 46, http://www.i-r-i-e.net/inhalt/004/Warner-Raiter.pdf.

that surround play, it is clear that community is key to players' long-term commitment to their game of choice.

Though active and autonomous communities of play have been studied within online game spaces since the emergence of virtual worlds, location-based games communities must be considered differently as they involve a complex correlation between both online (digital) and offline (physical) spaces. As a result, gameplay often extends beyond interactions with the digital games present on a player's device. As exhibited, the 'playtime' described by *Ingress* and *Pokémon Go* players is often porous, with online communications platforms used as and for player communications. Much like the hybrid nature of the games themselves, engagement between player communities occur, sometimes simultaneously, in **three** spaces: 1) the physical environment in which the game is played, 2) the digital interface of the game itself, and 3) the platforms used for sharing, coordination and moderation. The hybridity between digital and physical spheres associated with locative gameplay is therefore trifold with each space serving a very specific purpose in relation to overall gameplay and strategy.

I have identified that while *Ingress* and *Pokémon Go* player communities each have their own separate platforms, groups and methods of interacting and coordinating, they are many more similarities between the communities than there are differences. Both *Ingress* and *Pokémon Go* players identified that the social aspects of their game of choice is the primary reason for continued play over extended periods of time and that they sensed a kind of 'openness' and belonging within their local communities. Further, members of both communities described being actively involved in what T.L. Taylor calls 'power gaming' through moderation, organization and research endeavors. Accordingly, tensions between members of the community must be handled by these power gamers which can put them in precarious positions. Yet when it came to the emergent theme of cheating, it was clear that members of each community perceived and handled rule breaking differently. For *Pokémon Go* players, some forms of cheating such as multi-accounting, sharing accounts and using 3$^{rd}$ party applications are acceptable but spoofing (faking one's GPS location) is not. Yet interviewees said they would not take direct action against someone who is spoofing unless a player is negatively impacting other players or the larger community. On the other hand, rule breaking in *Ingress* is much more greatly frowned upon and interviewees described instances

in which people have been ostracized and banned from their local community. This is exhibited by the Broker's Guild Scandal where players who were found to have participated in the group were targeted and expelled from their local communities, with some players abandoning the game entirely.

This chapter has outlined how active players of both *Ingress* and *Pokémon Go* engage in forms of **Community Moderation** and **Self-Governance** to extents that ultimately influence larger play patterns and group dynamics in both offline and online situations. Yet while social ecosystems have a significant influence on player habits, so too do spatial experiences as (before COVID-19) locative play involves movement in and through public and private spaces. Accordingly, the following chapter will shift focus to the spatial aspects of location-based play, examining how the kinds of tensions that can arise out of location-based play, how players impact and perceive the spaces in which they play, and how players engage in creative experimentation with space through play.

# Chapter 2: Locative Play and Spatial Experiences

## Real World Play, Real World Problems

On a freezing, snowy evening in early January 2017, I was in my car, parked beside a small roundabout in the Town of Mount Royal neighbourhood of Montréal. It was not the first time I had stopped in this location for an extended period of time. In fact, I regularly stationed myself (usually at night) at a specific corner of the park in order to battle in a *Pokémon Go* Gym on the south edge of the roundabout as it was nearby my home at the time.

Yet this particular evening was quite different because as I was in the middle of battling, I suddenly noticed blinding red, blue and white lights in my rearview mirror and heard the jolting blare of sirens as a police car pulled up behind me. Surprised, I put my phone down on my lap, mid-battle, and waited anxiously as a police officer walked up to my door holding a flashlight. I rolled down my window and squinted at the flashlight, which was pointed directly into my eyes, as the officer sternly asked me what I was doing parked there. I picked up my phone and pointed at the still ongoing Gym battle and tried to explain that I was playing *Pokémon Go*, expecting the officer to laugh and leave me alone but instead, he looked unconvinced and asked for my license and registration. While I fumbled through my wallet and glove compartment for both items, I noticed that a second officer had appeared behind the car and was shining his flashlight into my backseat and passenger seat, presumably looking for something suspicious. I handed my documentation to the first officer and mentioned that I live two streets over and often parked here to play the game. He nodded and returned to his car to check out my information, all the while the other officer slowly scanned my backseat with his flashlight.

Eventually, the first officer re-appeared at my window, and still looking quite unimpressed, handed me back my license and registration and I asked if I should not be parked in the spot I was in. He said it was okay to park there but that they had received a call about an idling car. The police car slowly pulled away, and it dawned on me that while I was parked beside the *Pokémon Go* gym, I was also directly in front of someone's home. Somebody had called the police because they presumably kept looking out their window and seeing the same car idling at night directly in front of their home.

This moment was the first time that I became acutely aware of how my own actions in the real world might be interpreted, or in this case, misinterpreted by outsiders. While parking in the same spot night after night to battle in a *Pokémon Go* gym felt normal for me, I had not realized that my repetitive actions might be misconstrued by the residents living in the home beside where I was parking regularly. For them, there was no context or logical reason that a person would idle outside their home night after night, leading to the conclusion that my behaviour was suspicious.

While the previous chapter explored how the actions and efforts made by players form complex and dynamic social ecosystems, this chapter will tackle questions related to how, when, and why players engage with the spaces in which they play. It will also examine if and how spaces are impacted by players and will investigate whether or not these players' experiences of space are transformed by their game of choice. Though the experience I had with police officers while playing *Pokémon Go* exemplifies an instance where the 'real world' was impacted by my movements and actions in the game-world and vice versa, it also made me wonder what might have happened if I had been a racialized player sitting in a predominantly white neighbourhood. While as a white woman, the officers left me alone fairly quickly, a similar situation could potentially be extremely dangerous for players of colour. Therefore, this chapter will also touch on how the presence of systemic racism manifests through spatial experiences. As location-based games are played in public and often involve co-presence with bystanders and local populations, it is important to highlight how player experiences in public spaces differ when it comes to race.

## Spatial Tensions and the Problem of Copresence

In virtual worlds, users are playing in and with space, space is also playing with them. Pearce notes that as a result, players develop a sense of "spatial literacy" which she defines as "the ability to both 'read' and 'write' in the language of spatial communication and spatial narrative."[141] This suggests that each virtual world comes with its own spatial logic which dictates how, when and why players move through the virtual environment during play sessions. Though there is a micro-gameworld contained within the user's device in Location-Based Mobile Games, it is often a map

[141] Celia Pearce, *Communities of Play: Emergent Cultures in Multiplayer Games and Virtual Worlds*, ed. Tom Boellstorff and Bonnie A. Nardi (Cambridge, MA: MIT Press, 2011), 20.

that mirrors the streets, parks, and features of the 'real world'. Therefore, spatial logic within Location-Based Games is drawn from that in the real world. When *Pokémon Go* first came out, there were countless reports of players getting into car accidents, injuring themselves (and others), trespassing and even some accidental deaths as a result of distraction while playing the game.[142] In such cases, the boundaries that usually exist separating game logic and spatial logic were crossed resulting in bodily, legal and other kinds of harm. Players must therefore adhere to the rules of the real world in order to 'safely' engage with the game world. Breaking the predetermined logic and rules of movement in the offline world can potentially put both players and non-players at risk.

As locative gameplay takes place within both the realm of the physical and digital, they can be thought of as having simultaneous modalities of presence. When 'real world' rules are not followed by players, many of whom are, for the first time, engaging with location-based play, both spatial and social tensions can emerge. This phenomenon can be understood as a form of 'co-presence'. While traditionally, co-presence was understood as "the idea that the presence of other actors shapes individual behavior",[143] with scholars primarily focused on physical proximity with other people, the emergence of mobile media has led to investigations into how co-presence can occur between digital and physical spaces. Indeed, as mobile media erodes the boundaries between online/offline, public/private and work/leisure, Hjorth and Richardson contend that the convergence of locative, social and mobile media has created an entanglement between spatial and social co-presence.[144] They emphasize that due to mobile media, traditional binaries such as online and offline, and virtual and actual are no longer relevant ways of thinking about human experiences.[145] Moreover, the co-presence of physical and digital actions that occur during locative play is mediated through the ambient experience of embodied place, calling this 'ambient play'. Hjorth and de Souza e Silva identify that the notion of 'ambient play' "seeks to contextualise mobile games within the rhythms of everyday life".[146] As Location-Based Games become embedded in a player's daily life, so too does the constant mediation of everyday pedestrian

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142 Haydn Taylor, "Niantic agrees to combat trespassing Pokémon Go players," gameindustry.biz, last modified September 6, 2019, accessed August 11, 2020, https://www.gamesindustry.biz/articles/2019-09-06-niantic-agrees-to-combat-trespassing-pokmon-go-players.

143 Celeste Campos-Castillo and Steven Hitlin, "Copresence: Revisiting a Building Block for Social Interaction Theories," *Sociological Theory* 31, no. 2 (June 19, 2013): 168, https://doi.org/10.1177/0735275113489811.

144 Hjorth and Richardson, *Gaming in Social*, 64.

145 Hjorth and Richardson, 66.

146 Hjorth and Richardson, "Pokémon GO: Mobile," 5.

movements and interactions, with spatial awareness (or environmental knowing), social communication habits and digital interfaces on which game content can be accessed. Though Location-Based Games can certainly foster a "healthy curiosity" and "facilitate social interactions" between players and non-players,[147] it can also lead to tensions between both parties. Such tensions during gameplay often emerge as a result of both co-presence and locative play, as the spaces with which players engage are often also occupied by non-players. When asked if they had experienced any negative situations while playing the game, two of my interviewees reflected on specific situations in which they clashed with non-players while playing the game. *Pokémon Go* player R3DPUMA describes an incident that made her consider stopping playing altogether. She explains that she had a "bad experience" one morning after dropping off one of her children at school. She states that every morning on her way home she usually has her younger son in the car and explains:

> I take the same route [home] and to play and [one day] I stopped by the gym on the way and suddenly this guy came and [started] looking into my car … and kept waving at me. I'm like, 'Is there a problem?' [and] I thought maybe I [had] a flat tire and [he was] trying to help me. But he said … 'well, I see you here every day. You look very suspicious and I just wanted to know what's going on.' I told him, 'how do I look suspicious to you? I'm just playing Pokémon!' but he was very rude [about it]. So it made me feel very bad because he lives across from the park. I don't need to feel bad stopping near a park. It's not my fault he bought a house near a park. So it made me feel bad because you have to play this game in real life and you have to be near parks for the Pokéstops, and if it starts bothering people that you're playing outside, how can I really play? [148]

For R3DPUMA, the interaction with an outsider who had become suspicious of her actions made her feel guilty and frustrated. It also made her very aware of how her own presence in space might be perceived by others. I am uncertain if the same thing would have happened if R3DPUMA had been on foot with her child in the park as this is perhaps considered a more 'normative' behaviour. Indeed, bringing one's child to a public space, or even sitting on a bench in a park falls within behaviour deemed acceptable by 'outsiders' yet sitting in an idling car directly outside a park for extended periods of time appears to have aroused suspicion. A similar experience was described by another *Pokémon Go* player, MonadoBoy, who reflected on interactions with a local mechanic who threatened to call the police on him and a few other players on multiple occasions. He stated:

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[147] Leorke, *Location-Based Gaming*, 52.
[148] R3DPUMA, interview by the author, 36:06.

