Aalto University
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POKÉSTOPS AND OTHER SPACES OF OUR LIVES

Co-creation of Social Spatiality Through Consumption of Pokémon GO

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Anna Juselius
Aalto University School of Business
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Author Anna Jessica Juselius

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Abstract

The tremendous Pokémon GO craze got the world by surprise in July 2016. Within a couple of days this location-based mobile game gathered a record-breaking number of downloads and transformed the urban environment into a game board by driving people outside their homes to catch imaginary creatures. Combining the physical reality and imagination, this 'pervasive' game can be thought of as a new instance of digital virtual consumption (DVC) that could have an enhanced potential to simulate consumer fantasies.

While there is a decade of research on how the urban environment can be experienced differently through location-aware technologies, most of it is outdated. Furthermore, little attention has been paid to the full spectrum of social spaces following Lefebvre's (1991) triad that extends beyond behavior in the observable environment. The aim of this research is to help fill those gaps in understanding how consumers participate in the co-creation of social spaces through the next-generation location-based mobile games as a part of their daily lives. Moreover, the goal is to examine how the interface between the 'real' and the 'imaginary' is being experienced, and what kind of a role gamification plays in the equation.

The research problem is approached through qualitative research methods leaning on the philosophical assumptions of interpretivism and phenomenology, that view the world as socially constructed and only understood through one's 'being' in it. The research lies within the field of Consumer Culture Theory (CCT) that explores the dynamic interplay of consumer behavior, environment and culture through contextual, symbolic and experiential aspects of consumption. Consequently, the aim is to describe the phenomenon rather than to find an explanation for it.

The research identifies three main themes that together describe the experience of co-creating social spaces through game play. These are labelled as I) trusting the community to fill in the blanks, II) negotiation between spaces of play and duty, and III) making the most of both worlds. Together they draw a picture of a constant struggle between the player community and the game over agency in creating the experience; transformation of spaces and places through the practice of 'mapping'; un-controlled switches between spaces of nostalgia and responsibility due to loss of anonymity in the physical reality; and developing alternative game interfaces to optimally integrate the game into players' everyday spaces. Furthermore, the findings imply an emergence of a new form of gamification, where the core 'service' being gamified is, in fact, an individual life as a whole.

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Tiivistelmä

Heinäkuussa 2016 maailman sekoitti ennennäkemätön Pokémon GO -villitys. Vain muutaman päivän kuluessa julkaisustaan tämä tuore paikkatietoon perustuva mobiilipeli oli rikkonut sovelluslataus-ennätyksiä ja muuttanut kaupunkiympäristöt ympäri maailmaa pelilaudoiksi kannustamalla ihmiset kotisohviltaan ulos metsästämään animaatiohahmoja. Tämä fyysisen todellisuuden ja mielikuvituksen yhdistävä peli voidaan lukea tuoreeksi digitaalisen ja virtuaalisen kuluttamisen muodoksi, jolla voi olla erityisiä kykyjä simuloida kuluttajafantasioita todellisessa ympäristössä.

Vaikka paikkatietoon perustuvien mobiilipelien vaikutusta kuluttajan kokemukseen urbaanista ympäristöstä on tutkittu jo vuosikymmenen verran, suurinosa tästä tutkimuksesta on ehtinyt vanhentua siirryttäessä älypuhelinten aikakaudelle. Samaan aikaan Lefebvren (1991) esittämästä sosiaalisen tilan kolminaisuudesta, huomiota on annettu lähinnä käyttäytymiseen havaittavissa olevassa, fyysisessä tilassa. Tämä tutkimus pyrkiikin täydentämään ymmärrystä siitä, kuinka pelaajat osallistuvat tuottamaan 'elämiään' sosiaalisia tiloja paikkatietoon perustuvien mobiilipelien kuluttamisen kautta. Lisäksi tutkin, kuinka 'todellisuuden' ja 'kuvitteellisen' raja koetaan, ja mikä on pelillistämisen rooli tässä yhtälössä.

Tutkimus on luonteeltaan kvalitatiivinen. Se pohjautuu interpretivismin ja fenomenologian käsitykseen sosiaalisesti rakennetusta maailmasta, jota voi ymmärtää vain olemalla osa sitä. Teoreettiselta taustaltaan tutkimus kuuluu kuluttajakulttuurin tutkimuksen kenttään, joka käsittelee kuluttajan käyttäytymisen, kulttuurin ja ympäristön vuorovaikutusta symbolisen ja kokemuksellisen kuluttamisen näkökulmasta. Tutkimuksen tarkoituksena on siis tarjota kattava, subjektiivinen kuvaus ilmiosta, ottamatta kantaa siihen liittyviin syy-seuraussuhteisiin.

Tutkimuslöydökset esittelevät kolme eri teemaa, jotka kuvaavaa pelaajien kokemuksia sosiaalisen tilan rakentamisessa pelin kautta: I) yhteisöön luottaminen tilakokemuksen täydentämisessä, II) tasapainottelu vastakkaisten leikin ja vastuun tilojen välillä, ja III) kokemuksen maksimoiminen osana sekä virtuaalista että fyysistä maailmaa. Yhdessä nämä teemat luovat kuvan pelaajien jatkuvista pyrkimyksistä lisätä toimijuuttaan todellisuutensa rakentamisessa, tilojen ja paikkojen muodonmuutoksista niin sanotun 'kartoittamisen' seurauksena, tilakokemuksen nopeista vaihteluista fyysisen läsnäolon vaikuttaessa pelaajan anonymiteettiin, ja vaihtoehtoisten käyttöliittymien ja tilarajapintojen luomisesta osana pelimaailman integrointia pelaajan arkeen. Lisäksi tulokset antavat merkkejä uudesta pelillistämisen muodosta, jossa pelillistäminen kohdistuu, ei niinkään erilliseen palveluun, vaan yksilön elämään kokonaisuudessaan.

Avainsanat sosiaalisen tilan tuottamisen teoria, tilakokemus, toimijuus, digitaalinen ja virtuaalinen kuluttaminen, immersio, paikkatietoon perustuvat mobiilipelit, pelillistäminen

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To my mother and her earnest curiosity.

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1 Introduction

The overwhelming Pokémon GO craze that hit the world in July 2016 can hardly have gone unnoticed from anyone who lives in an urban environment or has any access to media. People running around phones in their hands, herding at public landmarks and even spending their nights at parks to chase and collect as many imaginary creatures as possible, became a common sight in cities, an everyday topic in discussions and a scoop after scoop in the news. After a decade of research on location-based mobile games that take the fantasy game content into the physical environment (de Souza e Silva, 2006; Licoppe & Inada, 2006), Pokémon GO is arguably the first game of its kind to touch so many lives - the total of 650 million downloads during its first nine months says it all (Turner, 2017).

Touching lives is perhaps the key here. Where there has been research on locative media as a mediator between the technology and the digital and material spaces, and its effect on human spatial practices in the physical space (Wilken, 2012), little attention has been paid to how the embedded virtuality is redefining the social spaces of our everyday lives (de Souza e Silva, 2006). Where mobility freed us from the physical limitations with the promise of "anytime, anywhere" connection and ability to organize our lives based on time rather than place (Green, 2002), is this location-specificity perhaps turning this right back around? And how much say do we have in the equation?

The research interests of this Master's Thesis (pro gradu) lie in gaining an understanding on player's participation in the co-creation of social spaces as a consumer of location-specific mobile games such as Pokémon GO.

1.1 Background and Phenomenon

"Life is a journey, not a destination." – Ralph Waldo Emerson

Due to increased appreciation for the symbolic aspects of consumption and the consequent growth in leisure and entertainment industries, consumers' everyday lives are turning into a constant search for thrill and enchantment (Firat & Venkatesh, 1995; Pine & Gilmore, 1999). This 'experience economy' (Pine & Gilmore, 1999) also characterized by the

emergence of information intensive commodities and interactive technologies has been involved in the creation of a completely new terrain of consumption: the digital virtual. Existing between the world of imagination and the material, digital virtual consumption (DVC) gives consumers new means, for instance, to actualize their fantasies through ownership of imaginary items. (Denegri-Knott & Molesworth, 2010).

While video games represent a key site for digital virtual consumption, it is also a growing market. Based on the Global Games Market report (McDonald, 2017) by Newzoo, in 2017 the games market will sum up to $108.9 billion in revenue, created by the 2.2 billion gamers worldwide. While gaming is often expected to happen in the setting of a private home, the emergence of mobile devices has made it possible for us to reach this digital virtual world anytime and anywhere (de Souza e Silva, 2006). By the time of mid-2010s, mobility has become a given in consumers' everyday lives. The GSM Association (2017) reports that 65 % of the entire world population owned a cell phone at the end of 2016, and that figure goes up to 87 % in Europe. Furthermore, half of all the mobile connections around the globe are smartphones. In this light, it is not surprising that in 2017 mobile games have grown to be a huge $46 billion market that accounts for over 40% of the total games revenues, and represents the most lucrative game segment (McDonald, 2017). This demand makes mobile games an increasingly interesting research area, not only for game studies, but also for consumer research.

Where mobility used to free people from the physical limitations and give them the ability to organize their activities around compartments of time rather than specific locations (Green, 2002), another theme has arisen to challenge this: increasing *location-specificity*. The development of Internet connection and GPS capabilities in cell phones has enabled the creation of communication media that is attached to a certain physical location (Wilken, 2012) as well as the category of 'pervasive games' that extend the game experience outside of private homes (Deterding, et al., 2011), turn the urban environment into the game board (de Souza e Silva, 2006) and facilitate encounters between people living in the same area (Belk, 2013). Consequently, new types of linkages between the online and offline spaces are emerging and worth exploring (Belk, 2013).

The early studies shedding the first beams of light into how life in urban spaces could be experienced differently through location based mobile technologies (de Souza e Silva, 2006;

Licoppe & Inada, 2006) take place more than a decade ago – before the era of smartphones. While, characteristically to location-based mobile games (LBMGs) real-life social encounters were encouraged, at the same time game interfaces, graphics and functionalities were all brutally simple compared to what we nowadays expect from games operating on smartphones. For example, in a game called 'Mogi' direct on-the-go communication between users was restricted to text messaging, while the live chat feature was only available via Internet access on a stationary PC. (Licoppe & Inada, 2006). This exemplifies how not only the technology, but also the user experience of mobile and pervasive games has drastically developed since. Another, more recent research conducted by Frith (2013) within Mobile, Media and Communication studies states that particularly location-aware games influence how individuals experience their environments thanks to the gamification elements in them.

So far, the existing research combining smartphone-operated location based applications and spatiality seems to have focused on the spatial practices in the observable world, such as awareness of surroundings (Gazzard, 2011), decisions on where to go (Frith, 2013), and which mode of transport to choose (Licoppe & Inada, 2006). Instead, little attention has been paid to users' understanding of the spaces they socially construct, the interface between the 'real' and the 'imaginary' and the meanings that this embedded virtuality has in redefining the spaces of their everyday lives (de Souza e Silva, 2006). In this light, the social theory of space, that relies on Lefebvre's (Lefebvre, 1991) thoughts of space and place as a combination of perceived, conceived and lived spaces, strikes as an interesting avenue to revisit within the mobile gaming context.

On top of shedding light into the social realities we construct through consumption of pervasive games, my research aims to build on the existing gamification research. The current literature on gamification would not automatically classify LBMGs as 'gamified applications' as they are often games at core. However, both accepted definitions (Deterding, et al., 2011; Huotari & Hamari, 2012) leave room for subjective perception and socially developed practices and norms. I will therefore investigate this application that is fundamentally a game but seems to develop such meanings that one might argue that it imposes gamification on the whole of our daily lives.

1.2 Research Context

What makes Pokémon GO an especially interesting and topical context for the study, is the sudden worldwide boom that followed its release on July 6, 2016. Within two days, this location based mobile game had already been installed on a bigger percentage of all Android devices in the U.S. (over 5 %) than for example the mobile dating app Tinder (slightly over 2 %) (Schwartz, 2016). After a week, Pokémon GO had gathered more first-week downloads in the Apple App Store than any other application in the history (Dillet, 2016). The hype quickly caught fire outside the U.S. borders too. People in countries where Pokémon GO was still pending release barged in masses to apkmirror.com in wishes to bypass the official app stores and get their hands on the game. The number of visits to the site skyrocketed from 600,000 visits on July 5 to over four million the following day, out of which 49.9 % of the traffic came from outside U.S. (Schwartz, 2016).

According to Bloomberg (Turner, 2017) by the beginning of March 2017 the app had been downloaded a staggering total of 650 million times. Although the monthly active user figures dropped substantially within the first few months after the launch, in October 2016 Pokémon GO was still massive compared to other top performing games, such as Candy Crush Saga and Clash of Clans. Despite the huge drop in absolute numbers, the statistics show that the game's weekly retention rate was still impressive, settling to the same levels with the games at the top of the "league" (Sonders, 2016).

1.2.1 Basic Idea of Pokémon GO

Pokémon GO app builds on the intellectual property of the long successful Pokémon franchise owned by Nintendo and the Pokémon Company Group (Takahashi, 2015). The animated fantasy creatures called Pokémon have enchanted children for 20 years since the beginning of the Pokémon phenomenon in 1996 (The Pokémon Company, 2017a). The portfolio of Pokémon products spans video games, TV series, movies, the Pokémon Trading Card Game, toys – you name it. The first of the video games was published as early as in 1998 for Nintendo Game Boy, and the card game that hit the market a year after, has sold a staggering 21 billion cards since (Takahashi, 2015). Most Pokémon games share the same setting: the player assumes a role of a young Pokémon trainer who is on a quest to collect

as many Pokémon as possible – as encouraged by the slogan "Gotta catch 'em all!" – train them and combat others to become a champion. (The Pokémon Company, 2017b).

Pokémon GO mobile game is one of the latest additions to the Pokémon product family. While the Pokémon games have traditionally supported only Nintendo systems including the Nintendo 3DS and Wii U console (The Pokémon Company, 2017b), Pokémon GO functions on iPhone and Android mobile devices (The Pokémon Company, 2017c). The storyline of the game remains the same as in other game platforms, but instead of a fantasy environment, Pokémon GO takes place in actual real-life locations all around the world. The app encourages players to leave the house and explore their surroundings to encounter the creatures, hatch their eggs (see *Appendix 1* for Glossary) by covering certain distances on foot, search so called PokéStops around important monuments for a variety of useful in-game items, and earn the reign of so called 'Gyms'. (The Pokémon Company, 2017b). In fact, the game's creators (Niantic, 2016) reveal that within its first 5 months in the market Pokémon GO encouraged its players – referred to as 'trainers' – to walk a combined 8,7 billion kilometers, which equals more than 200.000 round trips around the globe.

1.2.2 Technology Behind the Game

Location-based mobile games (LBMGs) are games that take a physical space and enrich the experience in it with digital game-like elements (Frith, 2013). In Pokémon GO the physical space is portrayed on the screen of a mobile device in the form of a simplified map of the immediate surroundings. The map draws the networks of streets, roads and paths as they are situated in the real-life environment around the mobile user, and adds on top a layer of different in-game elements and places of interest, such as Pokémon, PokéStops and Gyms, with the aim to show their relation to the real-life locations.

What makes Pokémon Go interesting in this location aware category of games is that it incorporates augmented reality features. Augmented reality (AR), then again, is a technology that visually alters the surrounding physical reality by embedding virtual content into the environment in real time (Azuma, et al., 2001). In Pokémon GO, turning on the camera of the device makes it possible for the player to see the Pokémon in the real environment (The Pokémon Company, 2017b). According to industry experts, Pokémon GO has been an important breakthrough for AR among mainstream consumers, partly

thanks to it being accessible without extra equipment other than your smartphone (Wingfield & Isaac, 2016).

Although Pokémon GO represents a new type of mobile games, the technology behind it is not unique. The game is a creation of a game studio called Niantic, that used to be an internal startup of Google, but is nowadays in the shared ownership of Google, Nintendo and The Pokémon Company together. In fact, Niantic's previous game *Ingress* that builds on Google's digital mapping capabilities (Wingfield & Isaac, 2016) has been in an important role paving the way for Pokémon GO's game design (Takahashi, 2015). However, Ingress never became as big of a success in the market as its successor.

1.3 Research Objectives

Although being a location-specific augmented reality application, Pokémon GO is not only about offering its consumers with a visually enriched representation of the physical environment. Due to being a game, it employs a variety of elements that are supposed to challenge the user – in the physical environment, as is characteristic to location-based mobile games (LBMGs) in general (de Souza e Silva, 2006). In this myriad of game elements and mechanics (see Appendix 1) the co-creation of space with the player can be expected to become a relatively complex and evolving process. For example, the way to express distance and proximity to in-game objects on the Pokémon GO map has evolved several times before the game's first birthday. One could expect, that the co-creation happens within a mix of heterogeneous physical, technological and social elements, and can be revealed through understanding the *lived experience* of playing the game.