> There's a garage near my place, a mechanic, and right across the street from him is an [old convent] which is a gym so we often go do raids there. There's some parking next to the garage [where we often park to access the convent], but … the mechanic doesn't like it when we go there. The parking is technically public, so it's not against the law to stop there but if we stay too long he will come out and complain and threaten to call the cops.[149]

Much like R3DPUMA and myself, MonadoBoy and his fellow players repeatedly parked and played in the same spot and their presence drew the attention of a local business owner who eventually became suspicious of the players. As described by my interviewees, these tensions can not only generate contested spaces, but also amplify self-awareness, as players had largely been unaware of how their presence was perceived by others who were co-existing in their play spaces. Leorke highlights that while some scholars identify that locative games "encourage their players to reflect on and 'read' the city in new ways", they may also "efface, subsume, or decontextualize the everyday spaces of the game."[150] Moreover, Farman notes that the hybrid nature of location-based games means that "players can potentially become temporarily oblivious to the meanings of their actions outside the diegetic world of the game."[151] He refers to an incident in New Zealand in 2008 when employees monitoring a CCTV witnessed a Geocacher placing a container for other players to find in downtown Auckland and mistakenly thought he was leaving a bomb and ended up calling the bomb squad. Parts of the city were closed off as officials investigated the situation. Farman argues that "this incident serves as a reminder of the possible disconnection that can occur between the player's awareness of the space of the game and environment around them".[152] Indeed, playing a Location-Based Game in a public space can challenge "the flows and behaviours normatively deemed acceptable … [and] can frustrate surrounding on-lookers"[153] who are unaware what is happening on players' devices and why they are seemingly loitering in one area. Similarly, tensions between players and non-players has been discussed as a 'risk' for Locative Game design. For instance, McGonigal and Bogost's pervasive game *Cruel 2 B Kind*, urged players to 'kill' their in-game opponent by physically complimenting, cheering, or singing at them. Yet as players were unaware of who their 'target' was, they had to test out "these tactics on unwitting strangers", often

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149 MonadoBoy, interview by the author, 28:39.

150 Leorke, *Location-Based Gaming*, 63.

151 Farman, *Mobile Interface*, 82.

152 Leorke, *Location-Based Gaming*, 63.

153 Benjamin Feldman, "Agency and Governance: Pokémon-Go and Contested Fun in Public Space," *Geoforum* 96 (November 2018): 295, https://doi.org/10.1016/j.geoforum.2018.08.025.

risking confrontation between "players and non-players who take compliments or advances the wrong way [and are] unaware of the fact that they are part of a 'covert game'".[154] Playing in the 'real-world' with real strangers presents challenges related to agency, territory, and safety for both players and non-players who may end up being 'part of the game' whether they like it or not.

## Whose Space is it Anyways?

Yet while nothing bad happened in my own experience with police officers, nor during the experiences described by interviewees' with 'outsiders', we are all white and similar instances could be especially dangerous for racialized players. This danger was expressed by Omari Akil in his article "Warning: *Pokémon Go* is a Death Sentence if you are a Black Man" where he reflects on the realization that the suspicion generated by his behaviour while playing the game could potentially be fatal should someone call the police on him. He writes that the 'breakdown is simple':

> There is a statistically disproportionate chance that someone could call the police to investigate me for walking around in circles in [a] complex. There is a statistically disproportionate chance that I would be approached by law enforcement with fear or aggression, even when no laws have been broken. There is a statistically disproportionate chance that I will be shot while reaching for my identification that I always keep in my back right pocket. There is a statistically disproportionate chance that more shots will be fired and I will be dead before any medical assistance is available.[155]

The systemic inequalities, power imbalances, and forms of racial discrimination that exist in the real world are inevitably present in public spaces where locative play takes place. Layland et al., point out that because "cultural norms for race and gender are deeply rooted in socio-cultural expectations that guide what leisure is considered appropriate and available for both individuals and groups", marginalized groups often have much more limited access and ability to move in and through 'leisure spaces'. Indeed, in his analysis of contested space, Feldman cites Valentine (2008) who "persuasively warns of a 'worrying romanticization of urban encounter' in some previous academic writing, arguing instead for recognition of the longstanding and [deeply-ingrained] prejudices that can complicate encounters with strangers."[156] Indeed, Akil concludes that his article was meant to function as a warning for Black players, stating "let's just go ahead and add *Pokémon*

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[154] Leorke, *Location-Based Gaming*, 55.

[155] Omari Akil, "Warning: Pokemon GO is a Death Sentence if you are a Black Man," *Medium*, last modified July 7, 2016, accessed August 11, 2020, https://link.medium.com/8b36yWNiS8.

[156] Feldman, "Agency and Governance," 294.

*Go* to the extremely long list of things white people can do without fear of being killed, while Black people have to realistically be wary."[157] Similarly, Mary Flanagan notes that it is important to consider "who has the freedom to explore … urban spaces in which designers promote playful encounters?"[158] As movement through public spaces is not fluid and carefree for marginalized bodies, it is important to highlight that while many players of different genders and races have faced suspicions while playing in public spaces, racialized players are much more likely to experience emotional and physical harassment and harm.

Moreover, Layland et al identify that there are major constraints to gameplay for Black *Pokémon Go* players in the United States because the locations of in-game loci fall primarily in affluent, white neighborhoods. It is important to note that the majority of Niantic's in-game points of interest were Crowdsourced by *Ingress* players from 2012-2016 who, according to a 2015 survey, are primarily cisgender, male and white.[159] Layland et al., highlight that the fact that "*Pokémon Go* is built on the spine of a game shaped by cisgender white men who self-selected locations as culturally significant" means that "the significance of these real-world locations may not transfer to other groups and individuals, specifically, men/women of color and white women … [who] may not feel comfortable going to many of these locations, for fear of personal safety or harassment."[160] They go on to conclude that the distribution of locations when *Pokémon Go* first came out was problematic because it indirectly "excludes or limits game-play by Black Americans who reside in rural or poorly resourced, low income, urban and suburban areas" and because "the demographic characteristic of *Ingress* is predominately white and, therefore, not representative of all potential *Pokémon Go* users."[161] However, in Fall 2019 Niantic created *Wayfarer*, a platform that allows high level players from all three of their games to suggest in-game Points of Interest (POI) in their neighborhoods. Though it certainly has not changed the experiences of racialized players in public spaces, this platform can allow for a much more diverse base of players to contribute to and review in-game content based on the locations and neighborhoods that they frequent.

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[157] Akil, "Warning: Pokemon," Medium.
[158] Mary Flanagan, *Critical Play: Radical Game Design* (Cambridge, MA: MIT Press, 2009), 200.
[159] Eric K. Layland et al., "Injustice in Mobile Leisure: A Conceptual Exploration of Pokémon Go," *Leisure Sciences* 40, no. 4 (May 18, 2018): 290, https://doi.org/10.1080/01490400.2018.1426064.
[160] Layland et al., "Injustice in Mobile," 301.
[161] Layland et al., 301.

## Impacting Space: Playing with the Real-world

While the previous section explored the tensions that arise from the co-presence of players and non-players in public spaces, highlighting the potential dangers that can arise when racialized players are subject to suspicion, this section will engage with the question: *Does location-based mobile gameplay impact physical space?*

Though the location-based aspects of *Pokémon Go* and *Ingress* function as spatial representations of the real world, they do not intrinsically have any material or physical connection or impact on the spaces represented on a player's device. Rather, it is the players themselves that have an impact on these spaces, functioning as the conduits between the game-world and real-world. Accordingly, Miguel Sicart identifies that while "play is a way of making spaces culturally relevant for communities that identify with the practices of play in those spaces", in most Location-Based Games "*the real world is not modified by player actions*, since the core mechanics are limited to the interaction with virtual [objects]".[162] Moreover, besides a static image, name and short description of in-game Points of Interest, there is little to no opportunity for historical, geographical or cultural learning in the game itself. The lack of material, indexical, or meaningful connection between physical spaces in which users play, and the digital representation of those spaces on their devices can be considered as one of the major limitations of large scale Location-Based Mobile Games. While the presence of unaware players can cause tensions with non-players in public spaces, Farman notes that "location based games can [also] disconnect players from the everyday meaning and context of the physical environment in which they are played".[163] Indeed, when *Pokémon Go* first came out there were reports of players playing in culturally inappropriate locations marked by traumatic historical events such as Auschwitz, the Hiroshima memorial site, and Holocaust museums. Moreover, in her analysis of critical play in smaller-scale locative games, Mary Flanagan draws off Huizinga's notion of play's signification function, stating that "if play is local, then *play within those spaces cannot help but refer to, rework, or, conversely, avoid history, social relationships, and customs of a play site.*"[164] She notes that spaces are always imbued with

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[162] Miguel Sicart, "Reality Has Always Been Augmented: Play and the Promises OfPokémon GO," *Mobile Media and Communication* 5, no. 1 (November 28, 2016): 31, https://doi.org/10.1177/2050157916677863.
[163] Farman, *Mobile Interface*, quoted in Leorke, *Location-Based Gaming*, 63.
[164] Flanagan, *Critical Play*, 207.

power structures and it is therefore important to consider who is being empowered (and disempowered) when play becomes present in such spaces.

Though the time of her writing was prior to the launch of larger scale games like *Ingress* and *Pokémon Go*, she identifies that if locative games might have the potential to change social relations, they "must address history, lived experience, and site in order for both participant and designers to learn how to produce something better—another city, another space, a space for and of social equity and change."[165] Yet an important distinction between the smaller scale site-specific pervasive games that Flanagan outlines and the later large-scale app-based location-based mobile games discussed throughout this thesis was outlined by Dale Leorke who distinguishes between these two phases (or categorizations) of Location-Based Gaming. He states that the period between 2001-2008 can be considered the first phase in the emergence of location-based games which were defined by "a period of experimentation with location-aware technologies, digital storytelling and interactive media art" which would often take place outdoors, in public space and involved aspects of performance. Leorke then states that 'location-based gaming's second phase' grew out of the previous experimentations in the first phase as well as the growing proliferation of smartphones and the 'emergence of the app ecology' in the early 2010s. He contends that earlier locative games were much more situated in specific spaces and were often designed to encourage users to engage with local spaces and communities through a correlation of technology, human actors and physical objects dispersed in space. Though these earlier projects are often called 'big games', 'urban games', and/or 'street games', they also included site-specific works of art and installations with which passerbys could engage.[166] Indeed, Flanagan highlights that in the early 2000s artists and collectives such as Blast Theory and Glowlab began incorporating locative technologies into playful experiences, developing performative projects that require "mass participation, occur in cities, and are designed more or less as games."[167] Further, many of these kinds of locative games were deeply intertwined with performance and relied heavily on material and physical elements of the spaces in which they took place. These kinds of games are still very prevalent, they are now

[165] Flanagan, 207.
[166] Leorke, *Location-Based Gaming*, 33-34.
[167] Flanagan, *Critical Play*, 189.

often categorized as forms of 'interactive', 'participatory' performances/works of art, or playable theatre pieces with game-like elements and mechanics.

Flanagan's spatial analysis in *Critical Play* provides an understanding of the impact that these kinds of experiments and experiences with locative and pervasive play have had on specific locations. For Flanagan one of the most important aspects of the first phase of location-based games is **Site Specificity**. She bases her argument on the actions of the Situationist International (S.I.) who were "interested in the banal, everyday acts of urban life that could be subverted in a radical redefinition of everyday experience" and emphasizes that such works grew out of a desire to change, disrupt and renew public spaces.[168] She asserts that in the mid twentieth century, public street art and interventions continued to playfully engage with and alter public space, often using nontraditional media like posters, video, and performance. Further, as these projects are designed in and around a specific place, they often incorporate physical items, features, and architecture that can be found in the play radius.

Similarly, in his book *Locally Played*, Benjamin Stokes identifies that games designed in local contexts create greater opportunity for community engagement with the historical, social-cultural and geographical stories embedded within specific locations. Stokes focuses on a variety of different 'local games' which "embed play in the social fabric of space" and notes that these (often) small-scale games are primarily developed to employ real-world actions to strengthen place-based communities.[169] Further, he identifies that in cases of 'local games', "positioning in space is secondary" to goals like building social cohesion, fostering economic development, amplifying local history and getting members of communities involved in civic labour.[170] Even if players do not engage directly with the physical aspects of space through these games, they are encouraged to learn about socio-cultural narratives that may not initially be apparent.

While both the site-specific games discussed by Flanagan, and the local, community-based games explored by Stokes rely on place-based design approaches that aim to involve participants in and

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[168] Flanagan, 195.

[169] Benjamin Stokes, *Locally Played: Real-world Games for Stronger Places and Communities*, ed. Tracy Fullerton (Cambridge, MA: MIT Press, 2020), 2.

[170] Stokes, 2.

highlight local histories and narratives, large-scale Location-Based Mobile Games were not designed in a 'local' context. The spaces in which players engage with such games are not modified by the game itself, and the in-game representation of these spaces do not afford great opportunity for civic engagement or socio-cultural pedagogy as information about in-game loci is very limited. Yet this does not mean that players are entirely disconnected or disengaged from the locations in which they play. Rather, it means that space is experienced, perceived and impacted by players much differently in Location-Based Mobile Games than in smaller-scale, local pervasive games.

Though the in-game POIs are different based on a user's location, each and every player who opens up either *Pokémon Go* and *Ingress* interact with the same augmented map as other players around the world. As they are 'global games' the homogenous visualized landscape does not change between different landscapes, and regions, resulting in a ubiquity and familiarity in player experience. The portals, Pokéstops, and gyms appear exactly the same, no matter where a player is located and therefore beyond the configuration of streets, highways, and bodies of water, the augmented map depicted on a players' screen does not vary all that much. Further, while there have been many examples of events and tours that use *Pokémon Go* to help participants learn about a location's history, these are organized by third parties who are simply using the game as a tool for historical, cultural or civic engagement. However, though the homogeneity in Niantic's global-scale games, and the lack of in-game opportunity for place-based learning may be a limitation, the ongoing presence of players in public spaces can be both positively and negatively transformative for underused or liminal public locations. Much like the tensions that can emerge as a result of co-presence between players and non-players, spaces can become contested sites when they are used as 'hot spots' for locative play. An example of this was described by five of my *Pokémon Go* interviewees about a specific and once highly well-known play area in Montréal.

## Cabot Square and the Hunter's Guild

When *Pokémon Go* first came out in July 2016, a square in downtown Montréal called Cabot Square was flooded with hundreds of players. It soon became a *Pokémon Go* hotspot for months to follow due to the presence of a cluster of Pokéstops in the game [Figure 11 & 12]. The crowds grew so large that it made headlines on local news outlets and police began patrolling the square, ticketing players who were not respecting traffic signals. Further, one officer commented, "[they]

were blocking the street and even putting their own lives in jeopardy by running (into the street) for those Pokémon".[171] This was a familiar scene worldwide as reports of players gathering en masse in large cities around the globe drew the attention of many, making the launch of *Pokémon Go* what Hjorth and Richardson called a 'cultural moment'.[172]

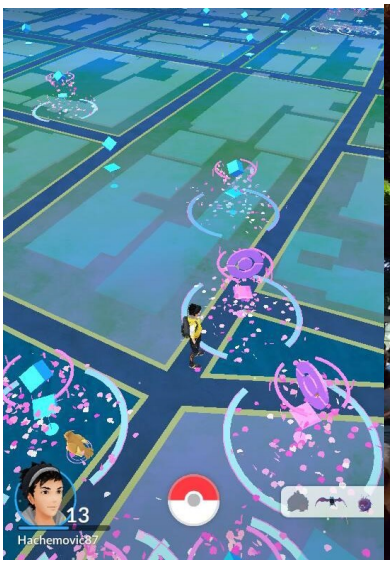


**Figure 11. Screenshot of 'lured' in-game Pokéstops at Cabot Square (2016).**

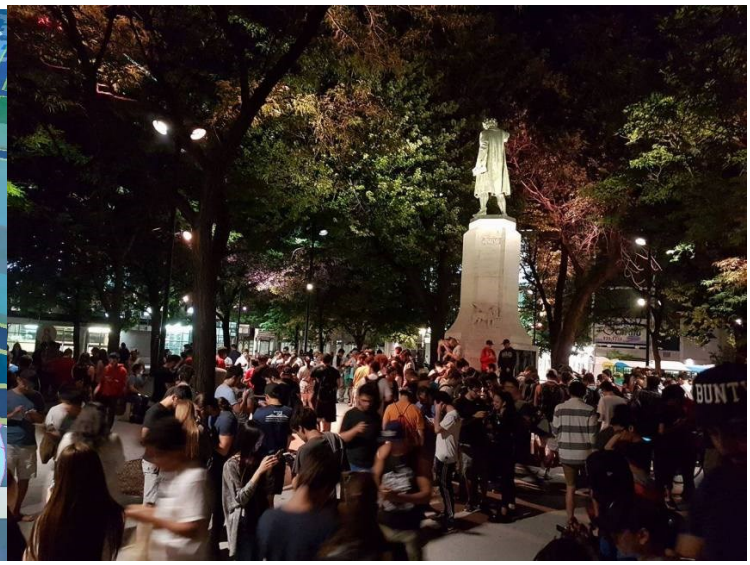

**Figure 12. *Pokémon Go* players gathered at Cabot Square July 2016**

While over the following months, the amount of players in the space lessened as the novelty of the game passed, there were still large groups of players that consistently congregated in one area of the square. This group of players came to call themselves 'The Hunter's Guild' and progressively built up a section of the square using signs, tarps, benches, tables and torches as their 'headquarters' [Figure 13].

[171] Laura Marchand, "Montréal police intervene after rare Pokémon appears at Cabot Square," Montréal Gazette, last modified July 21, 2016, accessed August 8, 2020, https://Montréalgazette.com/news/local-news/Montréal-police-intervene-after-rare-pokemon-appears-at-cabot-square.
[172] Hjorth and Richardson, "Pokémon GO: Mobile," 4.


**Figure 13. Hunter's Guild HQ Sign at Cabot Square**

Ebyru, one of my *Pokémon Go* interviewees, called this period 'the good old days' and recalled spending countless days and nights playing in the square because "people set up tarps for when it rained, and people would go play [outside] the [local] church who gave them water and stuff, and then the park had plugs installed so people could just charge their phones."[173] Similarly, Samorrita explained that the square became part of her daily routine and she would spend almost every day after work playing and socializing in the square. Daily play in the square defined many of my interviewees early experiences with both location-based games and the *Pokémon Go* community that was beginning to develop. Indeed, the surge of players and 'takeover' of one of the corners of the square in a previously quiet space caught the attention of many, with even the local church even involving themselves by providing snacks, water, and in-game Pokéstop lures for players [Figure 14]. While for players, Cabot Square was an essential play and socialization space, nearby residents, businesses and community groups began to complain after it was clear that the 'hype' was not dying down. Rather, players seemed to be settling in and slowly building up an unused area that they had claimed as their own. Further, the SVPM (Montréal Police) stated that they consistently received calls at night with noise complaints because of the ongoing presence of players in the square and the city of Montréal also received calls due to litter and trash left behind

[173] Ebyru, interview by the author, 11:00.

by players. The constant presence of players and the ways that they 'took over' and transformed the space worried and frustrated local residents and businesses because players were often unaware of how their presence was impacting the space that they were occupying. On a Reddit thread about an New York Post article titled "Clueless *Pokémon Go* players may have caused $7.3B in damages last year" one user wrote:

> I believe it. Just in Montréal at Cabot Square during the initial hype. That place got completely ruined by *Pokémon Go* players. The grass was ruined because people weren't using walkways, there was trash. EVERYWHERE except the trash can seemingly. The place is being renovated now. Not sure how much it actually [cost] the city but I have no doubts towards this statement.[174]

Another problem with the surge of players in Cabot Square was highlighted by local community organizations as the square was a vital space for homeless populations who had previously inhabited the space.


**Figure 14. A local church across from Cabot Square providing players with charging stations, water and snacks.**

Approximately four months after the game came out (in October 2016), the persistent complaints voiced by local residents and businesses resulted in Niantic removing multiple Pokéstops from the game in an effort to discourage players from gathering in the square. In an effort to maintain a spatially localized community, after the 'death' of Cabot Square, one of the leaders of the Hunter's Guild posted that they had decided to make the Cote-des-Neiges Metro station their new headquarters and encouraged former Cabot Square players to congregate there instead [Figure 15].

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[174] Demik13 and Activedesign to Reddit web forum, "Researchers: Pokémon Go players cause $7B in damages," 2018, accessed August 13, 2020, https://www.reddit.com/r/PokeMoonSun/comments/7gccpf/researchers_pok%C3%A9mon_go_players_cause_7b_in_damages/.


October 13, 2016 · Montreal ·

With Atwater HQ1 sudden death, Hunter's Guild is promoting CDN HQ2 as the new official hot spot in Montreal. CDN stands for Côte des Neiges and is located by the metro of the same name. We have reviewed potential locations around the city, weighted pros and cons and this one seems to be logically the second best choice after Atwater. By hunting at CDN HQ2 , you will benefit from:

* 5 Lured Pokestops After 6:30pm
* Best Sniping Location
* Free WIFI
* Easy Metro Access
* Free Parking After After 6:00pm
* No rain under metro entrance
* Clean Bathrooms
* Many Restaurants
* 24h/24h Fresh Food Market

Keep in mind this is a pilot project and hopefully it will be successful so the POGO community can thrive again. *****5 Lures will be set starting of 6:30pm*****. See you all tonight and share this as much as you can.

#HUNTERSGUILD

5300 Ch de la Côte-des-Neiges
Montréal QC
Canada

**Figure 15. A leader of the Hunter's Guild group encouraged players to play at Cotes des Neiges metro following the removal of Pokéstops at Atwater (Cabot Square).**

Yet while the spacious and underused environment of Cabot Square allowed for spatial modification and the constant presence of players, it seemed that the new designated Hunter's Guild location did not as it was a semi-indoor space (Metro station) and did not afford the same kinds of freedoms for 'setting up base' as Cabot did. While players did gather there for events and play sessions, it did not see the same surge of players that existed in and around Cabot Square.

As explored earlier in this chapter, spatial tensions can often emerge as a result of co-presence between players and outsiders in public spaces. The case of Cabot Square suggests that Location-Based Mobile Games do also impact and transform the physicality of real-world locations through the presence of players. Such transformations emerge when players habitually occupy and transform these spaces for their own benefit. Therefore, while games like *Ingress* and *Pokémon Go* do not have any material impact or connection to space, simply representing locations using POIs, the player communities themselves are often responsible for any clear changes in the physical play environments. While many players who were part of the Hunter's Guild have since retired, major in-game events like the monthly 'Community Day' and the recent Safari Zone in Montréal still draw large numbers of players to specified play locations. The 'new' hot spot for Community Day specifically has (for the last two years) been a building Concordia University called the EV building. Though the space itself is not public, players are allowed to congregate in

large groups to play so long as they do not cause any trouble or property damage. This is very different from the kinds of community gathering seen at Cabot Square as the liminality of the space itself afforded the opportunity for players to alter and occupy the square on their own terms.

## Do Players think about Space?

Research focused specifically on the spatial dynamics of both locative media and Location-Based Games has been quite extensive, often highlighting how players' relationship to urban spaces are transformed through locative play. De Souza e Silva has contended that location-based games, which she also called hybrid reality games, "(a) create a new logic of game space, (b) transform the relationship between serious life and playful spaces, and (c) transform the perception of urban spaces and patterns of mobility through the city."[175] Such experiences create what is known as *Hybrid Space,* defined as "holistic description of modern urban space encompassing the technological and the social aspects of space."[176] Furthermore, Hjorth and Richardson note that locative games provide "access to the layers of lived experience, personal anecdote[s] and history that are piled up invisibly on every street corner and city block" and therefore "such games and applications, and their deployment within urban space, require us to rethink the spatial and place-based experience of being in-public."[177] This 'rethinking' or reframing of public spaces through locative play has also been referred to as 'place-making'; Hjorth and Richardson note that both digital and non-digital hybrid games help "generate spaces to consider, reflect, and rethink our mundane and intimate practices and how they are *emplaced*, or integral to how we dynamically perceive and 'make' place."[178] Similarly, their concept of 'critical cartography' can be understood as "the idea that we shape maps and our geo-cultural terrain as much as they shape us". They argue that as "media become more mobile and playful, and games embed geo-locative data, we increasingly interweave our everyday experience of place with playful virtual environments."[179] Leorke notes that games like *Pokémon Go* and *Ingress* have often been likened to "flanerie and

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[175] Adriana de Souza e Silva, "Hybrid Reality and Location-Based Gaming: Redefining Mobility and Game Spaces in Urban Environments," *Simulation and Gaming* 40, no. 3 (March 18, 2008): 404, https://doi.org/10.1177/1046878108314643.
[176] Paula Alavesa et al., "Embedding Virtual Environments into the Physical World: Memorability and Co-presence in the Context of Pervasive Location-based Games," *Multimedia Tools and Applications* 79, nos. 5-6 (December 27, 2018): 3287, https://doi.org/10.1007/s11042-018-7077-z.
[177] Hjorth and Richardson, *Gaming in Social*, 8.
[178] Hjorth and Richardson, "Pokémon GO: Mobile," 6.
[179] Hjorth and Richardson, 6.

the derive, or romanticise their players' 'discovery' of the city through the game".[180] Yet he asserts that this trend in analysis risks being too optimistic as it is rooted "in the assumption that [location-based games] inherently engage their players more deeply with the everyday places in which they are played".[181] Throughout my interview process, I was eager to hear about all the interesting ways that *Pokémon Go* and *Ingress* had shifted and/or enhanced players' relationships with local spaces yet was surprised to instead find a plethora of different levels of speculation and experiences surrounding play spaces and neighborhoods.