The aim of the research is to understand the co-creation of social spaces through the consumption of the location-based mobile game Pokémon GO as a part of the players' daily lives. Following Lefebvre's (1991) triad which is introduced in the Literature Review section of this document, this involves touching upon Spatial practice (perceived spaces), Representations of space (conceived spaces) and Representational spaces (lived spaces). Moreover, I hope to shed light into the dynamics of agency as a part of the construction process, and ultimately, explore if gamification plays a role in the process. The primary research question is formulated as follows:

1. *How do players participate in the co-creation of their everyday spaces in negotiation with the game mechanics of Pokémon GO?*

The primary question is answered in the Findings and Interpretations part of this document. The thorough investigation of the main research question is supported by the following sub-questions:

   a. *What are the spaces the players experience in their daily lives with Pokémon GO?*
   b. *How do players experience agency and structure in the co-creation of those spaces?*

The main research problem will be accompanied by a secondary research question that will be explored in the Discussion part of this Thesis:

2. *How is gamification present in the creation of our everyday spaces?*

The study lies within and contributes to the field of Consumer Culture Theory (CCT) that examines the dynamic interplay of consumer behavior, environment and culture and considers the contextual, symbolic and experiential aspects of consumption throughout the consumption cycle. It adopts the view of existing CCT research that sees reality as socially constructed by nature, and consumption as way for consumers to experience the variety of realities around them. (Arnould & Thompson, 2005). Consequently, the study is interested in understanding the phenomenon, rather than finding an explanation to it, and is carried out using qualitative research methods. Additionally, the study leans on research in the fields of social theory of space and place, Digital Virtual Consumption (DVC), mobile media and communication studies, game studies and gamification.

The following section represents a literature review summarizing this relevant theoretical background for the study. The focus is first given to theories of spatiality in social research, and then to literature around Digital Virtual Consumption (DVC), mobile gaming and spatial research conducted in that sphere, as well as gamification.

2 Literature Review

The purpose of this section is to give a thorough yet not exhaustive overview of previous research conducted in fields relevant to my study. The section is split in four chapters each of which adds on top of the previous ones building a story flow that should aid the reader to get a good grasp of the phenomena. The first two parts will look at the literature on space and place from the sociology point of view, starting with the historical foundations of the theory and continuing with themes that have shaped spatiality in the digital era. The third chapter dives into the Digital Virtual Consumption exploring areas such as immersion, consumption of fantasy and consumer identity in spaces that combine the material and imaginative worlds. The last chapter looks at the relevant technologies of location-specific gaming and augmented reality, and briefly summarizes existing research related to spatiality in those fields. The literature review concludes in an introduction of gamification.

2.1 Social theory of Space and Place

In the following, I will first introduce the foundational spatial theory, including an overview of the historical development of the theories, introduction to the ground-breaking triad model by Lefebvre and a dive into several themes related to understanding the socially constructed space.

2.1.1 Foundations for the Socio-Spatial Dialectic

The importance of place, spanning both functional and existential qualities, was for long inadequately included in attempts to define the concept of place and examine its nature. While future advances in neurological research were hoped to give input into the matter, geographers themselves relied on intuition and used the term 'place' interchangeably with concepts of 'region', 'area' and 'location'. This further built on the common confusion of the definition. (Relph, 1976, p. 3). It was only in the 1970s when the idea was introduced, that perhaps the science of geography alone was unable to cover the entire spectrum of experiences that are in play when we humans know and construct places.

Lefebvre's book "*The Production of Space*", published originally in French in 1974 and later in English in 1991, was ground-breaking in the development of socio-spatial theory.

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Per Soja (1996, p. 11), Lefebvre's work was the first one in decades to look past the dual mode of spatial thinking that had grown dominant among the prevailing spatial theories. The dual model traditionally identified two modes of space: the concrete, material forms, often referred to as the "real", and the cognitive ideas about space, thought of as the "imagined". While Lefebvre recognizes two spaces – the perceived space and the conceived space – that correspond rather well to the ones expressed by the duality, he adds on top a third, lived space, that is basically a blend of the two. What essentially Lefebvre was interested in understanding is a *logico-epistemological space* that brings together the fields of the physical, the mental and the social. This space serves as a context for social practices and sensory experiences, as well as symbols and utopia that rely on imagination. (Lefebvre, 1991, p. 11)

Soja (1996, p. 11) calls this new-found awareness "Thirdspace" deriving it from what he calls "thirding-as-Othering" type of thinking about space. Although the term "thirding" might suggest otherwise, Soja emphasizes that the theory is not meant to arrive to a holy trinity replacing the earlier dualism, but to cumulatively build on what is currently known. Referring to it as "cumulative trialectics", each new approximation should deepen the understanding. (Soja, 1996, p. 61).

The idea about the trialectics of spatiality rely on Lefebvre's underlying idea of the trialectics of being. The ontological trialectics are about adding spatiality (the social production of space) into the company of sociality (being) and historicality (time) that traditionally formed the model for knowledge formation (see *Figure 1*). Instead of one historicality-sociality field of inquiry, the universe increased with two more: the socio-spatial dialectic (spatiality-sociality) and the complicated relationship between time and space (spatiality-historicality). This exemplifies how the corners of the trialectics don't exist in isolation of each other. (Soja, 1996, p. 72).

As a part of his own reformulation of Lefebvre's thoughts on spatiality, Soja (1996) refers to the concept of "the Aleph", a place of all places, that he ran into in a story by Jorge Luis Borges. Like the Aleph, Soja's Thirdspace brings everything together: the reality and the imagination, the concrete and the immaterial, the bodily and the mental, the everyday life and the everlasting history. He believes that exploring beyond what is known and relying on approximations is the only way to attempt to understand the complexities of modern life

through the lenses of the (social) production of (social) spatiality - an approach Lefebvre was the first to try (Soja, 1996, p. 57).
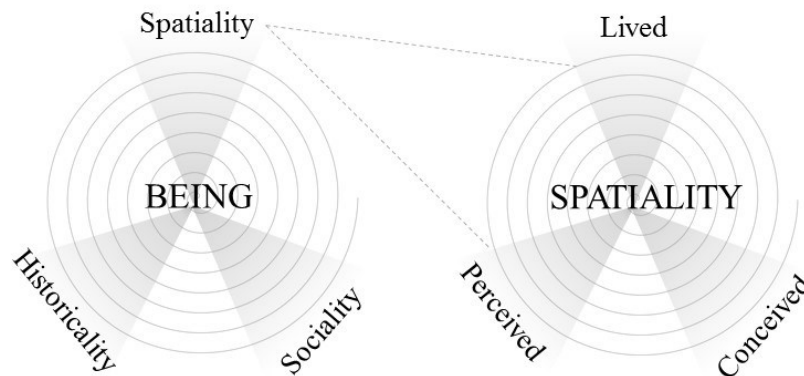
Figure 1: The Trialectics of Being and Spatiality (adapted from Soja, 1996, p. 71-74)

Foucault (1986), too, builds on the idea of thirding, although from a slightly different perspective. In comparison to Lefebvre's lived spaces, Foucault refers to "heterotopias": the surrounding space that "draws us out of ourselves", in which our time, lives and history get consumed. His greatest contribution to the discussion is, in fact, the relations he builds between spatiality and the historical imaginations, between the concepts of space and time. He ponders why space has traditionally been perceived as rigid, immovable and even dead, while time has been linked to fertility, dialectics, and essentially life. (Soja, 1996, p. 15).

2.1.2 Lefebvre's Three Moments of Social Space

One of Lefebvre's (1991, p. 36-38) key pillars is that space is a social product. As introduced above, his trialectic of space consists of "three moments of social space": Spatial practice (perceived space), Representations of Space (conceived space) and Spaces of Representation (lived space). As elaborated by Soja (1996, p. 10, 65), the first of the three is the most traditional sense of space in spatial literature. This space of *spatial practice* is both the context as well as the outcome of human activity. Described as the perceived space, it is very much material, experienced through the body and senses, yet socially produced. This physical nature of the spatial practices make it a space that is rather simple to accurately measure. Spatial practices can be perceived in the urban life through architecture, city planning and networks of streets and roads, for instance (Lefebvre, 1991, p. 413-414).

The *Representations of space*, then again, is a conceptual space conceived through language, discourse and text. It relies on systems of signs and codes that become socially interpreted. Therefore, such spaces house a complicated interplay of different representations of power, control and ideology. (Lefebvre, 1991, p. 38) In practice, representations of spaces often involve portraying a three-dimensional reality in two dimensions and refers to any graphic representations, drawings, maps, plans (p. 258) or, on another note, transportation and communications systems (p. 233). As the representations of space are also a playground for imagination, Lefebvre describes them as spaces of planners and scientific-minded artists. On the other hand, he claims them to have a dominant role in the society. (p. 38).

The Representational Spaces (or the Spaces of Representation, as translated by Soja, 1996) is both its own entirety as well as a space containing all real and imagined spaces mentioned before. Such a space is lived and inhabited, both by its "users" as well as so called "artists". It is very much abstract and experienced through symbols and images, that overlay physical objects transforming their meanings. Therefore, imagination plays an important role in making sense of this space and shaping it. (Lefebvre, 1991, p. 39)

2.1.3 Foundation in the Bodily Experience

Although Lefebvre's (1991) theory is based on the idea that "(social) space is a (social) product" (p. 26), he assigns special importance on the experience of the body, over that of the mind (p. 40). Per him, the layers that the senses create within the body reflect the layers the social space constitutes of (p. 405). Malpas (1999), too, wants to emphasize that the idea of social space should not be taken too far, so that place and space become mere social constructions. In addition to sociality – including its social institutions and social activities – the concepts of space and place cover the concrete elements of the world. Without that material foundation, nothing social can exist. (p. 36).

Per Malpas (1999, p. 45), any creature that is capable of movement, must be to some extent aware of its relation to the surrounding environment in terms of orientation and location. This 'grasp' of space is dependent on creature's motor, sensory and cognitive capabilities - ultimately the bodily experience. What Malpas calls the "subjective space" is then a construct of creature's own involvement with the space. In addition to being able to perceive one's own relation to the surroundings, it includes having a grasp of the causality of one's

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own abilities to act within the environment (p. 51). Then again, the so called "objective space" goes beyond one's own or any other creature's immediate, past and future experiences of space (p. 66).

The key proposition of Malpas' (1999) work is that human existence - with human mind and experience in particular - can only be made sense of through understanding spatiality. If that theory holds, it would suggest that the study of mind is the equivalent of the study of space (p. 16). However, what is key in the linkage between space and experience is not that place only lives *in* experience, but that it is *vital* for both the creation and structure of experience (p. 31) Throughout his book, Malpas uses the term "experience" in the broad sense of human abilities to think, feel and act that compose human existence.

Around the same time that Lefebvre was working on his renown theory, also Relph's (1976) thoughts on space and place touch upon the role of bodily experience. To avoid getting tangled in the at-that-time unresolved debates on the nature of the space, he prefers mapping different forms of spaces on a simplifying continuum between immediate experience and abstract thought. On one end of the continuum he identifies three forms of space that are based on a direct, instinctive and bodily experiences: *pragmatic space, perceptual space* and *existential space*. In comparison, the forms situated on the other end are more impalpable, mental and ideal. These he calls *planning space, cognitive space* and *abstract space*. (Relph 1976, p. 8). There is a loose connection to be found to Lefebvre's spatial theory.

Relph's (1976) *pragmatic or primitive space* refers to an organic space where certain vital needs can be met and functions performed, but of which there are no mental image. This space begins to form unselfconsciously in the infancy through basic individual bodily and sensory experiences of e.g. dimensions. The concepts of space and place cannot be easily distinguished. (p. 8). *Perceptual space* is clearly structured as it is related to practices and action, yet also includes the fleeting emotional responses to common landscapes that one encounters. Therefore, although such a space is personal, it is not isolated within the individual (p. 10). The *existential space,* also described as the lived-space, is the constantly evolving spatial structure that is grounded in culture and that we daily experience as members of that cultural and social community (p. 12). Moreover, an *architectural space* or a *planning space* involves deliberate creation of spaces focusing on the imaginative

experience of space (p. 22). *Cognitive space* is an abstract, neutral and uniform construct of space that can be portrayed through geometry, maps and coordinates. In comparison, the *abstract space* is also a space of logical relations yet free from the constraints of what is possible. It is a product of human imagination and, therefore, cannot spur concrete sensory experiences. (p. 24).

2.1.4 Overlapping Concepts of Space and Place

Although spatiality has its roots in the experiencing body, one should not let it mislead from the path of socio-spatial dialectic. While space *per se* could be primevally formed, it is organized and given meaning to through *social* experience and interpretation (Soja, 1989, p. 79). As an example, the exaggerated focus on the 'physical extension' aspect of space assumed in the Cartesian and Newtonian considerations of spatiality in the past ended up having long-spanning consequences to the Western idea of space. Due to the overemphasis on the physical context, the space became considered as a 'void' or a 'container'. (Malpas, 1999, p. 26). Since then, the general opinion seems to have shifted back to what Lefebvre (1991, p. 86) and Relph (1976) argue: that neither spaces nor places should be viewed as containers that are separate from what happens within.

Similarly, "place" has often been waved off as a simple and secondary concept compared to "space", leading again to an unnecessarily narrow understanding of place (Malpas, 1999, p. 28). On the other hand, some researchers such as Harrison and Dourish (1996) have seen 'space' merely as a pre-given, physical or even mathematical structure and have given 'place' the status of a sociocultural construct. Then how are those two concepts to be understood and differentiated based on the socio-spatial theory?

Only in the English language the terms 'space' and 'place' acquire a wide range of different meanings. The definitions around place seem to culminate to two contrary views: one that perceives place merely as a specific spot on the map, and the other as a certain locale that is inhabited by something. The latter definition always assumes a certain dimensionality – basically a certain space. (Malpas, 1999, p. 22). On the other hand, space is described as either a physical or impalpable 'room', or an extension, which also entails the notion of dimensionality (p. 23). Therefore, the temptation to define these two in separation to each other is impossible, and should not be aspired (p. 25).

To Relph (1976, p. 8), space serves as a context for places, but the meaning attached is attributed to and derived from specific places. This tight interlinkage and engagement that he finds in-between the concepts of space and place is exactly, what is especially notable in his theory. In comparison, many geographers who do talk about both concepts, treat them as separate constructs or refrain from commenting on their conceptual linkage. To Relph (1976, p. 26), places are those aspects of the surrounding space that stand out due to their ability to evoke and focus human intentions, attitudes, purposes and experiences. Therefore, the meaning of space is formed through the immediate experience of the (especially existential and perceptual) places we inhabit, which, then again, are understood through their spatial context. This supports the phenomenological understanding of places as a foundation for experience. As people are in an active role in their construction, places become important reflections of human culture and even individual identities (Gruenewald, 2003).

In his mid-00s work Dourish (2006) reformulates his idea about the relations of space and place, and this time, acknowledges both as products of social practice. However, his theory follows a slightly different system to the others presented. Where place addresses how social and cultural foundations affect our interpretations, and direct our behavior in certain bound locations, spatiality, then again, refers to our understanding of the structure that links together all the places we run across. To be noted is that his definition reflects some of de Certeau's (1984, p. 117) thoughts that see space mostly as a 'practiced place', the area we move through. It seems that Dourish (2006) still ignores the trialectics of social spatiality and ends up mostly relying on the container aspect of space.

Lefebvre (1991, p. 86) also points out that 'social space' is not in fact one space but a myriad of them. These countless spaces overlap, permeate and contain each other, and are intertwined through networks and relationships - such as the global communication and information networks. Malpas (1999, p. 34), argues that the same goes for places, which makes it possible to dive deeper into a place to find other places within.

2.1.5 Identity of and with Places

"It is, indeed, in and through place that the world presents itself." (Malpas, 1999, p. 15)

Summarizing from the discussion above, places can be thought of as spaces with identity, settings for events that are important and memorable for an individual and/or community. They are by no means neutral to social norms, rules, values and culture that characterize the space they form in. (Burbules, 2004).

This concept of identity of a place refers to an enduring uniformity and sameness that makes it possible for the place to be differentiated from others alike. It is composed of three elements: the physical setting, observable activities and the meanings they carry for people experiencing them. (Relph, 1976, p. 47). Based on Relph's (1976) view, in addition to the persistent identity *of* a place, it is possible for a person or a group to have an identity *with* that place while experiencing it either from the inside or the outside (p. 45).

The thought that human identity could be tightly connected to a certain place, is in no way new. For example, some pre-modern cultures, such as the Aboriginals in Australia and the Maori in New Zealand share a belief that life cannot be separated from land and, therefore, hold a very intimate relationship to locality. (Malpas, 1999, p. 2). Similarly, a wide range of poets and artists through the course of years have portrayed human life as life of a locale (p. 6). Malpas (p. 7) himself refuses to think that these examples could be dismissed as mere metaphoric constructs or with everyday psychology.