While the majority of interviewees had previously reflected and thought about community, they had not all necessarily considered how their relationship to space changed or was influenced by their game of choice. Alternatively, some players joked that they spend more time looking at their screen than at the world around them. For instance, *Pokémon Go* player Nakon stated that "it's hard to say I'm more aware of the city or less aware of the city with my nose and the phone. In some ways, there [are] certain landmarks and things that I'm a little bit more aware of or conscious of [but] other times I'm sure I've walked by things I probably should have noticed".[182] Similarly, *Ingress* player, CuttedFinger described that while she spends a lot more time outside because of the game, "I was taking in more 'air and [getting more] exercise' by taking a break from 'real work', but I wasn't taking the time to 'look around' or discover."[183] *Ingress* player, Portalis also shared a similar sentiment, stating:

> You know all those ads Niantic does? It's always like, 'discover your city in a new way', but is it really? Most of the time, I don't look at my surroundings, I look at my phone. And I don't even look at the pictures of the Portals or Pokéstops because it does not matter. So it's rare that I lift my head and actually appreciate the real world surrounding me. [184]

Yet on the other hand some players did describe play as a process of 'discovering' their city and neighbourhood. *Pokémon Go* player Samorrita for instance, emphasized that "I discovered, not re-discovered, [but] discovered my area, my real immediate area around where I live because of *Pokémon Go*."[185] Further, 2Floyd describes that he has "learned about the city through monuments,

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[180] Leorke, *Location-Based Gaming*, 66.
[181] Leorke, 66
[182] Nakon, interview by the author, 17:48.
[183] CuttedFinger, interview by the author, 39:10.
[184] Portalis, interview by the author, 10:30.
[185] Samorrita, interview by the author, 5:40.

graffiti, and historically and/or culturally significant portals."[186] Similarly, MonoAxon stated that because of the game he "suddenly knows little nooks of my own city that I didn't know about before. I discovered graffiti, churches, you name it." He elaborates that "there's a whole like tour guide aspect to the game"[187] as he is much more aware of specific locations in his neighborhood. The range of responses and considerations to questions about 'discovering' or appreciating spaces and locations through gameplay indicates that players do not consistently have the same experiences or perceptions of space as they play the game.

## Habitual vs. Situational Play

In order to try and make sense of how players themselves perceive the places in which they play, my interviews consisted of questions related to spatial experiences. A clear differentiation between the spatial experiences described by interviewees was those which emerge out of 1) **'habitual play'** and 2) **'situational play'** experiences. Habitual play consists of the repeated, daily movements and engagements with players' game of choice. It can include (but is not limited to) playing while commuting, running errands, or basic daily actions, quests and interactions with the game. Habitual play does not take place within specific time periods or in specific locations, rather, it is fluid and ongoing. Alternatively, Situational play occurs within constrained time periods and usually involve travel or commuting to certain locations. Special game events, missions, gatherings, and meetups all lead to situational (or situation-based play) which usually lead to memorable moments related to a players involvement in their game's community.

## Habitual Play: (Re)Mapping the Local

I found that the most self-reflection in terms of spatial experiences occurred when players discussed their habitual play habits. As Location-Based play often takes place during and around one's daily movements and activities, I was curious whether or not players' relationships with their local neighborhoods had changed because of their game of choice. For *Pokémon Go* player, MonadoBoy the game primarily changed his overall perception of his neighborhood. He stated that he now thinks of locations around his home in terms of spawns, stops and gyms, and explained, "I'll take [a certain] route on the way home so that I can spin stops or I can catch more Pokémon.

[186] 2Floyd, interview by the author, 34:18.
[187] MonoAxon, interview by the author, 18:55.

Whereas before I wouldn't necessarily care because it was all the same, but now, *everything matters*. Just because there's a reason to take certain routes."[188] Similarly, Samorrita stated that "in my head even when I am driving, especially … I see the Pokéstops, I see the Gyms. I feel I drive better, I know where I am [and] can just open the game and I would know where I am because of the stops."[189] Spatial Awareness in such cases appears to manifest through a constant awareness of one's location in space by referring to the in-game maps and locations (or loci).

Indeed, in-game loci (Pokéstops, Spawn Points, Gyms, Portals) represent markers through which players situate themselves in space and are known as Points of Interest. Though this does not mean that their relationship with such 'real world' locations has necessarily deepened, it has certainly changed in such a way that the game world becomes a layer that is constantly overlaid upon the physical world in the minds of players. This process has been described by Hjorth and Pink as 'digital wayfaring'. In their article, they revise Tim Ingold's notion of wayfaring as "a type of mobility that is both routine and repetitive (e.g., commuting)" and explore how "the digital entangles itself in our everyday practices and movements, especially through mobile media."[190] Further, Hjorth and Richardson build off of this argument by examining how 'digital wayfaring' is enacted through locative play in particular, stating that "place, as it is enacted through play, highlights the collaborative, performative, and creative dimensions of cartography."[191] Accordingly, *Ingress* player MonoAxon explained that "in my mind, it's all mapped out. But it's mapped out because of [the] scanner in the game [and] map, which are really just portals and points of interest." This kind of mental mapping helps players simultaneously orient themselves in physical space, and is used for gameplay strategizing. Such mental maps are defined by repeated, habitual and everyday engagement with Points of Interest, creating an index of spatial relationships based on their proximity to one another in the game.

Moreover, as POIs are mostly the same across all three of Niantic's games, players from all games most likely have similar mental maps of the spaces in which they play. BGold described in-game

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[188] MonadoBoy, interview by the author, 28:39.
[189] Samorrita, interview by the author, 33:00.
[190] Hjorth and Richardson, "Pokémon GO: Mobile," 9.
[191] Hjorth and Richardson, 9.

POIs a way of orienting himself, stating that his sense of direction revolves a lot more around the game as he situates himself in space "by the names of stops and gyms in certain neighborhoods."[192] While understandings of space and place have varied in regards to spatial and geographic theory, I would frame the ways that habitual play transforms players' relationships to space within De Certeau's understanding of 'space' as 'practiced place'. For De Certeau places are points on a grid which become spaces "when dwellers navigate those places". Accordingly, "place is … the stable, static, ideologically informed given, whereas space is about potentially anarchic movement – when you take routes that aren't time-efficient or cost-effective, for instance, or if you skateboard or do parkour, creating your own, alternative path where there wasn't one, expressing your own spatial 'slang'."[193] Indeed the re-negotiation of space that occurs through locative gameplay, referred to as 'mental mapping' reflects such an understanding. As De Certeau suggested, when an individual develops a spatial relationship to a place (or neighborhood) they navigate, perceive, and orient themselves differently in these places. Indeed, for 2Floyd, *Ingress* helps him orient himself no matter where he is in the city as he is not from Montréal; he states "There are still a lot of spots that when I arrive and don't know [where I am]. [But] I will open up *Ingress* and will see the portals and can often recognize my general area because I am familiar with a lot of them."[194] Like BGold, 2Floyd locates himself by referring to the in-game map and points of interest.

De Souza e Silva and Sutko note that Location-Based Mobile Games and Hybrid Reality Games are "innovative ways of attaching digital information to places and reconfiguring urban spaces."[195] Similarly, Lammes and Wilmott note that the "embedded and playful position of the user heightens their awareness of how mapping interfaces harbour affordances for playful and hybridizing activities, merging playground and game-board."[196] Moreover, the relationship between 'mental mapping' and locative games has been explored by Alavesa et al., who state that usually if "players are provided with access to both physical and virtual, one or the other prevails". Yet in the case of Location-Based Mobile Games like *Pokémon Go* and *Ingress* the simplicity of the game interface

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[192] BGold, interview by the author, 17:17.

[193] Timotheus Vermeulen, "Space is the Place," Frieze, last modified April 24, 2015, accessed August 13, 2020, https://www.frieze.com/article/space-place.

[194] 2Floyd, interview by the author, 34:18.

[195] de Souza e Silva and Sutko, *Digital Cityscapes*, 4.

[196] Sybille Lammes and Clancy Wilmott, "The Map as Playground: Location-based Games as Cartographical Practices," *Convergence: The International Journal of Research into New Media Technologies* 24, no. 6 (December 8, 2016): 653, https://doi.org/10.1177/1354856516679596.

as a reflection of a real-world map allows demands little attention from players, allowing elements of the physical environment to co-exist with the digital one as the player moves through space.[197] Indeed, Richardson et al., note that prior to the integration of 'Virtual Environments' in everyday life, "people generally [acquired] environmental spatial knowledge through direct experience by locomoting through an environment or by viewing a map."[198] Drawing off of participant-based research conducted by Thorndyke and Hayes-Roth (1982) they state that while city-dwellers who learned through 'direct experience' were less familiar with a *bird's eye* understanding of urban layouts, they were more likely to be able to pinpoint 'unseen' or unique urban features. On the other hand, those who learned from studying maps were more likely to have a better navigational understanding of city streets and were able to simulate direct routes from one location to another. Yet in the case of habitual engagement with Locative mobile games, the map-like qualities of the game's interface are constantly co-present with players' movements through real world spaces, creating a simultaneity between the kind of map-learning and environmental learning described by Richardson et al. The two types of 'learning' and navigating are constantly at play when engaging with Location-Based Mobile games, creating cohesive 'mental maps' as described by players, where real-world locations are constantly mediated by the game world and vice versa. While players are not necessarily 'discovering' or developing deeper connections with cultural, artistic, historical and/or unique locations in the world, rather, their perception of place is reconfigured and mediated through both the game's map and Points of Interest scattered around it. As a result, locative play transforms neighborhoods into game boards.

## Going the Distance: Operations and Events as Situational Play

While I have argued that games like *Pokémon Go* and *Ingress* create mediated experiences of players' local play areas through repeated every day, habitual engagement with their game of choice, discovery of 'new' or previously unvisited locations in the real-world are much more closely aligned with situational (or situation-based) gameplay. Unlike habitual play, where players become involved in a process of 'digital wayfaring' through consistent, long-term interaction with their game of choice, **situational gameplay** occurs within designated time frames and involves

[197] Alavesa et al., "Embedding Virtual," 3287-3288.

[198] Anthony E. Richardson, Daniel R. Montello, and Mary Hegarty, "Spatial knowledge acquisition from maps and from navigation in real and virtual environments," *Memory & Cognition* 27, no. 4 (1999): 741, https://link.springer.com/content/pdf/10.3758/BF03211566.pdf.

much more 'work' from players through coordination and designated visits to specific play locations. Though *Pokémon Go* players described instances and events that were particularly memorable for them, *Ingress* players identified that the 'operations' they have had to conduct for the game have led to much more significant spatial experiences. When asked if they had visited any 'new' places or travelled because of their game of choice, most *Pokémon Go* interviewees mentioned visiting parks or known 'pokestop clusters' around the city for community days, as well as visiting Ile-Notre-Dame for the first time for the Montréal Safari Zone in 2019. Parks are of special interest to *Pokémon Go* players because they often have clusters of certain Pokémon that spawn frequently, known as Pokémon 'nests'. Yet beyond visiting parks, attending community days and special events around the city, none of my interviewees described instances where they travelled outside of the city, or over great distances in order to play.