As discussed, the environment around us reflects not only our practical abilities to shape it, but also aspects defined by our culture and society - everything from needs to interests and dreams. However, the relationship is not a one-way street: the environment, too, has its ways to influence human beings. Although it can directly affect our activities and thoughts, e.g. in a decision about where and when it is best to grow crops, its more comprehensive yet less obvious ways are carved into how we relate to the surroundings through our own affectivity. (Malpas, 1999, p. 1).

Relph (1976, p. 49) uses the concept of "insideness" to describe the level of involvement and affection for a specific place. The more at ease, safe and enclosed one feels in a place - compared to e.g. stressed, insecure or alienated - the more identity one is likely to share with

that place. The strongest form of insideness, characterized by profound and unselfconscious immersion in a place is called existential insideness, whereas the opposite, existential outsideness is related to a complete disconnection from all places (p. 50).

2.1.6 Structure and Agency in Construction of Space

As the concept pair of insideness and outsideness mentioned in the previous paragraph are truly meaningful to individual lives, Relph regards it as the one central lived structure of space. This makes a pioneering idea in understanding spatiality. In his interest in how place establishes a structure that allows experiencing in the first place, Malpas (1999, p. 71) dives deeper into how human thoughts, experiences, and consequently subjectivity form.

Per Malpas (1999), individual's mental states are always tied to certain degree of rationality and consistency (p. 90). However, perception is always involved in a process where non-mental events spur mental events on a purely causal and non-rational basis. Despite that the causal influences generally "*reflect our integrated location and operation in the world*", they can sometimes create anomalies that affect our physical integration and temper with our senses. Similarly, abnormalities can exist in our experience of self and space. Examples of such include 'false memories', that collide with the factual knowledge of past events, as well as visual illusions, where one is able to see something that doesn't actually exist in that locale. In both cases the human mind is under pressure to align these experiences with the existing set of experiences. (p. 85).

Drawing on examples of memories, Malpas (1999, p. 105) simplifies the definition of spatiality into a "*form of dimensionality that allows the simultaneous presentation (the 'co-presence') of distinct elements*", that is critical for the recollection of complex memories. In contrast to common conceptions, memory seems to be as tightly connected to place as it is to time. This linkage between spatiality and memory would also suggest that memory is closely connected to the body, from which follows that embodiment is in relation to mentality (p. 107).

In his examinations, Malpas (1999) comes to one sub-conclusion that subjective spatiality is not built on an independent and underlying self, but is already included in the essence of the subject itself. What then makes it possible to have a self or a uniform subjective space

in the first place, is activity. Similarly, Merleau-Ponty (1962) recognizes that embodiment is not only about having a bodily structure, but being able to act. Having any mental state, such as a belief, then requires – when expressed in a provocative manner – possession of embodied oriented *agency*, simply translated as a capacity for organized and complicated movement. Showcasing this with an example on London taxi drivers who need to develop an understanding of the complex system of not only the streets but of movement in the city, Malpas (1999, p. 136) argues that the ability to navigate and move is crucial for acquiring a conception of the spatio-temporal structure of the world.

Thrift's(1996) work on "*Spatial formations*" also dives into the human agency, one of the components essential to social action. For Thrift, the conception of human agency - as well as social science as a whole - is held captive by the over-the-board rationalism that views humans as rational beings amid a theoretical world. He identifies three defects or shortcomings in many of the current views. The first one is especially that of associating human mind with computer-like, cold, hard reasoning that calculates proper courses of action to external stimuli. Secondly, theories tend to relieve the human agents from their moral responsibility. Although there might be constraints to what kind judgements people can make, in general they both follow and make rules, face pressure from peers and make their own evaluations. The third shortcoming, that Thrift relates to Marxist and neo-Marxist account of social action, reduces humans to members of certain categorizations, such as ideology. The strictest take on this leaves no room for acknowledging the creativity of human agents. (p. 126)

Despite these defects, Thrift (1996) is pleased to note a developing consensus on the nature of human agent. The first of what he calls 'prescriptions' for that new understanding states that human agents are to be regarded as contextual, they inhabit pockets of space and time, and are not universals. Everything in this culminates to contextuality that is created through action rather than reflection. Instead of being passive environments these contexts assemble dynamic networks of people and objects that all take part in action in the given social situation. (p. 128). Secondly, language is not to be dismissed as a static representation or a system to verbalize experience, but as an operator. Lastly, whereas spaces are socially constructed, human agents are *socially constructing*. This means that they continuously

create new meanings for themselves, others and the social institutions they interact with. (p. 129).

Lefebvre (1991), too, acknowledges the role of action and agency. His view that spatiality is not only reflective of social relationships but has an equal ability to react on them as the social has on space, was a bold suggestion compared to the prevailing theory of its time. The view was not always welcomed with open arms, but received opposition from a variety of critics. Most of the critique stems from a refusal to believe that space could have any transformational power over the mode of production, which led the counter arguments to resembling to great extent those of traditional historicism of Marxism. (Soja 1989, p. 80)

As Thrift (1996, p. 134) states, "*humans are story-telling animals*". By this he seems to be referring to the fact that agents use language and discourse to produce space. What he himself calls "the discursive model" – also known as the constructionist or constructivist approach – to human agency is developed around five key discursive elements: person, self, account, folk model and intention. 'Person' refers to the social and discursive way through which one learns to be a person over the course of time, starting from infancy. Similarly, the 'self' is constructed through narrations and 'accounts' as in explanations given to both one's own and other's action, which involves a continuous process of self-monitoring. Based on these accounts developed in joint action, a human can develop an idea of the world outside of their immediate environment, referred to as a 'folk model'. (p. 131)

2.1.7 Transforming Spaces into Places

An important aspect of social place is that it exists in time. Places emerge from spaces, cease and transform as the meanings they are constructed on change over the course of time. This transformation of a place happens through activities performed in a shared social space by active human agents. Based on the argumentation of Burbules (2004), places can emerge from amidst of space through two different processes: mapping and architecture. The following give an overview of these two methods.

Mapping refers to creation of an illustration that portrays the space, situates important sites of activity in it, and facilitates movement among them (Burbules, 2004). Using Lefebvre's (1991) terminology, this is about constructing representations of space that picture different

representational spaces, such as transportation and communication systems through a set of signs laid out, for example, in the form of a map. This kind of a 'map' (used for any other representation of space) can never be fully identical to the space itself as that would make it a clone which would not serve its purpose as a simplification of the reality. This need to carefully select the points the map wants to communicate transforms this visual adaptation of the space into a place. (Burbules, 2004)

Maps can also be formed around patterns of use. Offline examples of such maps could include a system of paths that have appeared across the lawns of a public park when the preferred routes in the area don't follow the predetermined sand tracks. This follows the same principle as any kind of a map, but also highlights how maps, too, can influence the spaces they portray. In the digital spaces of e-commerce sites this has been taken advantage of by presenting visitors with a navigator with the most frequently visited pages to guide their use of the space. (Burbules, 2004)

Burbules (2004) concludes: "a map does two things at once: marks significant places; and it makes places significant by marking them". Furthermore, he finds that mapping is a practice that captures our immersion in the space. It makes the human involvement in the space apparent through a system of signs and places of interest; it provides a challenge to discover ways to navigate the space and, thus, feeds interest; it gives its creator certain freedom of interpretation and decision over what should be included and how that information should be organized; and lastly, it can be characterized as interaction as it has the power influence the space it represents by turning it into a place. This immersion has a tight linkage to virtuality as will be explained further on in the Literature Review.

The other way that places can emerge from spaces is through structuring and organizing it with architecture. In the context of social space, this does not only refer to architecture in its everyday sense, as in buildings, bridges and physical infrastructure of that kind. Rather, it includes structures set by language, established practices and, for example, games developed around the space. Whereas mapping created places through describing spaces in a new way, architecture molds the space. As a social element itself, architecture is practically never finished as it evolves as we inhabit the space and place. (Burbules, 2004)

2.2 Spatiality in the Digital Age

In the very beginning of his book, Soja (1996) claims that understanding spatiality has never been this relevant both in practical and political sense. Example-wise he mentions that electronic media is beginning to shape our everyday lives. What is worthwhile to notice is that that statement was made already 20 years ago, and since then, the importance of the topic should not have shown any downward trends – but quite the opposite. In the following chapter I will explore how our understanding of spatiality and spaces around us has developed as virtual and material environments have become more intertwined on both sides of the turn to the digital era.

2.2.1 Disappearance of Space

What has happened to the environment over a course of a long time, is that it has become more created, more manufactured (Thrift, 1996, p. 260). The same was noted by Relph (1976) already in the 70s. Being familiar with the notions of authenticity and inauthenticity used in phenomenology, he acknowledges that being created doesn't make a sense of place automatically inauthentic, as not immediate, ingenuine and bound by stereotypes. However, his has voiced concerns of a modern trend of the authentic sense of space increasingly becoming threatened by "*placelessness*".

Considering place to have a key role in a human's existence in the world, Relph (1976) describes placelessness as a disappearance of "distinct and diverse experiences and identities of places" that serve as important contexts for our lives. He views this to be a result of insensitivity and ignorance towards the importance of space (p. 143). He argues, that the phenomenon emerges from *kitch* – lack of critical thinking and standing up to mass values (p. 82), or technique – planning focused on efficiency and standardization above all (p. 89) – that both become palpable through processes of mass communication, mass culture and central authority.

While this was before the time of digitalization, similar reflections are to be found from both sides of the turn of the millennium. Per Thrift (1996), the concept of place was becoming compromised in the world of in-betweenness. By this he means that places are showing signs of turning into stages of intensity and passages of movement and circulation. The same

idea is apparent in Castells (2004) work. He states, that today's urban environments face the rivalling logics of two forms of space: the space of flows and space of places. While the space of places puts locality in the center of experience and activity, the space of flows electronically organizes locations, activities and actors in interactive networks around specific geographical contexts. This tension both contributes to creating spatial structure but simultaneously demolishes it piece by piece. (Castells, 2004, p. 85). In his work on super modernity, Augé (1995) discusses that one instance of a structural change might be that urban places turn into 'hypermodern' 'non-places'. Question is, how categories such as subject, the body and the place, that have previously been considered as fixed both temporally and spatially, are grasped in a world of continuous mobility? (Thrift, 1996, p. 288)

2.2.2 Blending Boundary between Man and Machine

Another phenomenon that has its roots in the environment being modified over the course of history, is a significant shift in the field of human experience: the development of a so called 'cyborg culture'. Originally defined by (Haraway, 1985), the concept refers to a new type of a culture that involves foregrounding codes, binds together aspects of material reality and imagination, and blurs the distinction between man and machine (Thrift, 1996, p. 260). What Thrift (1996) suggests is that this has led to a world where everything from subjects and selves to times and spaces is "almost/not quite". Into the center of Thrift's examination also rises 'mobility', a trope he uses to describe the new realm for experience that develops from meaning horizons related to machines.

The intellectual project that Thrift (1996, p. 260) calls 'mobility' also has its roots in the environment that has become more and more manufactured. This transformation has fed the growing dissatisfaction towards science, which becomes visible through an emphasized connection to the nature, newfound solidarity towards all life on the planet, and increasing awareness of our own bodies as something we can improve. At the same time, machines have adopted the role of a partner or an ally - although an unruly one - rather than one of a threat or a tool. Additionally, non-humans can now act as subjects, that was previously regarded only as a human condition (p. 262).

Thrift (1996) crystallizes mobility with three different "machinic complexes": speed, light and power. 'Machinic complexes' here refer to groupings of technologies and surrounding institutions, that become modernized and change meanings in certain intervals. The following is a brief description on how these three have manifested themselves since their first sparks in the 19th century all the way to late 20th century.

In 19th century, *speed* represented itself as a string of technical advances in means of transportation and communication. This 'great acceleration' expanded the consciousness of space and time. Paying more attention to time, travel and communication becoming faster paced, and the emerging social practice of travelling contributed to the shrinking of space. However, at the same time cities often grew size and could have been experienced as boundless rather than as spatially diminished (p.309). In addition, there was a change in perception of subjectivity towards regarding body as any other good: anonymous and transferable from point a to b. (p. 266).

For the machinic complex of *light* the turning point was somewhere amidst the turn of 18th and 19th centuries when the invention of electric lighting made artificial lighting less of a scarce resource. This had several major consequences. First, for the first time ever night became thought of as a time of activity and was put into use. When human practices started to develop around the use of night time the concept of 'night life' was born. Light also had a significance spatially through the development of a new type of a consumption that was centered around being, and took place in hotels, cafes and theaters, for example. The experience in these new urban spaces relied on visuality throughout the day and, therefore, counted on artificial lighting. (Thrift, 1996, p. 267-270). Like the other two, also the development of electrical *power* spurred major shifts. Firstly, it, too, had an impact on the sense of time and space. Power lit the idea of so called absent presence, geography that revolved around communication but didn't require an actual transport (Thrift, 1996, p. 275).

Coming to the late 20th century, the most drastic changes have been in the machinic complexed of light and power. The field of light has experienced a complete transformation to virtuality. This has entailed the introduction of computerized graphic design and animation, flight simulators, robotic image recognition, virtual reality technologies, and so on, as collected into a non-exhaustive list by Thrift (1996, p. 280). Borrowing the term from Virilio (1994), Thrift (1996) refers to 'automation of perception', consequences of which

are many. Firstly, they separate vision from the human observer and his concrete position in the 'real' environment (p. 280). In relation to this, the subject and technology relationship cannot no longer be described as that of active versus passive. Through e.g. simulation it is possible for the subject to observe a created environment of which the observing body is a part of. This has new implications for the concept of 'thereness'. (p. 281). Thrift also touches upon the boost of artificial intelligence, that stems from the machinic complex of power.

This compilation of impacts resulting from the three machinic complexes brings Thrift (1996) to the notion of the cyborg culture of mobility that is establishing a new version of reality, where machines along humans adopt an active role and the human body becomes increasingly technologized (p. 282).

2.2.3 Blurring Line Between Real and Imagination

Among his spatial theory Soja (1996) introduces a concept of the *Exopolis*. By his definition (p. 19), Exopolis is a glimpse of a real space rather than real itself; it is an exact duplicate of a city that has never existed. Moreover, it is being copied countless times in different locations. and argues that Orange County is the perfect example of one. On one hand, this kind of an Exopolis can provide infinite enchantment to our everyday lives. On the other hand, it can turn our cities and lives into a confusing mixture of factual and fictional elements which blurs our ability to distinguish the real from the imagined. This confusion of the real and the imagination is where "hyperreality" comes along.

Soja (1996, p. 240) sees hyperreality as a different and contemporary version of the reality, which is disseminated especially effectively through electronic media. While previously the boundary between physical and digital spaces was crisp and clear, it has started to fade (de Souza e Silva, 2006). Technologies such as virtual reality, that can alter the visual cues and the bodily experience of space, could have an impact on the subjective space of individuals.

Soja (1996, p. 240) also leans on Celeste Olalquiaga's (1992) thoughts on what she calls "urban psychasthenia": disruption in the relation between the self and the surroundings resulting from everything becoming connected to the "topography of computer screens and monitors". Indeed, thanks to mobile technologies, the Internet access is no longer tied to fixed lines between personal computers, but is available for us anytime and everywhere –

even on the go. As remote virtual contexts, can be accessed within the present context, one no longer needs to exit the physical space to engage with digital ones. (de Souza e Silva, 2006). Per Soja (1996, p. 240), viewing the world mainly through a digital screen, can also lead to the body blending into the environment, history being taken over by geography and stories and memories getting replaced by maps and schemes.

De Souza e Silva (2006) argues that the constant connectedness to the digital world creates a completely new type of a space, *hybrid space* that merges aspects from both material and virtual environments. Her thoughts build on the concept of *hybrid reality, a* combination of mixed reality technologies (the scale between augmented reality and augmented virtuality), augmented spaces, mobility and communication, and is defined as a set of social practices that synchronously take place in both digital and material spaces (see *Figure 2*). Hybrid spaces then become constructed by the union of communication and mobility, and occur in social environments combining the material and the digital. Although the creation of such space relies on social and mobile technologies, it claims to be very much a conceptual space rather than a technological one.
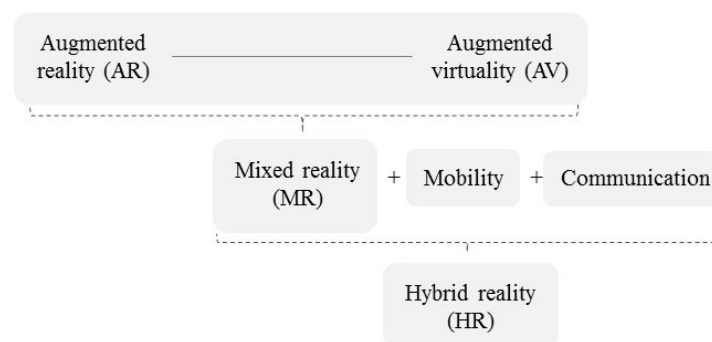
Figure 2: Definition of Hybrid Reality (adapted from de Souza e Silva, 2006)

Per Dourish (2006) technology not only gives birth to new opportunities for sociality, which would imply a creation of new places, but provides a chance to understand the structure of the setting differently, which creates new spatialities. However, he protests the view per which information technologies create new (virtual) spaces that are super positioned with the "real" spaces of the material world. Instead, what the technology provides is means to understand and encounter existing urban spaces in brand new ways, and transforming them as sites of our everyday lives.