On the other hand, because one of the primary goals in *Ingress* is to create large fields over the greatest distance possible, coordinated travel to specified locations is a common practice for 'hardcore' players. While during habitual play, these players reflected on how the everyday practice of play has shifted their perception of space, in situational play, they reflected more heavily on strategy-based mobility and movement in and through space in order to accomplish certain in-game goals, such as operations. Furthermore, because of the team-based competitive nature of *Ingress*, these operations are planned weeks and even months in advance and can involve meticulous organization to ensure that players are in the right place at the right time to form links and exchange portal keys. LordFranklin, for instance, describes:

> I've been a participant in some of those [big field operations] and it's really amazing the planning and the logistics, the communications, and the technology behind implementing these huge ops [which]could be all of Québec you know. You may have somebody in Maine or in Ottawa or up North. So in that context, in the real world, I've had to drive two hours to Coaticook [in Québec] for an [operation] at a certain time to do a certain thing so that we could put in these big fields.[199]

For large operations, *Ingress* players not only have to communicate with players from different cities and regions, but also often have to physically travel to designated distant locations in order to carry out tasks related to the operation. Further, LordFranklin states that the operations he has

[199] LordFranklin, interview by the author, 18:50.

been involved in "can require dozens, if not more, people because things need to be done in unison for them to work because every single thing is planned to the minute."[200] During our interview, Portalis also explained that he had recently helped organize an operation with 250 agents where they used a walkie-talkie application to coordinate players in a timely manner (because people had to do certain actions at certain times) and stated that "often players will follow us blindly, in the sense that they don't see the big picture [of] the operation but instead are delegated [with] smaller tasks" this is to ensure that the plan isn't spoiled. We only give certain people small fragments of information."[201] Moreover, Portalis also described having to drive 12 hours straight to Northern Quebec to hack a single portal and boasted that he has probably driven on 80% of the streets throughout the province of Québec. He stated, "I've traveled to lots of places that I would never have been if it was not for *Ingress*. Sometimes [I ended up] deep into the woods, soaking wet because I needed to jump over a swamp [to get to a portal]."[202] Similarly, another player, 2Floyd explained that doing operations has helped him learn about Québec as he is from France.

Unlike habitual play, which is much more casual and ongoing, operations are highly situational as they occur within specific time frames and rely on player movement and travel to designated locations. Accordingly, while players described *how* the game has shifted their perception of their local play areas when talking about habitual play habits, they only discussed *what* they did during instances of situational or situation based-play with little reflection on if and how organizing, and travelling for large-scale operations has made them see or perceive play spaces in a different light. Though the mental mapping that emerges out of habitual play is subjective and based on personal experiences with space, involvement and actions taken during situational instances of play grow out of active communities of play and strategic movements through space. Involvement in 'operations' is also key to being accepted and involved in the covert communications that occur within team factions. As a result, the actions taken by players during operations do not necessarily 'deepen' their connection with the spaces that they must travel to, but rather enrich and reaffirm their commitment to the larger player community. For *Ingress*, the travel, planning and coordination involved in situational play is also what makes players 'serious' or hardcore members

[200] LordFranklin, 20:14
[201] Portalis, interview by the author, 12:43.
[202] Portalis, 34:30.

of the community. Space and community involvement become intertwined through active engagement in these missions and operations.

Furthermore, three of my interviewees associated strong membership to the community to operations, stating that the process of 'mentoring' new players through operations is an integral way to get them involved in 'the bigger picture'. Newer players are 'brought in' by more established players and shown the ropes, often through assigning them a series of tasks in field operations. LordFranklin, for instance, reflected that "people who are new to the game get welcomed into the community, get contacted by people who will help them, take them out" and show tips and tricks, but most importantly, "brief them on how operations work".[203] The mentoring of new players supports the notion that situational play is deeply connected to community and belonging in *Ingress*.

## Creative Cartography: Playing with Space

While it is clear Location-Based Mobile Games can create contested environments through ongoing player presence, can lead to a renegotiation of one's neighborhood through habitual play, and can involve extensive travel through situational play, three of my *Ingress* interviewees brought up a playful activity in *Ingress* player communities that highlights the potential for creative spatialization through mapping. One of the primary in-game differences between *Pokémon Go* and *Ingress* is how the players impact the in-game environments. In *Pokémon Go*, the only way that players can 'modify' or trigger a change in other players' games is through lures which can be placed on Pokéstops and can be used by all nearby players. Yet in *Ingress*, as the primary objective in the game is to create links and fields between portals, players can see when others have captured portals, destroyed fields/links, or created links and fields of their own. The map therefore reflects these changes and is always made up of different kinds of Blue or Green links and fields [Figure 16]. Moreover, there is a live activity log on every player's device showing the recent actions taken by both members of their own faction and the enemy faction.

[203] LordFranklin, interview by the author, 20:14.

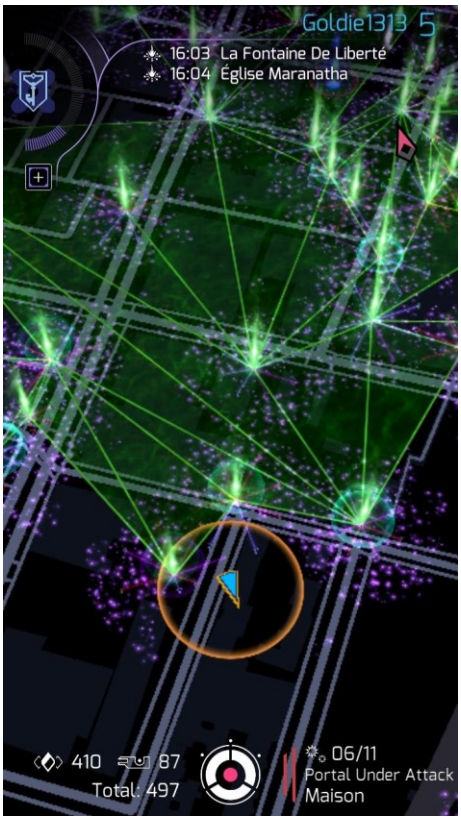


**Figure 16. Screenshot of Ingress' in-game map featuring interconnected green fields.**

Though the field and linking mechanics are primarily used strategically, the ability to create these fields has led to what is known as 'field art' which involves a player, or players repurposing ITTC (the same third party mapping software that is used for planning operations) to design images, icons, words and shapes using links and fields in *Ingress*. Indeed, players saw the opportunity to, as one of my interviewees put it, "have fun with the maps" to create and design thematically planned out field maps. Unlike maps planned for operations, field art is often enacted collaboratively by both factions to create interesting images using both Enlightened (green) and Resistance (blue) fields. During my interviews with CuttedFinger and LilPatate both showed me examples of field art they have used in the past for operation planning. Due to confidentiality I was asked not to share these maps but LilPatate also shared a map he had created for 'May the Fourth' featuring a number of interconnected blue and green portals depicting 'Baby Yoda' from *The Mandalorian* television series [Figure 17]. While both interviewees emphasized that the process of mapping out planned fields is the most important aspect of conducting operations, it is also used for collaborative mapped creations between both teams. Such planning relies on the

creative engagement with mapping technologies, a process used for both operations and 'field art' (as exhibited by the Baby Yoda map).

**Figure 17. Baby Yoda Map created by interviewee, LilPatate.**

In his examination of creative engagement with Social Games, Kirman states that while 'sandbox games' like *Grand Theft Auto*, and *The Sims* "are designed to be more freeform play experiences, where players are allowed, or even encouraged, to explore the environment and find their own source of amusement", social games are much more limited in how players can engage with their game of choice.[204] Yet while most Social Games do not allow for many 'emergent play' opportunities as 'patterns of play' are usually strict, players sometimes "develop new systems of rules in order to create challenges even greater than those posed by the formal system of the game itself."[205] Kirman analyzes the practice of modifying, creating, or altering maps in *Farm Town* where players used agriculture creatively to arrange their farms for aesthetic or artistic purposes. He notes that in these cases, the game affords players "enough freedom to express their own playful nature despite there being no direct benefit to them in the formal game structure, such as gaining points or rewards."[206] Similarly, much like Social Games, actions and mechanics are quite repetitive and limited in *Ingress* and players have discovered that mapping affords the rare

[204] Ben Kirman, "Emergence and Playfulness in Social Games," *MindTrek '10: Proceedings of the 14th International Academic MindTrek Conference: Envisioning Future Media Environments*, October 2010, 73, https://doi.org/10.1145/1930488.1930504.
[205] Kirman, "Emergence and Playfulness," 73.
[206] Kirman, 73.

opportunity to collaborate with the enemy faction and can be an exciting form of experimenting with the in-game content [Figure 18 & 19].

**Figure 18. Field art created by *Ingress* Players in Israel.**

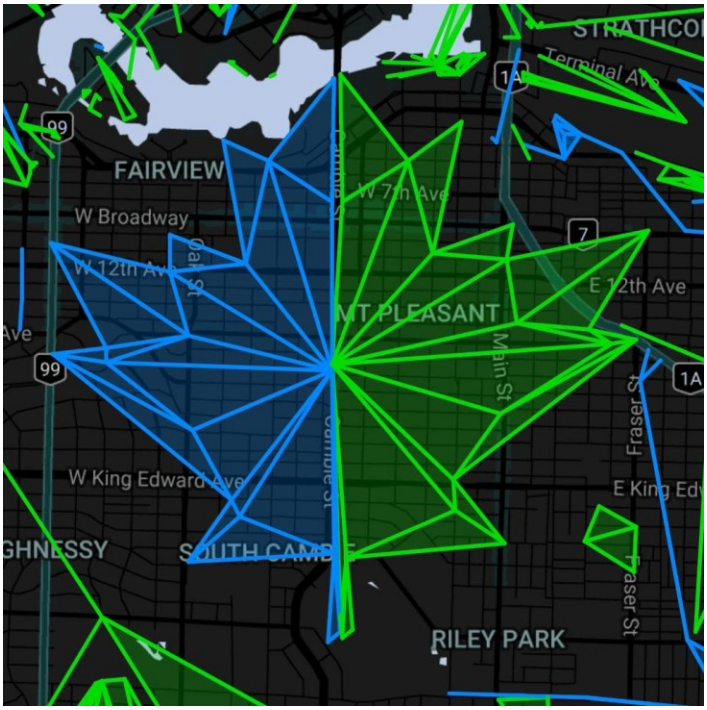


**Figure 19. Field art created by *Ingress* players in Vancouver for Canada Day**

Drawing off Espen Aarseth's notion of 'active experimentation' Lammes and Perkins state that 'game maps' often allow for situations in which "playing and mapping constantly bleed into one another and can even legitimize each other's existence."[207] They contend that mapping and playing "frequently trigger users to engage with processes of spatial navigation and test the possibilities of environments."[208] Though in the case of operation planning and field artwork players are often not 'directly' engaging with physical spaces, they use in-game POI to construct, imagine and experiment with possible pathways, patterns, and connections which will potentially be created out by fellow players and appear live in *Ingress*. These practices therefore "heighten … awareness of the performative nature of maps and emphasize that maps are always **appropriated, authored, de-authored, read, erased, enacted, dormant, and performed in situ**."[209] In the case of field art, playful experimentation with maps is considered an extension of play that moves beyond the rules and goals outlined by the game itself. Though it can be considered one of the many tasks associated with 'power gaming' (as discussed in the previous chapter), creative cartography and playful mapping extends beyond moderation duties and can be functions as an expansion of play that is not directly encouraged by the game. Further, field art is often shared among both local and global communities, inspiring players to experiment with and test the limits of the in-game map.[210] Indeed, while *Ingress*' in-game mechanics are limited, creative engagement with maps represents a freedom for explorative play outside the limits of the game itself.