Inevitably, this all has affected how we interact with the physical environment around us. Contrary to what some researchers suggest, de Souza e Silva (2006) argue that mobile phones neither separate users from their physical environment nor only mediate communication between distant parties. Instead, following her hybrid space logic, cell phones strengthen users' connection to the surrounding space, as they provide a way to socialize with peers in close proximity. What the consequences are for the lived-space of the socio-spatial triad, however, remains an interesting question.

2.3 Digital Virtual Consumption (DVC)

As set up in the previous chapter, digitalization has created a new world in which we consume, interact with others, spaces and, consequently, construct our identities in a different way we did before (Belk, 2013). Consumption has extended to the 'liminal' spaces between imagination and the observable world, such as websites, virtual worlds, video games, to name a few (Denegri-Knott & Molesworth, 2010). Thanks to mobile technologies these new spaces of digital virtual are only a few clicks away and only getting closer. This development has spurred the research stream of Digital Virtual Consumption (DVC).

Although the objects of consumption in this sphere don't are not tangible per se, the consumption itself is not merely imaginary. Instead the consumers experience ownership over the digital virtual commodities and utilize them for different purposes following the rules and constraints set by certain digital virtual spaces. (Denegri-Knott & Molesworth, 2010). In the following chapter I will first introduce a concept that has shaped the consumer reality through emphasis on the symbolic nature of consumption. Then, I will outline the building blocks of digital virtual consumption and how they relate to consumer fantasies. The last part describes how consumers experience embodiment and construct their identities in these 'liminal' spaces.

2.3.1 Rise of the Experience Economy

Over time, the importance of functional utility in consumption has diminished while consumers have begun to value more the imaginary aspects of the consumption experience (Denegri-Knott & Molesworth, 2010). Firat and Venkatesh (1995) argue, it was not until the postmodern times that the symbolic nature of consumption was recognized. In

postmodernism, the product and its image or material and imaginary are no longer separated, consumption represents more than a value-destructive recreational activity, and consumers are regarded as participants in the creation of experiences. The signs and symbolic representations rise as the new central site for consumption (Firat & Dholakia, 1998). This change has sparked a common quest for marketers and consumers to look for enchantment among daily routines, and to turn life into a 'spectacle'. (Firat & Venkatesh, 1995).

Around the same time in late 1990s, Pine and Gilmore (1999) developed a concept of 'experiential economies' reflecting the turn towards information intensive commodities, the rise of data, software and computer related systems, and tremendous growth of leisure and entertainment industries. Already at that time they preached about how new technologies such as interactive games, Internet sites, 3D films and even virtual reality are soon to take the creation of immersive experiences a notch further from anything seen before (Pine & Gilmore, 1999, p. 3). From this combination of realizing the symbolic nature of consumption, craving for a spectacle and technological advancement rises the research stream of digital virtual consumption (DVC).

2.3.2 Virtuality and Its Foundations in Immersion

As said, digital virtual consumption (DVC) occupies spaces between the physical world and human imagination (Denegri-Knott & Molesworth, 2010). Here 'virtual' is thought of as a synonym for 'imaginary'. However, Denegri-Knott and Molesworth (2010) recognize that in everyday terminology, the word 'virtual' is often understood merely as a computer-generated copy of a natural material counterpart. Firstly, per Burbules (2004), 'virtuality' is not dependent on a certain technology but the immersion that causes an 'as if' experience. This sensation of immersion - also known as telepresence - doesn't need to be computer created but can be experienced in any situation where we feel absorbed into a multisensory world, such as when reading a fascinating book or watching a captivating movie. Whereas presence is about the natural sense of being in one's immediate surroundings (Steuer, 1992), telepresence refers to social presence in a space without necessarily being physically present in it (Minsky, 1980). This latter perception is mediated through means of communication (Steuer, 1992).

This immersion that is in the core of virtuality is constructed of several interrelated dimensions. While Steuer (1992) focuses on two technologically defined variables of vividness and interactivity, Burbules (2004) expands it into four experiential dimensions: 1) interest, 2) involvement, 3) imagination, and 4) interaction. First, immersion does not exist without being interested in the activity. An interest and appreciation is a subjective quality that rises from the ability of the experience to pose an intriguing challenge that lets the individual discover something new every time. Involvement demands that the individual has a reason to care about the experience. This could come in the form of a personally important goal or aim, or enjoyment one can derive from the activity. The imagination aspect of immersion relates to how much space the experience leaves for personal interpretations and contribution on the detail level. Furthermore, the experience becomes interactive when one is able to actively and in an embodied manner participate in it and its further creation. The bodily movement and sensations become an important factor in making an experience feel 'real', and hence immersive.

Secondly, creating a sharp division where virtual is something synthetic, illusory and complex compared to the 'real', has major flaws (Denegri-Knott & Molesworth, 2010; Burbules, 2004). Such separation fails to consider the socially constructed nature of reality where all experiences - no matter material or virtual - are to some extent actively filtered, interpreted or created in our minds and, when combined, they construct distinct adaptations of the surrounding world. (Burbules, 2004, p. 163). This highlights how it is the collective sense of symbols attached to commodities – rather than materiality – that determines the perceived desirability (Arnould & Thompson, 2005). In fact, Denegri-Knott and Molesworth (2010) conclude that the virtual (imagination) can is the main locus of consumption, whereas the material is something that brings the attached cultural ideals to life.

2.3.3 DVC and Consumer Fantasies

The 'digital virtual', then again, refers to the hybrid of the material and the virtual-as-imagination. Therefore, it possesses both the ideals of the virtual and the potential to actualize them. Denegri-Knott & Molesworth (2010) identify four "roles" that DVC plays between the virtual and the material: It can stimulate consumers' desire for possessions,

actualize their daydreams of ownership, wealth and status, bring their imaginary fantasies to life, and help experiment with different societal roles (see *Figure 3*).

Video games frequently demonstrate the aspect of simulating fantasies. There the desire revolves around something that is abstract by nature and, therefore, cannot be materialized or owned outside the digital virtual world. In video games like World of Warcraft and Lord of the Rings, the consumer need not only fantasize about owning imaginary items, such as magic swords and armor that we have come to know through fiction based literature and movies, but can acquire and use them, too. Therefore, is seems that this liminal space may have a far superior ability to bring consumer fantasies to life than what has been possible through even the most elaborate material environments. (Denegri-Knott & Molesworth, 2010).

DVC practices:
Stimulation of consumer desire
Actualization of daydreams
Actualization of consumer fantasy
Experimentation

[Both actual and ideal]
Digital virtual consumption

[Ideally possible]
Fantasy

Possible resources for the imagination:
Myths
Nostalgia
Sci-Fi
Fantasy

[Ideal real]
Virtual consumption

Taboos
Consumer daydreams of wealth and luxury

[Actually Real]
Material consumption

[Actually possible]
Daydreams

Everyday commodities & experiences

Figure 3: Relationship between virtual material and DVC (adapted from Denegri-Knott & Molesworth, 2010)

Although the objects of desire are immaterial, the cycle of desire works the same way as in material world: one needs to work (or here perform in-game tasks and quests) to earn an access to high status items and, after successful acquisition, one keeps on developing new desires for further items. In addition, despite that the consumption experiences take place in the digital virtual space, DVC always has a material dimension: a physical device as well as an embodied end user behind the screen. (Denegri-Knott & Molesworth, 2010).

While fantasy can, indeed, be a door to a special world revolving around play, such world is not merely about enjoyment and fun. It involves new possibilities, challenges, performing and potential for personal development (Belk & Costa, 1998). By extending the spectrum of experiences and goods to desire, digital virtual can pose a remedy for consumer boredom

and a chance to enjoy enchantment in one's everyday life (Denegri-Knott & Molesworth, 2010).

2.3.4 Embodiment and Identity in Digital Virtual Space

In computer-mediated, virtual environments neither possessions nor consumer behavior are restricted by the physical body (Belk, 2013; Schau & Gilly, 2003). As the virtual space is deemed free from some of the constraints of the physically-bound world, the practices involved in inhabiting such a space are different. One of these practices characteristic to the virtual environment is creation of online identities, or so called 'avatars'.

Building on the thoughts introduced by Sherry Turkle in his book Life on the Screen from 1995, Burbules (2004) finds the online environment as an extraordinary platform for creativity and experimentation in identity construction. Since identity has been detached from the physical body, consumers in the virtual space have the possibility to reinvent themselves in the form an avatar equipped with whatever qualities one wants to try out. For instance, they could take part in online discussions as someone of the opposite sex, appear as more confident and straight-spoken than one would normally be in company, or provoke the chats anonymously with comments that might not represent one's true thoughts just for curiosity. Belk (2013) labels this as self-experimentation.

This phenomenon is not necessarily about falsifying one's identity, but creating a different version of it. Schau and Gilly (2003) suggest that instead of creating brand new personalities, people use digital virtual environments such as websites to communicate another side of their offline identities. The virtual identities can, in fact, also be experienced as the most genuine version of self (Burbules, 2004). Supporting Belk's (2013) notion, the technology seems to be used either to improve real life or as a prosthetic extension of one's physical real-life self. Neither do people give up their embodied identities in the process. However, anonymousness relieves individuals from the exposure to each other's physical appearance and, therefore, deprives them from the ability to judge each other by it. This may offer a relief of some extent from discrimination. (Burbules, 2004).

Both Burbules (2004) and Belk (2013) also draw a link from virtual identities to immersion. Burbules argues, that the virtual identities not only determine the ways in which one

interacts and becomes involved in activities in the virtual space, but are also at the core of creating sense of meaningfulness that, then again, spurs imagination and interest. This makes identities important in the creation of an immersive experience. Similarly, Belk (2013) notices that in the virtual world of games players tend to experience different levels of telepresence to one's own in-game avatar. With this he challenges his previous (1988) view which emphasizes the human body in extending one's self. Being represented by an avatar with physical characteristics that differ from one's own real world body can, in fact, affect person's offline behavior, e.g. by boosting confidence. (Belk, 2013)

Moving beyond the pure online environment, Licoppe & Inada (2006) expect technologies such as augmented realities to create challenges in combining the physical bodily experience seamlessly together with the virtual experience of telepresence. As proved in phenomenology, self-awareness requires blending different perceptions into a totality and, therefore, several separate feelings cannot be distinguished from each other at the same time. This could have implications to the experiences of immersion in the combination of the material and virtual spaces.

2.4 Pervasive Games and Gamification

Pervasive games are a category of games often associated with gamification and the branch of games that extend the entertainment outside of private homes. Such games tamper with the traditional boundaries of games by introducing them to brand new contexts, situations and places. Examples of these include location-based games, augmented reality games and alternate reality games. (Deterding, et al., 2011). In the following chapters I will give an overview of these three game categories by introducing their technological foundations, giving examples of such games and discussing how they have previously been studied in the field of space and place. At this point, most of literature still revolves around their ability to impact behavior in physical space, rather than the co-created social space.

2.4.1 Location-based Mobile Games

The common definition for a game treats it as a system. Salen and Zimmerman (2004) state that a game "is a system in which players engage in an artificial conflict, defined by rules, that result in a quantifiable outcome". A game operates on a core game mechanic, which

refers to the central activity (or activities) that the player keeps repeating throughout the game. The mechanic is a key mechanism in guiding the players and providing them a meaningful experience. On the other hand, they can be viewed as products of co-creation between the game developer and the players, where the experience and value is produced at the time of game play (Huotari & Hamari, 2011).

Location-based mobile games (LBMGs), also known as hybrid reality games, are multiplayer games that transform the surrounding physical environment into a game board with the help of mobile devices taking advantage of Internet connection and GPS capabilities (de Souza e Silva, 2006). Typically, they involve either interacting with other players within a certain radius (Sotamaa, 2002) or searching digital items from the urban environment (Licoppe & Inada, 2006; Gazzard, 2011; Geocaching, 2017). Based on de Souza e Silva's (2006) view, mobile phones should no longer be considered as telephones but "portable microcomputers embedded in public spaces", thanks to location-based applications.

The period between 2005 and the end of the decade was an important juncture for the commercialization of locative media technologies. While previously they were mostly deployed by specialized research and governmental organizations, introduction of both smartphones – lead by Apple's iPhone – and Google's geolocation initiatives brought such technologies into public attention and interest. Following the excitement, the appearance of new applications of the locative technology improved locative technology's accessibility among everyday consumers. (Wilken, 2012). Since then, LBMGs have been studied quite extensively from several different angles, considering individual games, LBMGs potential in education, and even the history and theory behind them (Frith, 2013). When it comes to the relation of such games to space and mobility, relevant findings emerge also from studies conducted with other location-based applications than games.

Released in 2001, 'Botfighters' became the first commercially available location-based mobile game. As a new twist to traditional first person shooting games, Botfighters made the players lurk in the real urban environment, and shoot their opponents with text messages. De Souza e Silva (2006) claims that the game serves as evidence that hybrid connections can affect users' perceptions of the physical space that they occupy. By bringing strangers

together in an unpredictable manner, the game transforms the mundane environment into a playful experience.

Similarly, the research conducted by Licoppe and Inada (2006) on another early LBMG called 'Mogi' explored how life in urban spaces could be experienced differently through such games. Resembling Pokémon GO, in Mogi the players run around the city capturing digital creatures (de Souza e Silva, 2006). The focus areas of the research were changes in user mobility, interaction with other players resulting from identifying their position on the screen and management of situations where on-screen and off-screen perceptions might not match. The finding was that Mogi influenced player motility – defined as the distributed ability, opportunity and tools for the actors to move and complete tasks on the move – and affected player's mobility choices. The following three examples demonstrates this: 1) During their daily commute, the users were found to make detours just for the sake of collecting items in the game, 2) the game would alter users' choice of transportation and inspire creation of meta games, and 3) even users without interest in collections would make special expeditions in search for objects. (Licoppe & Inada, 2006).

Later in 2010, another study set out to explore mobility in urban space, but not in a context of a game. Humphreys' (2010) research was a case study of a mobile social network 'Dodgeball' and investigated whether users would alter their paths in public space when receiving text message updates from other users' locations. Three factors that would influence the mobility decisions were timing, spatial distance and travel time. Furthermore, Humphreys (2010) speculates that the role of mobile social networks could be to familiarize people better with their urban environments. He suggests that those, who take advantage of such media, could find their city less cold or anonymous than others.

Frith (2013) follows the others in studying the practices and behaviors – especially mobility decisions – of the player of LBMGs. His focus is on gamification and context the aforementioned application Foursquare. Rather unsurprisingly, Frith (2013) finds that certain gamification elements of Foursquare, such as mayorships and badges, affected users' decisions about where to go. However, he also makes an interesting point about spatial legibility. What was important for the users was not the surroundings along the way – as it is not encouraged by unlocking new badges – but the end locations of the journeys. Through the game, those final destinations would transform into something that is "read" differently,

something that can be collected and competed over. The gaming elements of Foursquare, therefore, did seem to have an impact on the user experience of the space.

Frith's (2013) finding is in line with Alison Gazzard's (2011) similar study which states that the focus of Foursquare seems to be in locating places, rather than in exploring urban areas as claimed by the game website. This makes the game an "intentional hunt" and strips discovery and wandering out of the act of finding places. Additionally, Gazzard (2011) notices that spatiality and temporality can become distorted because of user's craving for the rewards of the app. This was demonstrated by situations where a subject tried to take advantage of the system loopholes and malfunctions by checking in several places at the same time, or in a place where one is not physically present.

2.4.2 Augmented Reality (AR)

The rise of smartphones equipped with technology such as high performance cameras and sensors has created all new avenues for mobile games. From this development, has emerged an element of pervasive games that takes a different approach to marrying the real-life environment and the fantasy world of the game: augmented reality (AR).

One of the most popular definitions views augmented reality as a technology that visually alters material reality by enriching it with overlaid virtual content in real time (Azuma, et al., 2001). The most distinct difference between augmented reality and virtual reality (VR) is the proximity to physical reality. While virtual reality is not dependent on the physical environment, augmented reality interacts with the real environment by complementing it with virtual elements that are synchronized with it and can react to changes in it. (Javornik, 2016b).

Since early forms of AR in 1990s, the technology has taken great steps towards a more user-friendly, relevant, cost-effective and, consequently, more commercially viable technology (Javornik, 2016b). Portability has become a central element (Reitmayr & Drummond, 2006), which has boosted the use of smartphones and tablets as the primary display type. Such handheld displays create the augmented view of the environment with video-see-through technology (Azuma, et al., 2001; Carmigniani & Furht, 2011) and avoid problems of size, weight and price compared to special equipment. In addition to the technological

advancements, deeper connectedness to the surrounding digital landscape – global positioning system (GPS) and near-field communication (NFC) included – has helped the development. (Javornik, 2016b).

Although a new concept in the field of marketing, augmented reality has already been widely researched from the angle of computer technology and human-computer interaction, HCI (Javornik, 2016a; Javornik, 2016b). The technology has applications in the fields of e.g. medicine, military, architecture, education and gaming. (Javornik, 2016b). The applications differ in terms of the real-life element they are designed to augment: a person, a product or the surroundings. (Carmigniani, et al., 2010)

By augmenting a person, the AR application aims to enhance the physical appearance of either the user himself or another person. Altering products most often means attaching additional information, such as nutritional information or peer reviews, to the product or demonstrating its different color options. Apps that alter the physical space around could, for example, display a product in another environment, add information into a street view (Javornik, 2016b), or place imaginary creatures around the city for users to chase, similarly to Pokémon GO.

It is very common for a game to revolve around collecting items. The Pokémon GO type of LBMGs that include augmented reality functionalities take the act of collecting items in a game to a completely new level. It is now possible to search for digital items spread around the live environment, see them embedded into the surroundings, and even collect spaces (Gazzard, 2011). Contributing to the research on the world of spaces and places and player mobility, Gazzard (2011) studies an augmented reality game called *Argh*.

Gazzard (2011) finds that although the game mechanic revolves around collecting ghosts in the real physical surroundings, it also involves collecting spaces. The term 'space' is used instead of 'place' as the player is constantly on the move and the ghosts are not attached to any specific locations, but appear randomly within the areas that have not yet been cleared. As augmented reality layers the physical environment with virtual information, the new virtual layer gives familiar places new meanings and identities. Together with the game's purpose, this affects how the augmented space is explored. In the case of Argh, the movement through the space becomes more important than mapping out different locations,

which is why the player is more likely to focus on the spaces rather than the places. Interestingly, this is different to the findings in the case of Foursquare (Gazzard, 2011; Frith, 2013), an LBMG without AR features.

Gazzard (2011) also contemplates which one of the spaces, the virtual or the physical, then is the center of focus. Although walking and awareness of surroundings is vital for the continuation of the game, the physical world might in fact fade into the background as the player's attention is primarily captured by what is happening in the game layer on the screen. Where Gazzard (2011) views space and place only as spatial practice in the physical environment (virtual or the physical), my research aims to tap into the full spectrum of social spaces as defined by the triad of Lefebvre.

2.4.3 Gamification as Gameful Design

The term 'gamification' was used for the first time in 2008 in the digital media industry, but it can be linked to a great number of studies within human-computer interaction (HCI) and game research. There, it often appears with terms such as serious, pervasive, location-based and alternate reality games that were introduced above, as well as playful design. Even without an agreed definition during the first few years, it fast developed into a common everyday term. (Deterding, et al., 2011). The academic definitions, then again, are limited to a few (Deterding, et al., 2011; Huotari & Hamari, 2012).

Deterding et al. (2011) define gamification as "*the use of game design elements in non-game contexts*". They find that the uses for gamification are grounded on two points: 1) the inseparable part videogames play in consumers' daily lives, and 2) game elements' ability to entertain users with unbeaten intensity and length of engagement that could perhaps be expanded to non-game offerings. The most common use cases for gamification are in fact within attempts to improve user experience. Location-based application *Foursquare* has been in the forefront of the trend, showing the way to a great number of other applications in several different fields, such as finance, health, education, sustainability and media. (Deterding, et al., 2011).

Summarizing from a variety of research, Deterding et al., (2011) find five levels of game design elements related to gamification. In order of increasing abstraction, they are 1)

interface design elements such as badges and levels; 2) game mechanics, such restraints of time and resources; 3) game design rules of thumb, including goals and a range of game styles; 4) game concepts, such as challenge and fantasy; and 5) methods of game design. As the researcher's focus is limited to game design components rather than full-fledged games, pervasive games (such as location-based and augmented reality games) would not actually make it under their definition of 'gamification'.

A competing definition looks at 'gamification' from the point of view of services marketing. In their two papers, Huotari and Hamari (2012; 2011) argue that game elements can be seen as services, and games as systems of such services. The services are co-created between the developers and players. While game designers oversee construction of the storyline and rules during game development, the value is created and the quality of the experience (flow) determined at the time of the play.

Therefore, Huotari and Hamari (2012) view gamification as *"a process of enhancing a service with affordances for gameful experiences to support user's overall value creation."* (Huotari & Hamari, 2012). This definition sees Foursquare in a different light than Deterding et al. (2011): not as a gamified service but as an enhancing service that can gamify other core services, such as local coffee shops. Furthermore, the definition does not restrict the nature of the core service, which means that also games can be gamified. This contradicts with Deterding et al.'s (2011) view that finds gamification only in non-game contexts, as it does not recognize 'meta-game' elements separate from normal game design.

However, Huotari and Hamari (2012) emphasize that not all service and game combinations are about gamification. As the definition states, the gamifying part should always enhance the core service, not the opposite. For example, if a location-based game such as Geocaching directs the player to a site of attraction, there is no gamification involved, unless the game is meant to enrich the experience at the site, e.g. from a tourism point of view. In theory, the interpretation relies on the customer's subjective perception, but in practice, it is the service provider, who draws the line. On the other hand, the provider of the gamifying service does not need to be the core service provider, but can be a third-party service provider, the customer himself, or even a fellow customer. (Huotari & Hamari, 2012).

In consequence, neither of the academic definitions would automatically identify Pokémon GO as a gamified app but rather a so-called 'pervasive game'. However, they both leave some leeway for subjective and socially negotiated perceptions, practices and informal norms that could shape how certain applications classify in the minds of the consumers. Therefore, it might be that in the case of Pokémon GO, the gamification elements are imposed on consumer's daily life, where life represents the core service that is being enhanced.

3 Empirical Research

As highlighted before, this research lies within the research stream Consumer Culture Theory (CCT) and is qualitative by nature. First part of this chapter will introduce this choice of approach, as well as the ontological and epistemological foundations of the study. Following from the methodological assumptions, I explain the chosen method of study and describe the approaches taken in collecting and analyzing the data as elaborately as possible. The last parts of the chapters attempt to evaluate the quality of the research.

3.1 Research Methodology

Consumer Culture Theory (CCT), as labeled by Arnould and Thompson (2005), refers to a research tradition that is focused on exploring the interplay of consumer behavior, market dynamics, and the heterogenous meanings created in the jungle of overlapping cultural groupings. Here, culture is not seen merely as a unified idea about a good way of life imposed on an individual as a member of a certain nation. Instead, it is a disintegrated, even inconsistent system of meanings developed amid marketplace ideologies and individual freedom of choice. It arises from a group's way to take advantage of commercial products, content and services as a part of the production of shared practices, meanings and identities, for the purpose of forming a common understanding of environments and giving individuals direction in their everyday lives (Kozinets, 2001).

Consumption, then again, is seen through its experiential, embodied and symbolic qualities (Arnould & Thompson, 2005; Joy & Sherry, 2003; Thompson, et al., 1990). As these experiential dimensions of consumer behavior are complex and very much created in the minds of the consumers - both on the conscious and unconscious levels (Joy & Sherry, 2003) - they often cannot be revealed with experiments or questionnaires, nor quantified. Therefore, CCT research tends to be qualitative by nature, although open for multi-method approaches (Arnould & Thompson, 2005). Being considered a product of social meanings and experiences (Lefebvre, 1991 p. 26; Soja, 1989, p. 79) spatiality explored in a context of a consumption phenomenon, such as Pokémon GO, is a good fit with the consumer culture research tradition and qualitative methods.

Adopting the lenses of Consumer Culture Theory and qualitative research to my research topic comes with a certain set of assumptions about the nature of reality and social beings (ontology) and the nature of knowledge (epistemology). Common to CCT and qualitative research in general is that they assume the reality as socially constructed and see the individuals as proactive instead of reactive (Arnould & Thompson, 2005). This paradigm of social research is referred to as constructionist research. On the contrary to positivism and quantitative research, this type of research aims to understand a phenomenon rather than to expose the causal forces in it. From the great variety of constructionist approaches, best-suited philosophical assumptions to underlie my study are interpretivism, hermeneutics and existential phenomenology, that will be described in more detail in the following paragraphs.

3.1.1 Interpretivism and Hermeneutics

Leaning on the constructionist idea of reality as a social construct that is proactively created, interpretivism sees world as a collection of different realities that vary based on subjective perspectives between different contexts. Due to the multiplicity and dynamicity of these realities, it is impossible to draw one single description of reality. (Hudson & Ozanne, 1988). This is the ontological stance interpretivism is founded on.

The interpretivist research aim is always to understand the phenomenon at hand, rather than to predict it (Rubinstein, 1981) or draw causal relationships. To create this understanding one needs to dive into individual lived experiences and rely an interpretation. These immediate, embodied and practical experiences are at the core of the interpretivist approach. This suits my study well, as neither can the meanings involved in the social construction of space be accessed through sole observation of the external reality. My role as the researcher then is to demonstrate the process through which meanings are constructed and illustrate how they become embodied through the language and behavior of social actors in that specific context. (Schwandt, 1999, p. 118). Through this it is possible to form a singular interpretation of the phenomenon - which exemplifies the epistemological assumption in the core of the approach (Hudson & Ozanne, 1988).

The axiological foundation of interpretivism is that there is no such a thing as a complete interpretation. Creating an understanding through interpretation is thought of as a never-

ending process in which existing interpretations will always impact the future ones. (Hudson & Ozanne, 1988). This iteration is referred to as hermeneutic circling (Gadamer, 1976). It can be viewed simply as a methodological tool, or philosophically as a phenomenological account of our existence in the world (Schwandt, 1998, p. 227).

Hermeneutics in general refers to the human tendency to interpret phenomena on a part-whole basis, through a process of foregrounding and backgrounding phenomena (Thompson, et al., 1989). It means forming a theory that follows the individual participant's point of view but recognizes it against a broader cultural background (Harré & Gillett, 1994). In the case of my research the foreground could be, for example, the immediate experience of space using LBMGs and the background might reflect themes such as hunger for everyday enchantment.

3.1.2 Existential Phenomenology

In phenomenology, the world can only be understood through one's 'being' in it. Resembling interpretivism, phenomenology is interested in describing experiences as they are 'lived' in specific, varying contexts. The underlying idea is that although humans can be distinguished - like a certain pattern - from their surroundings, they cannot be separated from the context. Therefore, what phenomenology studies is rather human-being-in-the-world than humans and their relation to the environment. (Thompson, et al., 1989).

Furthermore, the idea of multiplicity exists in phenomenology as in the ontological assumptions of interpretivism: It is possible for different kinds of experiences to form dynamically from the same context. From the phenomenological point of view, this is based on which aspects of the setting stand out and which recede to the background of the experience, which creates a linkage to the main idea of hermeneutics described above. Moreover, as human experience is guided by focus of attention, it is considered intentional. Reflecting on one's experiences can make some new aspects to stand out. (Thompson et al. 1989). Phenomenology is explored further in the following paragraphs that dive deeper into what it means in practice, as an actual research method.

3.2 Research Method

Following from the chosen methodologies, the natural choice for a research method is phenomenological interviews. Per Kvale (1992), interview in the form of an interactive dialogue has, in fact, an exceptional ability to tap into another person's experience. Linguistics play an important role in how the social world is constructed (Kvale, 1992), and narratives of everyday life have the capability to reveal those connections (Wilson & Hutchinson, 1991).

The goal of phenomenological interviews is to build is a confined, first-person description of a specific domain of experience. Focus is on how the experience is lived in a specific context by the informants, paying attention to sensations, feelings, perceptions, moods, emotions and practices that emerge. (Thompson, et al., 1989). According to Thompson et al. (1990), the key to phenomenological interview is to ensure intentionality, emergent dialogue, and hermeneutic endeavor. By intentionality they refer to acknowledging that what emerges from the data might not neatly fit the existing conceptual categories, or those set up by the interviewer himself. Instead, the lived experience should always be regarded as a reflective of the individual life-world of the informant. (Thompson et al., 1990). Therefore, one should refrain from trying to mold it into something it's not.

Another core aim is to get into an interactive, emergent dialogue, where it's the informant who is mostly in charge of the course of the discussion (Thompson et al., 1990). After assigning the context, the role of the interviewer is to sit back and listen to the informant freely elaborate on his experiences. To let the interviewee be the expert, positions of equality should be established from the very beginning (Kvale, 1992). Although there should be no predefined questions, the interviewer can gently "probe" for a richer description of an area that naturally emerged in the interviewee's own narrative. One should attempt to use the respondents own language and expressions and - due to the aim to describe rather than prove hypotheses - avoid asking "why?" (Thompson, et al., 1989).

The phenomenological research method comes with an iterative nature of interpretation, referred to as the hermeneutic endeavor (Thompson et al., 1990). Phenomenology typically strives to portray as an accurate account of the informant's perspective and experience as possible, through multiple verification rounds (Schwandt, 1998, p. 228), member checks

and group interpretive methods (Thompson et al., 1989). At the same time the combination of interpretivism and ontological hermeneutics discard such a clear dichotomy that the phenomenological approach assumes between the emic (foreground) and etic (background) points of view that one iterates between, and puts more value on the researcher's own interpretation (Schwandt, 1998, p. 228). Nonetheless, it is important to remember that that interpretation can only go as far as there is evidence in the data (Thompson et al., 1989), and one should keep prior knowledge and hypotheses in that area of research at bay.

3.3 Research Process

The two following sections I will describe how the phenomenological study was carried out in practice. It will first introduce the data collection process and give and overview of the group of informants. The second part describes the approach to analyzing the data and interpreting the findings.

3.3.1 Data Collection

The study relies on the data gathered in seven face-to-face, in-depth interviews with Pokémon GO enthusiasts. The total number of interviews conducted was eight, out of which one interviews was disregarded due to informant's poor ability to express himself in English and his barely existent background with the game.

The informants for the study were recruited through the public, yet moderated 'Pokémon GO Genève' Facebook group during July 2017. At that time the group had approximately 1600 members and seemed to host lively and frequent discussion around the game. Upon getting accepted as a member, I first approached one of the administrators to introduce myself as a researcher and to request their permission to post in the group with the aim of asking for volunteers. Five out of seven interviewees were recruited through this public post on the group. To improve the gender balance, a selection of female members of the group were approached directly with private messages on the Facebook platform, after having identified them as active participants in the community. This granted me with two more female informants.

The final group of informants, then, consists of four males and three females (see *Table 1*) that all report having actively engaged in playing Pokémon GO more or less since its launch

in the summer 2016. Their backgrounds vary greatly, including students, an elementary school teacher, a part-time model, an entrepreneur and a lawyer. Despite that the informants represent four different nationalities - Swiss, Spanish, Austrian and Canadian - all of them either live or work semi-permanently in the city of Geneva, Switzerland.

All the informants are young adults between the ages of 23 and 31. Having been born between the years of 1986 and 1994 makes them so called Millennials, also known as the Generation Y (Wesner & Miller, 2008). Characteristic to Millennials is that they have grown up with information technology. Although smartphones did not emerge until later, iPods, mobile phones and the Internet were there and shaped their childhood and adolescence. (Howe & Strauss, 2009, p. 297). In addition, their relationship with the Pokémon franchise is likely to date back to the very beginning of the Pokémon phenomenon in early 90s and, therefore, can be expected to be special compared to other age groups. This makes them especially interesting subjects of study. Moreover, the aspect that as the informants already run their own lives determined by not only fun and play, but also responsibilities, gives an intriguing spin to investigating gamification of everyday lives.

Table 1: Informant Details

Informant	Gender	Age	Nationality / Residence	Occupation
M1	Male	30	Swiss / Switzerland	Elementary school teacher
M2	Male	24	Swiss / Switzerland	Student
M3	Male	30	Spanish / Switzerland	Computer engineer
M4	Male	26	Swiss / Switzerland	Entrepreneur
F1	Female	31	Canadian / Switzerland	Lawyer
F2	Female	23	Austrian / Switzerland	Student
F3	Female	25	Swiss / France	Assistant / model

The interviews were held face-to-face at cafeterias in downtown Geneva, Switzerland. The respondents were given the opportunity to affect the choice of location, to create a setting that was as comfortable for them as possible. They were asked to set aside at least one and half hours for the interview, to reserve enough time for relaxed discussion. In the end, the interviews varied between one hour and two hours and 15 minutes in length. All the interviews were conducted in English, independent of the mother tongue of the informant.