## Conclusion: Why Does Space Matter in Location-Based Games Research?

While my interviews revealed that trends in the social dynamics surrounding Location-Based Mobile Games are clear, coordinated and extensive, with each interviewee detailing their involvement in the local community as well as the complex micro-politics of social systems and moderation, answers to questions about spatial experience were much more fragmented and inconsistent. While some interviewees reflected on tensions they experienced while playing their game of choice, many outlined how the game has changed the way that they perceive and orient themselves in their play areas, and others provided anecdotes about significant play locations. The impact of players on physical space was highlighted in the case of Cabot Square, an 'underused'

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[207] Clancy Wilmott et al., *Playful Mapping in the Digital Age* (Amsterdam: Institute of Network Cultures, 2016), 12.
[208] Wilmott et al., *Playful Mapping*, 43.
[209] Wilmott et al., *Playful Mapping*, 47.
[210] Wilmott et al., 47.

public space that presented the opportunity for players to occupy and transform a dedicated space over time, but which resulted in numerous complaints about these players and the eventual removal of in-game loci to discourage player gatherings in the space.

The spatial experiences of players in both communities varied slightly more than the social ones, with Ingress requiring a lot more travel for specific missions and operations. Further, tensions with non-players were also described in more detail by *Pokémon Go* players. This is most likely because players can spend more time in one location interacting with one in-game Point of Interest by battling Gyms and doing Raids, whereas *Ingress* players must travel to multiple portals to create fields and there is a 'cooldown' period between interactions with a single POI. However, one similarity I found was in the way that 'habitual' play experiences were described as a process of mental mapping. Alternatively, situational play was primarily described by *Ingress* players who participated in larger operations and missions with members of the community.

Ultimately, questions aimed at investigating experiences of space through gameplay led to an array of answers which either fell into the category of habitual (everyday) play habits and situational (event or operation based) instances of play. While habitual play is more closely associated with the personal, subjective relationships with local spaces that emerge over time, situational play grows out of collaborative community driven actions tied to hardcore, or serious play and involves more strategic movements through space. Moreover, interviews revealed that in *Ingress*, the extracurricular moderation and play activities described in the previous chapter also extend to experimentation with mapping and creative cartographic practices. Though the trends in player perceptions and reflections about spatial experiences were a bit more scattered than those about community engagement, it is evident that space plays a large role in how, when and where players engage with their game of choice.

# Conclusion

While communities of play have been a major focus of game studies scholars for a variety of game genres, the communities surrounding location-based mobile games remain under-examined. Locative games themselves have been studied as spatially transformative cultural artifacts, with many authors linking them to forms of *flâneurie* and/or *dérive*,[211] little research has been done comparing the social and spatial dynamics of these games. By interviewing fifteen active members of the *Ingress* and *Pokémon Go* communities, I have identified that the social ecosystems in Location-Based Mobile Games are generated, moderated and implemented by players themselves and spatial experiences are often drawn from either habitual or situational play patterns.

## Locative Gameplay and Social Ecosystems

In the first chapter, I frame my analysis of communities of play around two genres of games: Social Games and MMOGs. I identify that, while the mechanics and monetization models in *Ingress* and *Pokémon Go* are drawn from pre-existing Casual, Social and Mobile Games, the social ecosystems that developed around the games are much more akin to the complex and autonomous communities that emerged out of MMOGs in the late 1990s and early 2000s.

Accordingly, by investigating players' involvement, perceptions and experiences with their local communities in Montréal, I found that the social aspects of their game of choice was one of the primary reasons that players have continued playing over extended periods. Interviewees also reflected on a sense of belonging and 'openness' attributed to meeting and collaborating with other players face-to-face settings, indicating that Location-Based Games in some ways dismantle the preconceived perception of what a 'gamer' looks like because face-to-face interactions are rare in the contexts of other kinds of games, exposing a wider range of player groups to each other.

Another aspect of community involvement that repeatedly came up in my interviews was the extent to which players are involved in 'extracurricular' activities. Drawing from T.L. Taylor's understanding of 'power gamers' as "those who play in ways that seem to outside observers as 'work'",[212] I outlined the various moderation, content creation, organization and research activities

[211] Leorke, *Location-Based Gaming*, 62.
[212] Taylor, *Play between*, 10.

described by interviewees. This kind of engagement with a game means that the typical boundaries between labour and play sometimes disintegrate entirely. Unlike in the MMOGs analyzed by Taylor where, there is a "sense that somehow power gamers are just too dedicated, almost bordering on the (psychologically) pathological",[213] Location-Based Games players who were not engaged in such forms of 'extracurricular' activities had very positive attitudes to those who contributed greatly to communal knowledge, moderation and organizational activities. Furthermore, I identify the relationship between forms of emotional labour and the involvement of 'power gamers' in their local communities. Such players elaborated extensively on specific issues and players tensions they have had to handle, sometimes putting themselves at risk of emotional or physical abuse. Moreover, I identified that such activities determine larger play patterns and 'soft rules' within each community. While cheating in both *Ingress* and *Pokémon Go* was identified as a source of tensions within the community, malicious behaviour was more likely to be punishable by the community at large. As exhibited in the Broker's Guild Scandal, which gained a great deal of attention because those who engaged in Guardian Hunting were perceived to do so purely out of ill-intent for their targeted players, those who engage in this kind of play have been excluded, ostracized and even expelled from local *Ingress* communities of play.

## Spatial Awareness through Locative Gameplay

The second chapter of this thesis expanded on findings related to social dynamics and perceptions, focusing on both individual and community-based experiences with 'real-world' physical spaces. While traditionally, co-presence was understood as "the idea that the presence of other actors shapes individual behavior,"[214] the convergence of locative, social and mobile media has created entanglements between spatial and social copresence.[215] Indeed, as locative gameplay takes place within both the realm of the physical and digital, they can be thought of as having simultaneous modalities of presence. Accordingly, I investigated how co-presence in locative play can generate tensions between players and non-players, and examined how the presence of systemic racism manifests through spatial experiences.

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[213] Taylor, "Power Gamers," 4.
[214] Campos-Castillo and Hitlin, "Copresence: Revisiting," 168.
[215] Hjorth and Richardson, *Gaming in Social*, 64.

Building off the analysis of tensions between players and non-players, I explored whether or not locative games can have an impact on space itself. Though *Pokémon Go* and *Ingress* function as spatial representations of the real world, they do not intrinsically have any material or physical connection or impact on the spaces represented on a player's device. While smaller-scale, local locative games are often designed from a 'bottom-up' approach to engage players with the socio-cultural, geographical, and historical aspects of space, Location-Based Mobile Games are designed from a 'top-down' approach and represent spaces in a homogenous manner. Yet by exploring the case study of Montréal's Cabot Square, I found that it is the players themselves that have an impact on these spaces, functioning as the conduits between the game-world and real-world.

Next, drawing from my interviews, I explored how players reflect on their own experiences with space, framing my argument around notions of digital wayfaring, spatial learning (or mental mapping) and De Certeau's understanding of space vs place. While the majority of interviewees had previously reflected and thought about community, they had not all necessarily considered how their relationship to space changed or was influenced by their game of choice. While some commented that they felt that while playing they spent more time looking at their phones than at the world around them, others expressed that the game did allow them to 'discover' or re-learn their city and neighbourhood. Building off the interviews, I identified that the variety of spatial experiences described by players can be categorized into two kinds of play experiences (habitual and situational) to frame an understanding of spatial awareness that develops through different kinds of gameplay. While habitual play consists of the repeated, daily movements and engagements with players' game of choice, situational play occurs within constrained periods and usually involves travel or commuting to certain locations. I highlight that while through habitual play, players are not necessarily 'discovering' or developing deeper connections with cultural, artistic, historical and/or unique locations in the world, their personal perception of place is reconfigured and mediated through both the game's map and Points of Interest scattered around it. Alternatively, situational play revolves heavily around community participation and was discussed much more by *Ingress* players concerning 'operations' that they have been involved in. Situational play is deeply intertwined with community participation and often involves travelling to a specified location to complete an in-game action. It requires much more 'work' from players through constant coordination with those organizing the operations, events or missions.

Finally, I explored how *Ingress* players in particular engage in creative and experimental mapping as a way of expanding play. Unlike *Pokémon Go*, the map in *Ingress* can be altered by player actions and there is therefore more opportunity for creative forms of play through an activity called 'field art'. In the case of field art, playful experimentation with maps is considered an extension of play that moves beyond the rules and goals outlined by the game itself.

While the social ecosystems described in interviews were consistent, the spatial aspects varied from player to player and showed a greater difference in spatial experience between *Ingress* and *Pokémon Go*. This indicates that while activities around sociality are consistent between both games, spatial experiences differ based on how each game is played.

## Locative Gaming in the time of COVID-19

While traditional digital games can, for the most part, be played in the comfort of home, physical movement through the real world is a requirement in Location-Based Mobile Games — or at least, it was before March 2020 when the COVID-19 pandemic hit Canada. As mentioned, *Ingress* and *Pokémon Go* urge players to 'get up and go' in order to spin stops, hack portals, raid, make fields, trade and collaborate with others. Yet what happens to locative gameplay and the communities that surround it when movement in the 'real world' is no longer a requirement? The impact that the pandemic has had on locative gaming has made me realize the extent to which real-world gaming can be completely altered by real-world events.

By March 2020, as COVID-19 continued to spread around the globe, Niantic had cancelled some of its most popular in-game and 'real-world' events around the world. First, the monthly community day, which was to take place in mid-March was 'indefinitely postponed'; following this, upcoming Safari zones in Liverpool, St-Louis and Philadelphia were cancelled as the events draw hundreds of players to gather in specific locations in the hopes of catching shiny featured Pokémon, socializing with other players and profiting off the added bonuses. Similarly, *Ingress*' First Saturday Event was also cancelled in order to prevent players from organizing gatherings in large groups. Next, local community leaders and admins in Montréal began posting messages warning players not to raid or do operations in large groups, and to be careful when letting other players in their cars (something which is usually quite normal for gameplay). An example of this

can be seen below when on March 18th when a local admin of the *Pokémon Go* Montréal Group issued a message to all 18, 000 members to stay safe [Figure 20].

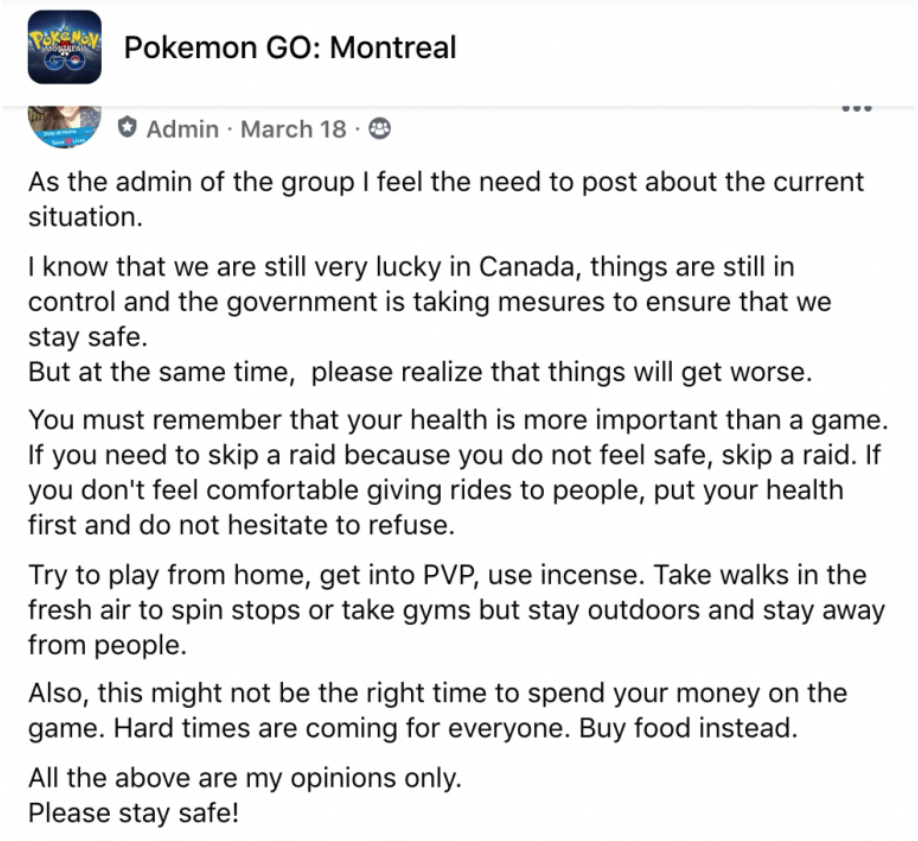


**Figure 20. Screenshot of an admin post on the *Pokémon Go*: Montréal Facebook Group, March 2020.**

Yet while the cancellation of in-game events didn't necessarily impact daily gameplay, in late March, Niantic announced that they would be restructuring gameplay in all three of their games in order to assure that players don't put themselves and others at risk by playing outside where they could come in contact with others. Though they had previously hinted on their social media platforms that changes would be coming in the games, on March 30th they published a Blog Post titled 'Embracing Real-World Gaming from Home'[216] which outlined how mechanics, rewards, events and quests would either be adjusted or integrated to support less player movement. In the post, they state:

[216] "Embracing real-world gaming from home," Niantic Labs, last modified March 30, 2020, accessed August 20, 2020, https://nianticlabs.com/en/blog/stay-safe/.