3.3.2 Analysis

All the interview sessions were audio taped and transcribed in verbatim. Each individual transcription was first read through and then analyzed independently of the other interviews. The purpose was to identify emerging themes without the bias of any prior expectations, and categorize them. Before moving on to the next interview, the transcription would be once again read throughout reflecting on the understanding and themes accumulated so far.

After this coding process, the analysis was widened by relating separate interviews together and identifying common patterns - also known as 'global themes' (Thompson et al., 1989) - among them. This was conducted using tools such as mind maps and comparative charts, but was mostly an iterative writing process. Circulation between the individual interviews ('parts') and the global themes ('whole') was repeated several times, until the phenomena was grasped. After having attained a good understanding of the phenomenon, relations to theories within the existing CCT research sphere started to emerge, and bridges were built between those and the core emergent themes. Key quotes of the transcripts, or 'significant statements' as referred to as by Thompson et al. (1989), are used throughout the analysis to illustrate how informants 'lived' their experiences.

3.4 Evaluation of the Quality of Research

As described in previous paragraphs, qualitative research is not set out to yield a single, complete nor universal truth or interpretation of the phenomenon of interest. A major risk in trying to assess the validity of phenomenological research is assuming it founded on reliability. Sandelowski (1993) argues, that when reality in interpretivism is not viewed as singular and repeatable, one should not expect informant responses to remain the same over time, or all researchers to interpret the data in a similar fashion. Repeatability is then not in the core of qualitative research. Rather, striving for better reliability might reduce the meaningfulness of the findings, as the researchers become forced into a consensus in their interpretation (Rolfe, 2006). This is one of the reasons why it's generally more complicated to assess the quality of its process and findings than in the field of quantitative research.

The debate on how to then measure qualitative research has continued for decades (Pringle et al. 2011), and still it's missing a universal evaluation criteria (Rolfe, 2006). While some

insist the use of the same criteria as for quantitative research, others call for a different set of criteria, and the third position questions the whole need to establish a uniform way of measurement (Rolfe, 2006). Several of the sets of evaluation criteria suggested for phenomenological research seem to stem from the fields of psychological and health research (e.g. Sandelowski, 1993; Fossey et al., 2002; Yardley, 2000; Rolfe, 2006; Pringle et al., 2011). Yeardley (2000) summarizes four central pillars to the assessment: 1) Sensitivity to context, 2) Commitment and Rigor, 3) Transparency and Coherence and 4) Impact and Importance.

Sensitivity to context refers to thorough understanding of the existing literature relevant to the research, awareness of the social context and power dynamics between the researcher, as well as the sensitivity to the informant point of view (Yardley, 2000). In my study, I attempt to provide a good overview of the relevant literature in both the field of spatiality as well as Digital Virtual Consumption and draw linkages between them to showcase my accumulated understanding. In addition, at the beginning of the interviews I aimed to create an atmosphere where the informant could feel as the expert of the phenomenon by revealing that my background with the game isn't as extensive as theirs. This helped to ensure sensitivity to their stories. Furthermore, I illustrate the identified themes through a variety of examples and verbatim quotes to ground my interpretations (Elliot, et al., 1999) and to give the reader a possibility to check their fit with the data.

The guideline of Commitment and Rigor by Yardley (2000) is described as the thoroughness in all phases of the research, including acquiring the required skills to use a certain method and being exposed to the topic an extended period of time. When it comes to rigor, he also counts in the "completeness of interpretation" (Yardley, 2000). This can be questioned, since the paradigm of interpretivism does not recognize the possibility of an exhaustive interpretation (Hudson & Ozanne, 1988). Sandelowski (1993) emphasizes loyalty to the spirit of the qualitative research over strictly obeying predefined rules. In her view, trustworthiness - and consequently rigor - is more about being transparent and, therefore, auditable about the process used to conduct the research, rather than presenting the one allegedly correct interpretation. This definition stretches to cover also Yardley's (2000) third pillar of transparency and coherence.

My actions to ensure both Commitment and Rigor as well as Transparency and Coherence include: working on the topic for a duration of almost a full year; getting acquainted with the phenomenological research by reading a multitude of articles using a similar approach; conducting interviews until data saturation; checking the clarity of argumentation with my instructors; and disclosing the steps involved in the process all the way from recruiting participants to the analysis.

Perhaps the most profound aspect that a research becomes evaluated on the combination of the appeal of the topic and usefulness of the findings. This represents the Impact and Importance principle of Yardley's (2000) framework. My aim is to provide fruitful insights on what kind of impacts the rise of location based mobile games with AR capabilities - out of which Pokémon GO is likely to be only the first major success of its kind - might have in consumers' everyday lives. This should contribute to several research streams and pose interesting implications to e.g. sociologists, marketing professionals as well as game companies.

4 Findings and Interpretation

In this chapter I will present the findings that emerged from the interview data and my interpretations of them. The analysis focuses on three sub-themes that reflect the most prominent global themes identified among the interview transcripts. Within each theme, I will attempt to create a thorough understanding of how the theme arises from the experiences of the different types of spaces, based on Lefebvre's triad, and describe the agency the consumer possesses in the creation of those spatialities.

4.1 Theme I: Trusting the Community to Fill in the Blanks

Pokémon Go, as any other game, is ultimately a system where the player takes part in artificial challenges under the influence of the game rules and strives towards quantifiable results (Salen & Zimmerman, 2004). In a similar way that spaces are socially constructed (Lefebvre, 1991), the gaming experience can also be a co-production between the game company and the Pokémon trainers (Huotari & Hamari, 2011). Even though the game itself already sports a digital map of the surroundings, based on my research, there are other representations of space that the players seem to utilize and trust more when forming an understanding of their realities. In this following part of the analysis I investigate the struggle to structure one's own game experience, group effort as a practice to improve participation in the co-creation of space, and the user-generated representations of space developed as tools to further this goal.

4.1.1 Struggle Over Structure and Agency

As concluded by Thrift (1996, p. 128), agency is dynamic and highly depended on the context. The context, then again, becomes constructed at a certain point of time through actions of all the human and material elements in a specific social space. He has recognized, that nowadays even non-humans can have a role of active subjects (Thrift, 1996) and, thus, agents.

Within existing spatiality research - even from the limited perceived space angle - the location-specific mobile game elements have been found to have power over the player in an agentic way. In previous research the game elements have been found to affect aspects

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such as perceptions of physical space (de Souza e Silva, 2006), meanings attached to physical space (Frith, 2013) as well as mobility choices and spatial practices (Licoppe & Inada, 2006; Frith, 2013; Gazzard, 2011). Naturally, the game along with its game mechanics is designed to pose certain incentivized challenges to the users, and ultimately to keep them entertained (Salen & Zimmerman, 2004). Although in the sphere of mobile games the objects of desire are intangible, the in-game quests feed the same cycle of consumption as in the physical world: performing the tasks allows access to desired items that increase the appetite for more and more (Denegri-Knott & Molesworth, 2010).

In fact, nearly all the informants of my research report senses of being "forced" into or "having to do" something only because of the game, and often find themselves performing actions they would not have otherwise anticipated. Based on their stories they seem to worry about their own ability to decide on their actions as they see the game mechanics assume greater agency in the construction of the game experience. However, these sudden urges and 'whims' - as referred to by an informant - that result from game play seem not to be associated with solely anxiety over lost agency.

Sometimes the informants experience the terms set by the game as an extra motivation. An informant tells that for him the game "*was also a way to keep me walking, to force me to go walking everyday*" (Male, 30). Another informant describes the experience as follows: *"You know how there's some people who are like 'it's snowing and you just gotta dress appropriately'? And I'm like 'it's snowing, I'll just stay inside'. So, it [Pokémon GO] got us out, which is nice"* (Female, 31). This implies that sometimes the structure and incentives that the game poses on the player from the outside were experienced as welcome pushes towards useful practices that one normally would not prioritize.

Furthermore, the challenge posed by the game elements can also act as an enabler. This is how an informant tells about how playing Pokémon GO while taking a jog improved her performance: *"I like booted - my time was faster than before I gave birth 'cause I really wanted it* [the Pokémon]*!"* (Female, 31). In this case the time constraints of in-game elements such as Raids gave the user an experience of empowered rather than worry about the fact that her actions were driven by game mechanics.

On the other hand, gaming in general gets repeatedly referred to as an addiction - but mainly when talking about other players. An informant puts it this way: *"I don't want to be addicted to something. Smoke, or drugs, or anything. And playing is totally a drug, for some people"* (Female, 25). At another point of the very same interview she tells about her inability to join her co-workers for lunch in the following way: *"I tell them the truth. That I must go to play the game. And they say 'like really?'. And I'm like 'Yeah really! I have to go, and that's it'"* (Female, 25). Despite feeling obvious pressure and need to accommodate her life to fulfil the requirements set by the game*, the informant wouldn't admit that the game has got the better of her.

One can conclude that the game mechanics have an ability to impose such a structure on the players, that they are urged to participate in activities that are against their usual behavior in space. While sometimes these structures are welcomed, there seems to be an underlying uncertainty about one's reduced abilities to decide on and structure one's own gaming experience. This sets the stage for several attempts to restore some of that agency.

4.1.2 Joint Effort in Structuring the Experience

One core element of Pokémon GO is the in-game map that - like any other of the game element - has a potential to structure the experience for the player. Per Lefebvre (1991, p. 258) maps are examples of representations of space that rely on socially meaningful signs and codes. Through that system of signs, they try to portray the essential of a space and direct navigation in it (Burbules, 2004). Gazzard (2011) argues, that in location-specific and augmented reality applications maps are not only about supporting the processes of navigation and observation, but experiences in themselves. Following this thought, the map within the Pokémon GO application is also a form of conceived space that aims to capture the combined reality of the physical and virtual elements of the game world in real time, and in it.

What is interesting is that in their interviews practically every informant mentions aspects of collaboration within the community to jointly develop alternatives for the in-game map in structuring their realities. It appears that players collectively engage in a process of 'mapping': forming their own depictions of space they inhabit, highlighting meaningful places in it and, ultimately, helping navigation within it (Burbules, 2004). At least two types

of player-created representations of the space of the game emerge in the interviews: a collaborative online map and discussion groups on the instant messaging application WhatsApp.

The first of these tools or 'maps' frequently mentioned is a collaborative online map created by the player community to form an understanding of which Pokémon are around for the trainers to go after. In practice, the map is a visualization of the physical environment combined with a layer of graphical information, that any member of the community can update online based on their knowledge and observation of the urban environment. What the collaborative map portrays is a system to locate certain game content of interest such as Pokémon in the real world. This information is something that the digital virtual in-game map has not yet freely offered in any of its updates. While in the beginning one was not able to see any Pokémon on the map until one came across one, and at some stage the map expressed distances to the virtual creatures in footprint icons, it now reveals those nearby PokéStops in which proximity there should be certain Pokémon spawning.

One informant describes the in-game map in comparison to the collaborate one in the following way: "*You can only see a 1 kilometer radius, but others help fill in the blanks*" (Male, 30). It seems, that from the player point of view, the map provided by the application itself is not seen as a complete and convenient representation of space. Being able to bypass the constraints posed by the game and rely on a user-generated version instead, seems to increases their experience of agency as a community in the co-creation of the gaming experience.

The fact that the informant uses the term "to see" implies that the representation of space is experienced as tightly linked to the real-life environment and the experiencing body, and that without it one feels physically impaired. In existing literature, the sensory experience is, indeed, viewed to be at the core of grasping one's immediate material environment and, consequently, forming their spatial experience (Malpas, 1999; Lefebvre, 1991). Social constructs such as space cannot exist without the physical foundation (Malpas, 1999, p. 36). This also implies that the representational space defined by the virtual - and hence imaginary (Denegri-Knott & Molesworth, 2010) - elements is not experienced as any less 'real' than the material spaces portrayed on the map.

Moreover, in players' everyday lives, the alternative map represents a way for them to more easily structure their daily routines around the game. The map enables them to plan their actions, *"Thanks to the map we know which raids are happening when and which boss is on the raid, so we move to the raids we want"* (Male, 26); as well as reduces anxiety over not knowing what's out there and frustration over aimless wandering: *"So, before we didn't have this map, so I tried to memorize like 'there is a Gym, one there, another one over there'. And I would just have to go and see, if there was something interesting there."* (Female, 25) This, too, seems to increase their experienced agency in the construction of their lived spaces, as the game cannot not hold as much power on their routines and daily activities.

Another representation of space developed for the purposes of establishing structure and improving one's agency in the gaming experience are member-maintained discussion groups within WhatsApp - an instant messaging mobile application that lets users send messages containing e.g. text, images, video, voice or location information, as well as call other people via internet for free (WhatsApp Inc., 2017). These WhatsApp groups became formed only around the time when the game element of 'Raid Battle' was introduced in June 2017. A Raid refers to a scheduled battle against an especially powerful Pokémon that randomly appears at a Gym (see *Appendix A*). Since the game itself offers no way to foretell in advance when and where different Raids will appear, the aim of the WhatsApp groups is to track and portray in real time as they emerge around the city. Again, this representation of space relies on member observations of the external reality, as described by an informant: *"You watch around where you live, where you walk, where you eat at any moment of the day, and report if there is a Gym and a Pokémon about to spawn"* (Male, 24).

The difference to the collaborative map introduced before is that on top of reporting aspects of the external reality to create a representation of the space that mixes virtual and physical elements, these groups also aim to spur action in real time. Due to the difficulty of beating the powerful Pokémon called 'Raid Boss', success in Raids often requires players to join their forces. WhatsApp groups make it easier for the players to organize themselves for the Raids as Pokémon Go app doesn't provide such a forum for discussion with fellow players.

After discovering a Raid one wants to participate, the member starts a conversation in the group, or engages in one, in the hopes of assembling a strike force to beat the Raid that

requires team effort. If enough volunteers appear, this small group of players that often are complete strangers to each other would agree on a meeting time and location on WhatsApp and then meet face-to-face for the short time that it takes for them to defeat the common enemy, known as the Raid Boss. After the Raid is done, the momentary team would dissemble, everybody would be free to go about their ways, and the interaction would move back to the online space.

In fact, perhaps these WhatsApp groups should be understood as spaces of their own rather than sole representations of the game space. Based on the claim of Burbules (2004) online environments should be regarded as spaces rather than mere medium since people spend lots of time in them *doing* things. Indeed, Pokémon players that have asked from the creator administrator of a WhatsApp group to be added in a group become exposed to its content throughout the day, and interact in it on a regular basis by discussing timely topics, sharing experiences and tips, and collaborating. A transcription of an interview with a female informant captures an example of how deeply embedded these social spaces are in her life:

"I live in the mountains. As it's not a big city, there is nothing there. I tried to open the application just to see that there was no Pokémon around. So, I cannot play when I'm at home. So, it's kind of a break during the evening and night. Although, still the groups are spamming me in the [WhatsApp] app. Suddenly, around midnight everyone is starting to chat." (Female, 25)

In fact, the players seem to inhabit the social space of the game not only throughout the day, but rather around the clock. In addition, story highlights an interesting fact that the user-created spaces offer a way for the game space to extend beyond the reach of its game content of interest. Suddenly, the game seems to have its roots deeper in their lived spaces than they even realize.

4.1.3 Trust in the Community to Play Fair

As summarized by an informant, for the players, the goal is to reach an "*accurate representation*" (Male, 30) of the game space around. However, as both types of representations of space introduced above can be edited by any player, they are subject to incongruence between player's understanding of space and what one perceives physically

on site. It is also the very nature of a representation of space such a map that it can never be an exact duplicate of the space it mediates (Burbules, 2004) and its meanings are constantly negotiated (Lefebvre, 1991). Also, the representational space portrayed is built on a *sense of community*, of being-in-the-same-boat, and therefore, on mutual trust in what others report. Thus, the players assume no such discrepancies.

In fact, the informants seem to trust the representations of space built among the players beyond the one offered by the application itself - despite that the informal map is illegal and not approved by Niantic. As shown by the following two informant stories, they seem to suspect that the company is deliberately keeping them in the blind and creating limitations, perhaps for commercial purposes:

"The interactions with the face of the game are limited by Niantic, the company. They have everything under their control and you get what comes out of the other side. You just see how it works but you get no data from them. But some have managed to decrypt stuff that is on the server side." (Male, 30)

"And they said that this is cheating; that one is supposed to walk in the nature and find the Pokémon. You're not supposed to look at a map and say "ok this guy with those stats I want this guy", you know. They don't want that. But we don't care, we want the rare Pokémon, and people have a hard time finding them. They really struggle." (Male, 26)

It is evident that the community takes pride of these tools that they have jointly developed to have more say in the co-creation of the gaming experience. Thanks to the 'maps' they seem to have restored some of that agency the game has taken control of.