> We have always believed that our games can include elements of indoor play that complement the outdoor, exercise and explore the DNA of what we build. Now is the time for us to prioritize this work, with the key challenge of making playing indoors as exciting and innovative as our outdoor gameplay.

They also outline major changes that have since been introduced in the game:

- Exercise: you can track your steps indoor [sic] with Adventure Sync so activities like cleaning your house and running on a treadmill count toward game achievements. We're going to make improvements to Adventure Sync so it works even better with indoor movement and activities.
- Social: we're enhancing our in-game virtual social features to enable players to stay in touch when they can't meet in real life. You'll soon be able to team up with friends and take on Raid Battles together in Pokémon Go from the comfort of home.
- Explore: we're also looking into how we can help players virtually visit and share memories about their favorite real-world places, until they can once again visit them in person.
- Live Events: we're re-imagining what it means to participate in a Niantic live event this summer, and putting our creative energy towards bringing the excitement directly to your home. That means we're working on an entirely new way to enjoy Pokémon Go Fest.

Although these changes have been useful measures to assure player safety, they also strongly emphasize one message: that movement in and through the physical world is no longer a necessity to play these games. Accordingly, such major transformations in Niantic's games essentially make them much more like most other mobile games (or even like most digital games) by removing the 'Location-Based' elements that made them so unique and significant.

While the findings drawn from my interviews primarily reflect the pre-COVID gaming environments of *Pokémon Go* and *Ingress*, it is important to note that the changes made by Niantic may have long-lasting transformations on both the social and spatial dynamics of these games. COVID-19 has had a major impact on Location-Based Gameplay both in terms of community dynamics and play in public spaces. In late March 2020, Niantic began introducing new mechanics in their games to encourage players to play from home. In *Pokémon Go*, some examples of these changes include the ability to do raids remotely, an extension of the player's radius (so players can reach Pokéstops and Gyms from a greater distance), more sensitive movement tracking, shorter distances to hatch eggs, daily rewards and spawns for opening the game, and the transition of the annual *Pokémon Go* Fest (which is normally held in Chicago) and monthly community days to

virtual events. *Ingress* measures have included reduced interaction with portals needed for items, an increased amount of times players can interact with portals, made their 'First Saturday' event remote, and removed the limit on high level 'resonators' that can be placed on a portal. Though the changes in *Ingress* are not as extensive as in *Pokémon Go*, they still encourage less social interaction and collaboration between players by increasing the number of actions one player can make on their own. As explored throughout both of my thesis chapters, the social and spatial ecosystems that have developed around these games are heavily based on a correlation between online and face-to-face interactions. Without the need to interact or gather with other players in public spaces, or even move in the 'real world', what will become of these dynamics and communities of play?

On a positive note, including more diverse activities that players can engage with from home can open up more varied gameplay, encourage players to play regularly, and makes the games much more accessible to those with disabilities. While making the game more accessible is certainly a very positive outcome of some of the changes that have been implemented, the concerns that players have expressed regarding the new changes are mostly related to the lack of in-person interactions, the monetization of these changes through paid items and events, and that Niantic appears to be 'going against' everything they encouraged (or discouraged) by introducing 'remote play' as an option in their games.

A recent article addressing the changes that have been made to Location-Based Games during COVID-19 identifies that as "LBGs are a genre of games that are typically played socially outdoors, and people were advised or even ordered to instead stay home, a natural conflict arose."[217] By analyzing *Pokémon Go* subreddits and groups, the researchers determine that players have raised concerns about "playing *Pokémon Go* alone for too long" as it "could induce a degree of dryness and boredom capable of shaking newcomers and long-term players alike, creating legitimate concern about the game's future."[218] The majority of my interviewees stated that the social aspects of their game of choice is their primary reason for continued engagement with the

[217] Samuli Laato, Teemu H. Laine, and A.K.M. Najmul Islam, "Location-Based Games and the COVID-19 Pandemic: An Analysis of Responses from Game Developers and Players," *Multimodal Technologies and Interaction* 4, no. 2 (June 17, 2020): 2, https://doi.org/10.3390/mti4020029.

[218] Cian Maher, "How COVID-19 transformed Pokémon Go into 'Pokémon stay-at-home,'" ArsTechnica, last modified July 13, 2020, accessed August 13, 2020, https://arstechnica.com/gaming/2020/07/how-covid-19-transformed-pokemon-go-into-pokemon-stay-at-home/.

game over the last few years. Contributors on a recent *Ingress* subreddit thread also voiced these concerns, with one user noting that since COVID-19 their local chat rooms had gone quiet. They stated "I am interested in community building with my local faction. That was definitely the most rewarding part of gameplay, the social aspect of this game."[219] It is clear that the pandemic has affected local communities of play, as more and more players must rely solely on online groups for communication and collaboration with other players.

Another important aspect of these changes to explore is how some of Niantic's 'remote gameplay' changes relate to spoofing. In the first chapter I explored how spoofing (manipulating one's GPS location) in all of Niantic's games not only goes against Niantic's Terms of Service but is also extremely frowned upon by active members of their communities. As some of the new elements in the game now allow players to access in-game locations and challenges remotely, players on a thread about the remote raid passes on the *Pokémon Go* subreddit have voiced concerns over the hypocrisy of such changes with one player stating "this is just legalized spoofing".[220] Another user jokingly wrote, "Do we know anything about how far from a gym you can be while ~~spoofing~~ using these remote raid passes?"[221] Players have observed that there appears to be a fine line between the remote play mechanics implemented by Niantic in *Pokémon Go* and 'full out spoofing'. Furthermore, Niantic recently implemented an 'invite' system in remote raids, where players can invite someone on their friends list to join the raid. This means that technically a player in Montréal could participate in a raid anywhere in the world, further complicating the fine line between spoofing and remote play. Much like the social aspects of locative play, players fear how remote play will impact the game in the long-run when movement is no longer needed to access many in-game features.

Beyond my worries that the continued introduction of remote and 'home-based' play will disrupt the social elements in these games and dismantle the spatial aspects through the introduction of remote play, I am also wary of price points being introduced for previously free elements in these games. A recent article found that on "the week of March 9, spending [in *Pokémon Go*] was around

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[219] JustHere4TheMeta to Reddit web forum, "Rebuild Local Community!," July 19, 2020, accessed August 13, 2020, https://www.reddit.com/r/Ingress/comments/hxp4r5/rebuild_local_community/.
[220] Solomonster83 and Reaper527 to Reddit web forum, "Remote Raid Passes image," May 2020, accessed August 13, 2020, https://www.reddit.com/r/TheSilphRoad/comments/g5np2a/remote_raid_passes_image/.
[221] Solomonster83 and Reaper527 to Reddit web forum, "Remote Raid Passes image."

$13.8 million. The week of March 16, spending was up to $23 million. That's a boost of 67%."[222] Furthermore, Mobile app tracker Sensor Tower said as of July 1st, 2020, "players have spent more in *Pokémon Go* (an estimate $445 million) in the first half of 2020 than in the same timeframe in previous years — including the game's first year when *Pokémon Go* basically took over the world [Figure 21]."[223] While this can be attributed to an increase of purchases of in-game items, "2020 has already seen multiple paid events, including three Safari Zones and Special Research story events for legendary Pokémon and Community Days".[224]

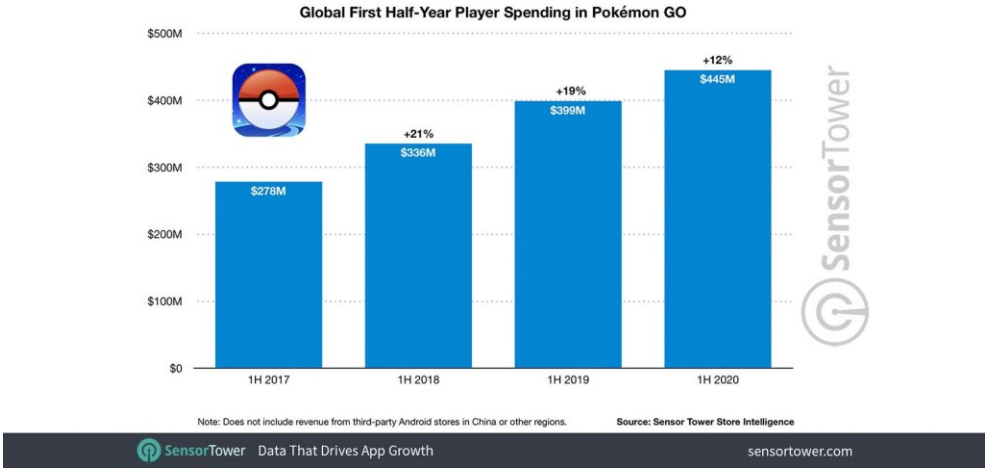


**Figure 21. *Pokémon Go* 'player spending' chart by SensorTower, 2020.**

Further, in order to access 'remote' play events, such as Raids, players must purchase special 'Remote Raid Passes' [Figure 22] from the store in *Pokémon Go*. Indeed, in order to access a Remote Raid, "you need to purchase a specific Battle Pass that is financially detached from the daily free pass Niantic affords players, as well as the Premium Battle Pass players, may have already coughed up real money for."[225] Moreover, on a Reddit thread about the new features, one player stated "It's great that they've added remote playing options during COVID but it's only to keep people still shoving money into the slot machine."[226] There is, therefore, a profit-margin and

[222] Chris Burns, "COVID-19 could've ended Pokemon GO; Instead, it's exploding," Slash Gear, last modified March 31, 2020, accessed August 13, 2020, https://www.slashgear.com/covid-19-couldve-ended-pokemon-go-instead-its-exploding-31615008/.
[223] Patricia Hernandez, "Pokémon Go is breaking records despite coronavirus limitations," Polygon, last modified July 6, 2020, accessed August 13, 2020, https://www.polygon.com/2020/7/6/21314911/pokemon-go-coronavirus-record-player-spending-niantic-raids-fest-microtransactions-passes.
[224] Hernandez, "Pokémon Go is breaking," Polygon.
[225] Maher, "How COVID-19," ArsTechnica.
[226] Solomonster83 and Reaper527 to Reddit web forum, "Remote Raid Passes image."

shift in Niantic's game economies associated with the addition of 'remote' gameplay elements and Niantic's initiative to keep players engaged from home.


**Figure 22. Remote raid passes in the *Pokémon Go* store.**

As Location-Based Gameplay takes place in the 'real world' Niantic was very quick to react to the COVID-19 pandemic. Indeed, Laato et. al. noted that the pandemic has raised "ethical concerns regarding the duty of LBG developers to minimize health risks"[227] and it will, therefore, be important to keep a watchful eye on the continuous changes that are implemented over the upcoming months.

## The Future of Location-Based Games Research

In August 2019 I had the opportunity to participate in a workshop at the Digital Games Research Association (DiGRA) Conference in Kyoto, Japan. The workshop, titled "The Future of Location-Based Games Research" had twenty-two Location-Based Games researchers from all over the world, and involved a series of short presentations followed by group discussions. In the groups, we focused on four different themes tied to locative games. They included:

- **Games**: focusing on the technology and gameplay design of location-based games
- **Play**: focusing on studying location-based game players and player Experiences

[227] Laato, Laine, and Islam, "Location-Based Games," 29.