4.1.4 Transforming Places Through Mapping

Burbules (2004) writes that maps don't only pinpoint meaningful places in a space, but can make places meaningful by pinpointing them. In Relph's (1976) view, places emerge from space as they become distinct through their ability to focus attention, intention and experiences. In short, places are spaces with identity. As the practice of 'mapping' is about simplification, it involves a careful selection of what to portray and what not. This process has an ability to mark certain places as significant and, that way, give them identities. Mapping is, therefore, capable of transforming spaces into places. (Burbules, 2004).

My informant stories highlight several examples of how the map in Pokémon GO as well as the alternative representations of space created by the player community construct places of significance. The first obvious example is about the basis of the Pokémon GO map. As mentioned in the introduction section of my research, Pokémon GO has inherited a big part of its game design from its predecessor *Ingress* (Takahashi, 2015), another location-based augmented reality application of Niantic that takes directly advantage of Google digital mapping capabilities (Wingfield & Isaac, 2016). In practice this means, that the physical locations that inhabit PokéStops in Pokémon GO are based on the locations of places of interest in Ingress, called 'portals'. Moreover, these locations are marked and accepted on the map of Ingress - and consequently of Pokémon Go - through a game-related platform by the player themselves (Scimeca, 2016).

One of my informants (Male, 30) excitedly tells a story about a hidden gem in the city, a place that he discovered near where he lives: three blocks that are designed by a several Spanish architects, based on the work of Antonio Gaudi, another Spanish architect. In the area, there is also a three-meter replica of the salamander shaped fountain that sits at a staircase in Park Güell, Barcelona. He says that he did not know that it existed until it appeared as a PokéStop on the map and his friend pointed it out: *"I think that I found it because of a friend, or a colleague, that used to live in the neighborhood, told me about it. I think it might have been him that created the PokéStop, too."* (Male, 30)

Being Spanish himself, the informant seems to experience special connection to the place he describes as it reminds of everything dear at home. Interesting is, that without somebody creating the PokéStop there, it would have not been found and it would not have become to have any importance to the informant. Marking it on the map made is standout as a separate place in the space, and made it possible for the player to construct it as something beyond a PokéStop. Similarly, Gazzard (2011) found that the ability of Foursquare users to supplement the in-game map by marking places that hold meaning to them rather than just landmarks, the map transformed from a virtual map into a cultural one.

At the same time the informants report occasions where this 'mapping' has been used inappropriately as a hack to progress in the game faster. Informants describe: *"at some point this got people tricking the maps, putting stuff in the map that weren't there, to get things in the game"* (Male, 30); *"It was about marking parks where they weren't, because parks might*

become nests. For example, I would say that this bar is a park" (Male, 23). As Pokémon Go is a location-specific application, the players seem to expect a clear linkage between the virtual places and the physical places of interest. This creation of fabricated places through the map then distorts the reality for fellow gamers.

Another example that came across in the informant stories is about how the WhatsApp groups have divided the space of the game as well as that of the city. The informants report knowing a multitude of WhatsApp groups across Geneva, out of which the biggest can host close to 300 players. Channels as big as this are witnessed to easily lose focus due to the large number of messages measured in hundreds that can arrive within a couple of hours. Added to the confusion, the messages are likely to contribute to myriad of separate, even overlapping discussions happening in parallel within the same message feed. This attempted structure, that mostly resembles chaos, has spurred the creation of smaller groups that only allow discussion related to playing in a certain real-life neighborhood:

"I tried posting in the group of the area where I'm working that I knew that there was nothing in the area itself, but raid only 1 or 2 tram stops away. The administrator asked me to write in another group as 'here we are a group of Meyrin'. He was right, but I wanted to be like 'come on guys, it's just one stop away, so move your ass and let's go!'" (Female, 25)

The representations of space that these small WhatsApp groups function as seem to create each neighborhood as its own place within the game space, by clearly delimiting it to what is found important. As can be concluded from the above verbatim excerpt, the informant acknowledges that limiting discussion around one well-defined area is important for organized play. However, she also seems frustrated about the fact that such a rule imposed by the group makes the neighborhood more confined and separate from each other, affecting what spatial practices she can take part in in the space, as well as the flows of her day – thus, her lived space. Moreover, interesting is that the exact definition of the area is left in the hands of one player, the group admin. As the administrator is able to ban players from the group, he or she also has the biggest power over what is deemed appropriate and meaningful. This expands the admin's agency in the co-creation of the places, spaces and game experience, while other players need to give up some of theirs.

While the two examples above describe mapping as a method for creating places out of spaces, I have also identified an example that tells an opposite story: where mapping and the spatial practice it boosts revert certain historically important places back to mere spaces. As described by Lefebvre (1991) and Malpas (1999), social places and spaces can overlap, permeate and contain each other. One way for them to become connected is through communication and information networks, of which Pokémon GO could be an example of. The below description how an informant experiences a clash of two very different spaces inhabiting the same physical location. On one hand a representational space developed around mourning and honoring a tragedy of historical and societal importance, and on the other a space of entertainment mediated through the game:

"By Nation there's a statue of the Srebrenica Massacre, which was during the dissolution of Yugoslavia. - - And there's a memorial there, and that statue is a PokéStop, you know what I mean? I guess it teaches people about things they might not [know about] – because I think it's called Srebrenica Memorial PokéStop – but it's almost odd that it is, to a lot of people on their phones, just a Stop that they spin. I guess, when you put a monument out it becomes a public thing, but it does seem a bit odd to me." (Female, 31)

Referring to another similar example, she recognizes that it's not the physical appearance of the place that changes, but the social meaning. While the representational space of the in-game map identifies the spot as worthwhile to depict by marking it as a PokéStop, it understates or even completely ignores the meaning that the place in that spot currently carries. Instead of specially recognizing and incorporating its historical importance, it reduces the place into just another PokéStop, that can be found in every other corner around the city. Especially now that a big part of the action in the game revolves around Raids located at Gyms, PokéStops seem to carry quite little meaning on their own. Therefore, as the informant describes, for an average Pokémon GO player it might not represent a place of significance, but just another node in the structure of the virtual space.

My interpretation is, that although the existing social and historically important meanings are not erased, the representation of the space of the game pushes them into the background and reverts the place into a space. As Burbules (2004) says, social place is a temporal concept that can evolve and even disappear over the course of time through activities performed in a shared social space. It becomes apparent that through its map Pokémon GO

has a huge agentic power over the players' social place. This finding is in interesting contradiction to the fact that the game claims to help familiarize the players with their actual real-life urban environments.

Moreover, one could argue that the finding that important places are turned into 'mere' PokéStops reflects the phenomenon that Thrift (1996) calls "in-betweenness", where the digital era turns places into passages of movement. At the side of spaces of places, there nowadays exist so called 'spaces of flows' that emphasize interactive networks over locality (Castells, 2004). Matching Castells' (2004) logic, it seems that while the representations of space related to the game help build a structured view of the reality around the user, they also demolish structure as some places are overrun by the importance of movement between them.

4.2 Theme II: Negotiation Between Spaces of Play and Duty

Several of the informant narratives include a mention of nostalgia and feeling of "being a kid again". However, this sentimental narrative towards the past and the fond memories are contrasted by countless mentions about playing as reverting to "acting like a kid", instead. In this chapter of the second global theme I am to discuss my interpretation about the related spatialities constructed within this contradiction.

4.2.1 That Sweet Nostalgia

Although a game based on fictional characters of an animation film, Pokémon GO seems to have at least as much appeal among an older audience as the children, based on the informant reports. In fact, game's success also in the media is often attributed to nostalgia, especially among Millennials that used to engage with the Pokémon franchise in the 90s. In fact, the informants repeatedly refer to nostalgia as one of the things that got them playing in the first place. They report feelings of affection for the brand of their past, and memories of engaging with it as children. For example, an informant (Male, 24) reminisces on his late grandfather whom he used to get the first Pokémon Gameboy from and play with. Furthermore, the game is often referred to as a way to recall the "good old times". In Denegri-Knott and Molesworth's (2010) framework nostalgia represents one of the possible resource for consumer imagination that feeds digital virtual consumption.

A representational space that the game, thus, seems to mediate is that of reverting to childhood, a momentary escape from adult responsibilities and obligations. As described by an informant (Male, 30), being in that space feels as if "*You are playing the game, going back home, your parents will cook for you… You will just play and go to bed and go to school. You have nothing to care about*." He also uses a parallel metaphor of "being on holidays" for this same sensation. This builds a picture of a Pokémon Go player as a 'romantic consumer'. Whereas a 'craft consumer' is on the quest to acquire skills and achievements appreciated in the real-life society, the 'romantic consumer' looks for an escape from the burden of adult duties (Denegri-Knott & Molesworth, 2010). This sort of avenues of catering to 'escapism' (Jansz & Martens, 2005) have in previous research been continuously associated with the appeal of entertainment such as video games (e.g. Barnett et al. 1997; Kuss et al. 2012) and their abilities to immerse players in their fantastical virtual worlds (Jansz & Martens, 2005). Being a virtual game that, on top, takes the bodily experience to another level compared to video games, it's no wonder that Pokémon Go and its trainers can construct a space that offers an 'as if' experience of 'being a kid again'.

4.2.2 Physical Presence Exposing to Expectations

Despite the mentions about the sweet childhood memories, most of the time the lived space mediated through Pokémon GO seems to be rather different. Even more often than reporting pleasant carelessness, the informants seem to have a negative twist to the experience of going back to being children.

Based on Poster's (2004) work on digital consumption as a driver for cultural change through composition of new practices and agents, Denegri-Knott and Molesworth (2010) discuss that DVC could possess the ability to avoid some of the normative pressures that direct consumer actions in the purely material world. However, this does not seem to be the case in location-aware games such as Pokémon GO. While a player can momentarily sink into this relaxed space of "childhood" or "holiday", the space gets frequently shattered in the pressure of conforming to the deeply-rooted expectations of the modern society for adulthood and related responsibilities.

The informants frequently describe experiences of sudden realizations about a mismatch between the behaviors they take part in while playing the game and what they are expected

of as adults: "*You're grown up, you still have other things to do. - - It's not like back in the childhood when you could play the whole day.*" (Female, 23); "*It was just funny because there were four adult men I could see. And I was like 'we're all adults on our lunch breaks going for it [the raid battle], what are we doing?'*" (Female, 31); "*I was like, 'what am I doing here?'. I mean, I'm 25, not 15 anymore*" (Female, 25). The emergence of this experience of 'what am I doing here?' seems to appear in gaming situations that require physical presence.

Before the emergence of the location-specific technologies and augmented reality, the sphere of pure online consumption let people get used to maintaining a certain anonymity in their online experience (Belk, 2013; Burbules, 2004; Schau & Gilly, 2003). Compared to offline environments where consumers as subject to a wide range of sensory experiences - sight, smell and touch among others - purely online spaces such as video games and online shops strip the experience of some of those elements, even to the advantage of the virtual consumer (Denegri-Knott & Molesworth, 2010). Representing themselves through avatars individuals avoid the exposure to each other's physical appearance and cannot, then, judge each other based on it (Burbules, 2004). As Denegri-Knott and Molesworth (2010) highlight, "*For the online flâneur, there is no embarrassment in entering a luxury store in cheap clothes or arriving at a luxury car dealership in an old Ford.*"

In the context of location-specificity, some of that anonymity must be given up. Being a location-specific mobile game Pokémon GO is, by definition, all about physical environment as the game board (de Souza e Silva, 2006). Its game elements (*see Appendix A*) such as collecting Pokémon, raids and PokéStops urge people to go outside, explore the urban space, and gather players in certain physical locations. This requires physical presence in a real-life location. Consequently, informants report getting exposed to other players' 'real-life' identities. For example, one informant tells in the following way about a situation in which she could attach a face to a familiar pseudonym:

"*It's still quite funny when you go in a Gym, and you can check who's inside and... – you know that all players have their pseudonyms, nicknames, right? So, you have seen this same guy's nickname there at the Gym several times, but you don't know how he looks like. And one day, there are like 17 people around [for a Raid], and you see from the WhatsApp conversation that this guy is there too. You ask 'Who is this guy?'. And somebody would*

say: "It's me". And you would walk over there and say 'okay, we need to talk'. Sometimes it's quite fun!" (Female, 25)

She finds it intriguing that suddenly a character that one has only known as an avatar is occupying the same physical space, to the extent that one can meet and interact with that individual in person. This has resemblance to Humphreys' (2010) speculation that mobile social networks could potentially help users to feel more connected to their urban surroundings, that they might currently find as cold and anonymous. Another one of my informants has a very different vibe in her story. She describes a need to hide from co-workers that have suddenly entered the bus she is sitting in playing: *"Obviously when you're on the bus you see colleagues. And I'm like: 'I'm definitely not playing a game for children, just putting that away'"* (Female, 31). She, then again, seems to assume a certain level of anonymity in the virtual space mediated by the application. However, she experiences breaches to that anonymity through unexpected encounters with familiar faces which are made possible by the material dimension of the space she inhabits when playing a location-specific mobile game.

This exposure to others' physical identities becomes a part of the spatial practices, visible markers of the space that one can perceive in the gaming situations. It is my interpretation that the physical identities of peer players, neighbors, co-workers etc. that the individual encounters when playing in the physical space also become signs that focus player attention to social expectations and makes them assess their own behavior against them. This collection of signs forms a representation of a space where the roles of children versus adults in the society are clearly differentiated, and that carries certain expectations about who should engage in gaming. Consequently, the player is suddenly forced to retreat from the comforting space of childhood as the other space charged with societal expectations for adults gain dominance in their attention span.

One could argue that the switch between the social representational spaces is due to diminished immersion to the space of childhood. The clash of the embodied and virtual experiences mediated through contradicting signs starts to rupture the imagination aspect required for immersion. Furthermore, the discrepancy between the norms and values of the representational spaces reduces the involvement in the space of childhood, basically the reason to care about that spatial experience (Burbules, 2004). This finding seems to support

Licoppe & Inada's (2006) hypothesis, that adding the dimension of materiality back to the virtual experience e.g. through location-aware and augmented reality technologies, can pose challenges in combining the bodily experience seamlessly together with the virtual one.

Players of Pokémon GO seem to balance between these two lived spaces not only in these specific moments of game play but amidst their daily lives with the game: on one hand a space where one experiences a relaxing distraction from the burdens of the daily life; on the other, a space that interferes with their necessary routines, fulfilment of responsibilities and even personal time. As an example, an informant tells a story about how an update to the game, which made special Pokémon called the 'Legendaries' to be available for only for a certain number of weeks, changed the routines of her working days. On top of feeling anxiety of spending her breaks chasing these Pokémon rather than with her colleagues who expect her to socialize with them over lunch, she is eager to get back into her exercise routine:

"I've lost so much time on this game, like really. I have more than one hour of break at work and always I'm spending it just by going from one point to the other by car [to participate in Raids]. - - *It didn't used to be as addictive, because there weren't these Legendaries. But now the game forces you to catch them, because of the limited time duration. Hopefully I will go back to normal next week. Because honestly, it's impressive - I've stopped going to the real gym, the fitness, for three weeks now."* (Female, 25)

The representational space this and all the previous examples from the interview transcriptions seem to mediate is one where adult life is expected to be steady and stable, be about rational and pragmatic choices, and revolve around contributing at home, at work and in the society. This social space disregards gameplay, then again, as a childish, unproductive activity that basically eats away time from everything truly important. This space is an interesting contradiction to the prevailing modern day consumer aspirations to find a spectacle in all the little mundane moments of life (Firat & Venkatesh, 1995).

4.2.3 Distortion of Space

However, not everyone is willing to conform to the requirement of being physically present set by the game. In her work discussing the location-based application of Foursquare as well as the augmented reality game Argh Gazzard (2011) observed that the incentives provided by the apps would sometimes urge the users to develop creative yet questionable practices to overcome the limitation of physical presence. They would look for loopholes left in the game logic and ruthlessly take advantage of the technical defects they might encounter to, for example, perform activities in distance from the actual physical place one is supposed to be in, or even appear to be in several places at the same time. My informants report witnessing or participating in a variety of similar practices. These include 'spoofing' of 'flying', that refers to manipulating the GPS so that the game allows playing from remote locations; logging in with friend's credentials or playing with two phones at once to catch Pokémon on someone else's behalf; and even creating new poke stops wherever one needs them to be.

This kind of tactics could be seen as some players' attempt to restore their agency over their spatial experience and anonymousness that is threatened by location-specificity of the game elements. Instead of being *present* in the natural, embodied and immediate way in the social place (Steuer, 1992), they manage to be *telepresent:* able to participate in the interaction happening in the social space without appearing in the associated physical place in person (Minsky, 1980). It seems to give players who participate in those practices a sense of being freed of the constrictions of the game mechanics and pleasure over their ability to "beat the system".