- **Making**: focusing on the production process and funding models for location-based games (commercial and public)
- **Cultures**: focusing on their impact across local and global cultures, comparing and contrasting different countries and cultures

The workshop was extremely productive and generated questions about how locative research should be conducted in the future. Two questions that came up again and again throughout the workshop were:

1) How can large-scale location-based games such as *Pokémon Go* be more reflective of the cultural, spatial, social and material histories in which they are played? How can these games be used for civic engagement?

2) How can location-based games researchers move past 'blockbuster' games like *Pokémon Go*?

This thesis did not aim to answer the first question, as it would need to have been primarily focused on spatial experiences of both Location-Based Games players and those who have engaged with the kinds of smaller-scale 'local' or 'place-based' games discussed by Benjamin Stokes. Stokes' analysis of local games and civic engagement highlights that smaller-scale games often encourage players to learn about spaces and reflect on questions surrounding local histories and cultures. Furthermore, research of this kind would need an in-depth comparison of locative game design practices in order to determine how space is considered in the design and implementation processes.

Though the second question grew out of researchers' frustration that *Pokémon Go* is now the 'baseline' for location-based games research due to its success and visibility, I believe that there are still many potential avenues for research surrounding *Pokémon Go* as both the game and community are constantly evolving. The research conducted for this thesis was highly localized as I focused solely on players from the Montréal area and therefore qualitative research can be especially useful to develop further understandings and comparisons of player experiences in different micro-communities around the globe. Furthermore, as Niantic and other Location-Based Games developers will be launching more games in the upcoming years, it can be useful to draw on existing research on *Pokémon Go*, *Ingress* and other Location-Based Mobile Games to frame an understanding of emergent communities of play.

While the focus of this thesis has been on the intricacies of social ecosystems and spatial experiences associated with locative play, there is still much that needs to be explored through more in-depth qualitative research. By simultaneously interviewing and playing with fifteen members of the local *Ingress* and *Pokémon Go* communities, I was able to develop a comprehensive understanding of how each player thinks about the communities with which they play and the spaces in which they play. Though experiences varied from player to player and from game to game, I found that overall, there were many more commonalities between player experiences than differences.

Throughout the process of researching and writing this thesis, many people who don't play Location-Based Games repeatedly asked me something along the lines of "isn't *Pokémon Go* dead?" While the initial 'hype' that was defined by Hjorth and Richardson as a 'cultural moment' in 2016 certainly waned, it is clear that the hardcore communities of play surrounding these 'casual' games will continuously grow and evolve for years to come.

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# Interviewee Overview

| IN-GAME NAME | GENDER | AGE | OCCUPATION | GAME | PLAY TIME PER WEEK | STARTED PLAYING | OTHER GAMES PLAYED |
|---|---|---|---|---|---|---|---|
| **Gosuu** | Male | 42 | Customer Support Agent (full-time) | Ingress | 36 hrs per week | 2016 | Pokémon Go, Harry Potter: Wizards Unite |
| **LilPatate** | Male | 36 | Engineer (full-time) | Ingress | 10 hrs per week | 2017 | Pokémon Go, Harry Potter: Wizards Unite |
| **CuttedFinger** | Female | 35 | Support for Tech Company (full-time) and also doing a Bachelors Degree in Computer and Software Engineering (part-time) | Ingress | 5-10 hrs per week | 2014 | Mobile Games (Egg Game) & Zelda on Wii |
| **LordFranklin** | Male | 64 | IT Consultant (part-time) | Ingress | 5-10 hrs per week | 2016 | None |
| **Ebyru** | Female | 30 | Currently on medical leave due to back injury | Pokémon Go | 30 hrs per week | 2016 | Some other mobile games (did not specify) |
| **R3DPUMA** | Female | 43 | Travel Agent (full-time) | Pokémon Go | 12-15 hrs per week | 2016 | None |
| **DoctorProximo** | Male | 46 | Unemployed | Pokémon Go | 10-12 hrs per week | 2017 | Mobile Games (Words with Friends, Yahtzee) |
| **BGold** | Male | 23 | Recently finished his Undergraduate Degree in Software Engineering | Pokémon Go | 60-80 hrs per week | 2016 | Fortnite & Binding of Isaac (PC) |
| **MonoAxon** | Male | 46 | Mortgage Broker (full-time) | Ingress | 5-10 hrs per week | 2015 | Mobile Games (Clash of Clans) |
| **Portalis** | Male | 31 | Business Analyst (full-time) | Ingress | 15-20 hrs per week | 2012 | Other LBMG (Pokémon Go, Harry Potter:Wizards Unite, Minecraft Earth & Orna) |
| **Oracle222** | Female | 46 | Bookkeeper (part-time) | Pokémon Go | 20 hrs per week | 2016 | None |
| **MonadoBoy** | Male | 24 | Graduate Student in Chemistry | Pokémon Go | 30 hrs per week | 2016 | Zelda, Xenoblade Chronicles and other Pokémon games (Switch) |
| **Samorrita** | Female | 49 | Clinical Research Assistant at a Hospital | Pokémon Go | 25-30 hrs per week | 2016 | None |
| **Nakon** | Male | 44 | Scriptwriter at a AAA games studio (full-time) | Pokémon Go | 5 hrs per week | 2018 | PS4 & PC games as well as other Pokémon Games on the Nintendo Switch |
| **2Floyd** | Male | 35 | Engineer in the aerospace sector (full-time) | Ingress | 10-15 hrs a week | 2015 | Mobile Games & Nintendo games |

# Glossary of Terms

## General

**Discord** —— Discord is a proprietary freeware instant messaging and VoIP application and digital distribution platform designed for creating communities ranging from gamers to education and businesses. Discord specializes in text, image, video and audio communication between users in a chat channel.

**Multi-Accounting** —— A 'grey zone' type of rule-breaking where players use more than one account simultaneously to help in gameplay. Multi-Accounting is very frowned upon in Ingress but generally accepted in Pokemon Go.

**Spoofing** —— Spoofing is a form of cheating where a player either uses a software that tricks a device's GPS into locating it elsewhere or where a player downloads a modified version of *Pokémon Go* or *Ingress* that features joystick and teleportation options. Spoofing is considered the worst form of cheating in the game.

## Pokémon Go

**Community Day (*Pokémon Go*)** —— An event that occurs one weekend day every month, where specific Pokémon spawn at a very high frequency for a three-to-five hour period. There is a much higher chance to catch a 'shiny' variant of this Pokemon and there are often special quests and other bonuses during this time as well.

**Gym** —— Gyms are in-game locations in *Pokémon Go* where players can battle the Pokémon of rival teams and claim for their own team by adding Pokémon to the gym. Like Pokéstops, Gyms have spinnable photo disks which provide players with in-game items. Players earn badges by interacting with a gym and can 'level up' their 'Gym Badge' by interacting with the gym on a recurring basis.

**IVs (Individual Values)** —— a Pokémon's base attack, defense and stamina stats.

**Lucky Pokémon** —— ‘Lucky’ is a newer form of Pokémon that can be acquired by chance or when a Pokémon is traded with an in-game ‘best friend’. A lucky Pokémon requires less resources to power up and evolve.

**Pokémon Go Fest** —— First started in 2017 in Chicago, the annual Pokémon Go Fest is a real world gathering of players who worked together to complete challenges, catch Pokémon old and new, and celebrate their love for the game.

**Pokéstop** —— An interactive photo disk corresponding to a physical location which rewards players with tasks and items.

**Regional Pokémon** —— Some Pokémon are exclusive to certain geographical regions and some may even migrate depending on events happening at the time.

**Raid** —— Raids are battles against rare, unique and/or legendary Pokémon who spawn at Gym locations temporarily. There are 4 different ‘tiers’ of raid. While players can usually do a raid alone if they are tier 1 and tier 2, the higher tiers require up to 10 players to be beaten. Due to COVID-19, as of April 2020, players can join raids remotely if they have ‘remote raid passes’ which can be purchased in-game in the Pokemon Go store.

**Safari Zone** —— The Pokémon GO Safari Zone is a recurrent, regional event that has already occurred across the world. The common feature of Safari Zone events is that players have the possibility to catch region-exclusive Pokémon that aren't "native" for the region where the event is hosted. Additionally, there is an increased spawn rate of selected Pokémon and Unown.
**Shiny Pokémon** —— A rare variant of a regular Pokémon. ‘Shiny’ refers to a rare colour of Pokémon that can be found both in the wild, in raids and through completing special research quests and weekly missions.

**Sniping** —— A gameplay style where players use 3rd party spawn maps to identify the location of rare Pokemon. The ‘sniping’ process is when players drive around to these spawn points to catch (or snipe) rare Pokemon.

**Timezone Trick** —— The timezone trick simply involves logging out of the game, changing your phone's time zone to somewhere that is already a day ahead, and logging back into the game in order to trick the game into thinking it is the next day.

## Ingress

**Control Fields** —— A Control Field is created in-game when three Portals controlled by the same faction are Linked together in a triangle to collect the primary scoring metric, Mind Units. They are shown on the map as fields of green or blue in accordance with the faction that controls them.

**Exotic Matter (XM)** —— Exotic Matter or XM is a resource collected by the Scanner and drained with most actions made with the scanner. XM is represented as glowing bluish-white dots throughout the world. XM tends to appear more around areas of high mobile phone usage, such as public transport stops and city centers. XM also appears clustered around a Portal.

**First Saturday** —— Ingress First Saturday is a cross-faction event organised and run by agents, for agents all across the world on the First Saturday of each month.

**Linking Portals** —— Links are created between Portals using the Portal Key of the distant portal. To create a link, the agent must stand within range of the portal to be linked from, select the portal to view its data, then press the "LINK" option. Upon selecting a target portal, its Portal Key is consumed, the link is established, and the AP is earned.

**Portal** —— Portals are in-game locations that can be captured, hacked, and levelled up by agents from either the Enlightened or Resistance factions. Portals generate 'exotic matter' that players can collect by interacting with, or being in proximity to portals. Portals have 8 slots in which players can place 'resonators'. Once all 8 slots are filled, portals can be linked to other portals to create fields. The color of a portal indicates which faction is in control of it: blue for the Resistance, green for the Enlightened, and grey for neutral. Moving into proximity of a portal

will allow the agent to select the portal and have access to different actions through the portal menu.

**Portal Key** —— When a player interacts with a portal by ‘hacking’ or deploying resonators, they receive a key for this portal which can be used to create links with other portals.

**The Anomaly** —— An XM Anomaly or simply Anomaly is an official event run by Niantic itself that takes place across many countries and several weeks. At each event, which generally lasts four hours, agents of both factions compete to accomplish various objectives on top of normal Ingress gameplay. The faction who scores the most total points across every event in the series wins the Anomaly, and often the Ingress storyline changes based on the anomaly events.

# Interview Questions

**Introductory Questions**

1. What is your trainer name?
2. What is your occupation?
3. What is your age?
4. How much time (approx.) do you play per week?
5. What level are you?
6. When did you start playing this game?
    a. What made you start playing?
7. What is it about the game that enticed you to keep playing?
8. Do you play any other video games? If so, what kinds?
        1. What other platforms do you play on and how much per week?
        2. Do you play any other location-based games?

**Questions about Social Dynamics**

8. Can you describe your involvement with the local *Pokémon Go/Ingress* community?
9. What kinds of relationships have you made since the launch of the game?
10. Can you describe the general dynamics of the local community?
11. What kinds of offline (real world) events have you hosted or participated in because of the game?
12. How do you coordinate with other players?
13. Have you had any very positive experiences as a result of being a member of this community?
14. Have you had any negative experiences?

**Questions about Spatial Experiences**

15. How has your daily routine changed since you started playing the game?
16. Have you visited any places that you had not previously visited because of the game?
        1. If so, where and can you describe why you visited these places?
17. Do you go out of your way to play the game? If so, how?
18. Has the amount you walk changed since you played the game?
19. Where do you play most?
20. How do seasons affect the way (or amount) you play?
21. Have you ever felt unsafe playing the game?
22. Has your relationship with the city changed since you started playing the game? i.e. do you associate certain places with in-game places?