At the same time, part of the players not following the game dynamics seems to distort the sense of place for others (Gazzard, 2011) and, consequently, diminish their immersion in it. The informant stories are filled with examples where a place meaningful in the game is supposed to be occupied by other players as informed by the representation of the space on the screen, but one just can't see anyone around. This makes them feel a mismatch between what their sensory experiences imply and what the digital interface tells them about the space they are in. They also seem to share a deep resentment especially towards 'spoofers' that tamper with the GPS with third-party applications so that they can fake their physical location and able to access certain social and virtual places of the game from afar. The

following verbatim excerpts from an interview with a male informant highlight his contempt for such a behavior and how it seems to have ruined his experience:

"You see it's says there is supposed to be thirteen people [in the Gym], you look around and you only see ten. These guys, they spoofed from his home, clicked to join, and they're in. - - This destroyed everything, this is horrible. - - I mean, it's the first game I can go out and play with friends, and they've ruined the game." (Male, 26)

"Go catch your rare Pokémon in Japan, get your Kangaskhan in Australia while sitting at home, I don't care. But when I'm doing my gym and I'm moving my ass to the gym wasting time, potions, invested stardust and good Pokémon to get the gyms down…" (Male, 26)

On the other hand, the same informant casually explains how he has developed a way to take advantage of the lag in the game to be able to leave the physical scene while still continuing activity in that specific virtual place. "*What I do, I go in the lobby* [of a Gym]. *When the Raid launches, you can go. You won't be cut off, you can continue playing, killing the boss, catching it*" (Male, 26). He could then virtually still be fighting the battle in the space of the Gym with his team, but physically already elsewhere, nowhere for his team to be seen. Furthermore, he happily spreads the word around the community to educate others about it. It seems that the acceptability of practices that distort the space come down to compliance with the special nature of a location-specific game. If one is even to some extent loyal to the requirement of going outside one's house and moving in the urban area - which makes the game distinct from video games - creative tactics are allowed in the name of optimizing their time and effort.

4.3 Theme III: Making the Most of Both Worlds

The third common theme that emerged across the interviews is about trying to combine the world of the game with players' 'real' lives in an optimal way. First, I will consider the social space that seems to drive this urge not to waste time; and then explore some practices that the informants engage in in with the aim to bind the game into their everyday spaces. Lastly, I argue that this establishes "augmented reality" rather as a representational space than a mere technology.

4.3.1 Optimizing Time and Effort

"*Some people actually ask me if I'm playing the first Pokémon game on the Gameboy now. Of course, I'm not. Because? Because I tried, and realized that ten years ago, you had to be very patient. It's just not fast enough! - - That's in general: in games, in your working life, everywhere. You need to go fast to get everything.*" (Female, 25)

What comes across from practically all the interviews is the informants' complex relationship to time. As portrayed in the excerpt above, the space that the informants daily inhabit seems to be characterized by fast attention shifts, hunger for accomplishments, anxiety over wasting time, and aspiration to optimize. The emergence of this theme itself is no wonder considering the rise of the 'experience economy' (Pine & Gilmore, 1999) around the turn of the millennium, following a trend where consumers lives become centered around a constant search for thrill and enchantment (Firat & Venkatesh, 1995; Pine & Gilmore, 1999). In that sense, and judging by the informant description, both the modern-day Pokémon GO as well as its predecessors on Gameboy are experienced as 'accurate' representations of the spaces of their own times. These different lived spaces (Lefebvre, 1991) or 'heterotopias' combine current time, history and our lives (Foucault, 1986).

To cater their audiences in these changing lived spaces, the games must accommodate. An example of this presented in the interviews is the introduction of the Raid system, that incorporates a time limit. Several informants say that this new element, that creates an exhilarating sense of urgency, has managed to lure some of the ex-players back to the game. The sensation also feeds the need of a player to experience more in less time, "*We* [our WhatsApp group] *are always full! So, we cannot just lose time with people who only try to find a date or something.*" (Female, 25); and to optimize: "*Technically, if you go one and half hours back and forth* [to Lausanne], *it's three sessions of 30 minutes that you lose in Geneva.*" (Male, 26)

Similarly, when an update to the Pokémon GO in-game map and system to express Pokémon's physical location in relation to surrounding PokéStops came out, people report having changed physical practices from random exploration to destination driven movement in urban space. This is highlighted by an informant story where he claims to be wandering around, yet has an end destination in mind and the 'randomness' is limited to letting the

traffic lights decide the route: "*I literally walk randomly, I just decide on whether I want to go to the lake or not. And then when I reach a corner I just turnaround depending on the traffic light.*" (Male, 30). Moreover: "*The game doesn't care if you do circles - it's going to see point A and draw a straight line to point B every 30 seconds. So, the best way to hatch an egg is to walk in a straight line.*" (Male, 26) It is relatively easy to conclude that the game element has both been developed to match the representational space we live in as well as managed to change our spatial practices in it.

The same representational space becomes reflected in the use of the player-generated representations of space, hence the WhatsApp groups and the collaborative online map introduced before. What emerged from the interviews, is that these groups offer an avenue outside the game interface to feed one's constant need to stay up to date about what is happening around. An informant tells about the start of her day at work in the following way:

"*I connect my phone on the web version of WhatsApp on the computer - - and follow all the discussion from my desk. Then, I open the [collaborative] map, just to stay in touch with which [raids] are where*" (Female, 25).

This example not only supports the conception that today's consumers expect to be able to access the digital environments everywhere and anytime (de Souza e Silva, 2006), but also that the meanings of the spaces we inhabit are in extremely rapid motion. So rapid, that the meaning shifts need to be monitored in real time. Green (2002) argues that this "anywhere, anytime" connectedness has already some time ago become a marketing mantra that links mobile devices with references to freedom from geographical limitations. However, on a practical level it does enable users to engage in their favored social spaces - in this case the world of the Pokémon - despite one's physical environment.

Where this mobility has freed people from the physical limitations and given them the ability to organize their activities around compartments of time rather than specific locations (Green, 2002), have location-specificity and augmented reality come to threaten this? In the following I dive deeper into how players construct their lives in the space combining both 'real-world' and digital virtual aspects.

4.3.2 Creation of Alternative Interfaces

In the conclusions of his study of the augmented reality game *Argh* Gazzard (2011) hypothesized that the digital layer of a game might be able to push the physical world into the background of player's attention. Similarly, previous studies on the AR app usage have found it to make the user less aware and more disconnected of the immediate surroundings due to the information overload (Hofmann & Mosemghvdlishvili, 2014). The initial Pokémon GO craze did, indeed, come with many stories in the media about accidents and assaults resulting from players focusing their attention on the game rather than the potential dangers of the urban environment (Pokémon GO Death Tracker, 2017). However, the informant stories reflect that they don't have a possibility nor an interest in being held captive by the mobile screen.

While my informants want to get as much out of the game as possible, they seem to face a series of limitations of the 'real' world that stop them from constantly paying attention to the mobile screen. These include, but are not limited to, formal rules about where one is allowed to use the cellphone (e.g. when driving), social expectations about how to behave in company, and the technical limitations of the device, such as battery length. Although they occasionally might bend the rules to achieve something in the game, that is understood not to be a sustainable practice: "*Now they are trying to avoid the 'car players'. I am one of them. I mean you open the application while driving. And honestly, it's very dangerous*" (Female, 25).

Challenging Celeste Olalquiaga's (1992) idea about "urban psychasthenia", a big portion of their Pokémon GO gaming experience seems to happen offline, or at least outside the screen. For example, one of the informants reminisces about "*going to this nice park beside the lake with a ton of people around, chatting with everyone while playing the game, sitting in the grass, maybe enjoying a drink*" (Male, 30) as some of his most enjoyable moments with the game. Several informants paint similar representations of their lived space with the game. Often these spaces involve not being playing as such but spinning the game absent-mindedly while the main experience would be e.g. about socializing with others. It seems, that the Pokémon Go players don't want to become "locked" within the world of fantasy portrayed on the mobile screen if it compromises their ability to enjoy the real-life world.

Consequently, there are number of practices that the players engage in to overcome the limitations and to make the most of both real and imaginary worlds. Despite the hypothesis of Denegri-Knott and Molesworth (2010) that the material restrictions posed on the digital virtual consumers might hinder them from easily adopting new subject positions in the liminal space, Pokémon GO players seem to have found ways to improve their position as active agents in the creation of the gaming experience. This seems to come down to finding substitutes for the interface of the mobile screen.

Common practice identified among the informants is that of putting the phone upside down in one's pocket, which makes the device go into battery saving mode without closing the application. One can continue receiving notifications that allow them to stay aware of what's happening in the virtual world, while engaging with the reality. This practice seems to be a creative self-treatment to consumers' gnawing need to stay connected all the time (Green, 2002) without appearing to do so:

"On holidays, you don't want to be around a screen you want to be enjoying the place. Enjoying the company, you are with. But if you have data and you have it connected, you can just have it in your pocket and no one will notice. It will not interfere at all with your holiday, your time with people, really nice." (Male, 30)

This alternative representation of space then not only allows the player to keep engaging in the lived space of digital virtual, but also finds a way to privatize the space from other people around. In the informant description above it seems to the social pressure that limits one's ability to rely on the representation of space pictured on the mobile screen. As the physical cue of the mobile phone as well as the practice of using it are now non-visible to other people, they cannot give away the presence of the overlapping virtual space one occupies. This creates a clear division between insideness and outsideness of the space, which Relph (1976) finds as the key lived structure of space, and showcases how spaces also can overlap without permeating each other (Lefebvre, 1991).

Several interviewees even admit having been playing throughout our interview. Two of them introduce me to a simple device the size of a keyring, called GO Plus. Pokémon GO Plus is a creation of Nintendo, that connects to the smartphone via Bluetooth and gives notifications about events in the game, such as nearby Pokémon and PokéStops. It is a one-

button interface where blinking light and vibration alarm player of interesting things in the surroundings, a click on the button allows the player a chance to throw a Poké Ball or spin a PokéStop for items, and a flash of the light helps interpret success of those actions. Every collected item will automatically be added to one's inventory. (Niantic, Inc, 2016) Therefore, GO Plus takes the idea of "pocket playing" even further by also allowing interaction with the in-game elements and reacting on them without picking the phone from the pocket.

The representation of space that communicates one's relative distance to points of interest in the virtual world is, then, reduced to a simple vibration or a blink of a light. Per de Souza e Silva (2006), it is interfaces that determine our perception of the surrounding space. Compared to the rich visual interface of the mobile screen with a location-specific map and augmented reality features, a single button would seem less engaging than the visual representation. But the informant descriptions tell another story.

The narratives build a picture of GO Plus as an actor, an agent, that one can outsource some parts of the game to, as described by an informant: "*You don't have to be on the screen, it [GO Plus] can background play*" (Male, 26). This partnership between human and a device that can perform activities as a subject follows Thrift's (1996) notion of the changing role of machines. Despite having to rely on this kind of "automation" (Male, 30) - that could be linked with Thrift's concept of 'automation of perception' - and partly give up the rich visual experience the screen could provide, the player feels more in charge of the gaming experience and their lives in general. They seem to feel empowered to more easily choose when and where they play, *"GO Plus, it's playing for you. So, I use it when I'm driving in the car" (Male, 26);* to incorporate it in their daily routines, *"I'm doing other stuff like cooking or whatever and it [GO Plus] allows me to be completely focused in this. It gives some freedom back to you" (Male, 30);* and enjoying the real-life world, "*keep looking around, enjoying the views, enjoying the lake, looking at people passing by*" (Male, 30).

Examples above imply that the visual interface of the gaming world is not critical for the representational space it portrays to come across. This is an interesting finding as it partly contradicts with Denegri-Knott and Molesworth (2010) claim that the digital virtual experience is always dependent on its material elements: not only the embodied user but also the screen of the device. Denegri-Knott and Molesworth (2010) argue that

technological aspects such as quality of the graphics and the speed of the internet connection play an important role in the creation of the digital virtual space. If not at a proper level, they have the potential to greatly hinder the spatial experience, and consequently, the actualization of consumer day-dreams.

It seems that Pokémon GO players have found alternative ways beyond the smartphone screen to constantly and discreetly engage with this digital virtual space of fantasy - or at least that of constant thrill. This aspect of leisure rises as important as not all informants feel such a deep-grounded connection to the "universe" of Pokémon, its characters and legends as one of them (Male, 24). While the research by Belk & Costa (1998) on contemporary consumption communities found that the Mountain Man movement as a social space that depended on these same themes of imagination and entertainment, Pokémon GO players don't seem to want to consider their spaces as alternatives to the 'real' ones. Instead, they want them to be combined in an optimal way and blend together in a combined lived spatiality.

4.3.3 Augmented Reality as Lived Space

By definitions, augmented reality is a technology that visually alters the surrounding physical reality with a layer of virtual content (Azuma, et al., 2001) giving familiar places new meanings and identities (Gazzard 2011). However, the AR functionality itself that enables the player to visually place the Pokémon in the real surroundings, rarely gets mentioned in the interviews. At the same time, the transcriptions describe a myriad of examples where the game enriches players' experiences of space and their daily realities - not limited to what's on the screen.

The players seem to experience this digital virtual space of Pokémon as parallel to the material world, something that lives alongside their own mundane lives and, once recognized, can be accessed in multiple ways, anywhere and anytime. One could assume this to be partly works of the common expectations laid by mobile technology: Since the technology has given the consumers the freedom from the shackles of fixed computer networks and the ability to be connected all day, every day (de Souza e Silva, 2006), they expect to be able to integrate the digital virtual world into their daily routines (Green, 2002). In fact, it seems that playing games such as Pokémon GO is not as much about finding time

to relax for a couple of intense hours of gameplay, but the possibility of being enchanted and entertained throughout the day.

Similarly that Steuer (1992) strives to re-establish the concept of "virtual reality" as an experience rather than a set of hardware, I argue, that in the context of consumption of Pokémon GO or similar LBMGs, "augmented reality" is not to be viewed as the mere technology that enriches the surrounding environment with a digital layer of information on the smartphone screen. Instead, it should be used to describe the representational space, so called lived space, in which the game is "augmenting" our mundane lives. Differently put, turning our everyday life into a 'spectacle' (Firat & Venkatesh, 1995).

This touches upon de Souza e Silva's (2006) concept of 'hybrid space', that she claims to combine material and digital environments in a conceptual rather than technological manner - unlike what the concept of augmented reality does. As described in the literature review, de Souza e Silva's (2006) definition for hybrid space emphasizes social practices, mobility and communication in the interface of the material and the digital. Despite bringing sociality into the picture, her conceptualization of hybrid space remains at the superficial level of talking about spaces as containers of practices rather than the multiplicity of overlapping spaces that Lefebvre (1991) understands as social space. The view makes no reference to the lived spaces, nor the virtual - also known as imaginary - consumption that does not necessarily need to be linked to a digital interface (Burbules, 2004). Moreover, her conceptualization does not manage to capture the essence of social space where people are taken as co-producers of spaces, but implies that the spaces are imposed on them by mobile and communication technologies. This doesn't give room for the idea that agency in the production of space is constantly competed over between the man and the 'machine.

Based on this I conclude that a proper term for these social spaces that rise from the digital virtual consumption and drill deep into the flows of our days, is still missing. However, I can agree with Steuer (1992) that scholars should steer clear from categorizing games and technologies based on their physical interfaces but on the lived spaces they mediate: case augmented reality.

4.4 Synthesis

The aim of the research was to investigate how players experience their role in the co-creation of the spaces of their everyday lives through consuming Pokémon Go. This comes down to acquiring an understanding of spaces they engage in, the *structures* that the game imposes on the players, and the *agency* one experiences in creating those social spaces.

What emerges from the synthesis of the three core themes presented above is a constant struggle over agency between the players and the game. The game elements manage to structure the consumer experience to that extent that the informants report feeling empowered on one hand, and the game's puppet on the other. Not only is the experienced lack of agency driven by the game mechanics, but there also seemed to be a certain elementary reservation towards the game company and the accuracy of information it presents to the players. Instead, players seemed to trust their own community more in the co-creation and mapping the reality. To have better ability to structure their realities and, thus, increase their agency, the player community has developed several alternative representations of spaces to supplement the in-game map. Furthermore, this practice of mapping not only portrays spaces and helps navigation in them, but is also able to turn spaces into places by giving them significance and identity - and the other way around. I've highlighted an example of the in-game representational space overlooking the existing social meanings attached to a historically important place, and fading them into the background of the lived space mediated by the game.

Moreover, it was found that the element of physical presence in the game can rob the players of some of the anonymity they expect and expose them to other people's identities and, consequently, to other spaces. Negotiating between several contradicting spaces can result in anxiety and uncontrolled switches between the spaces. An example of this is the following situation that an informant labels as "not sane": "*We had friends coming over and I realized there was a Snorlax on the sightings. I was like 'I'm going for it!', grabbed on my boots and my coat over the cocktail dress I was wearing, and I ran.*" (Female, 31)

Thirdly, it was found that the player agency in combining of the spaces of real and virtual was experienced limited due to external regulations, social code and boundaries of technology. At the same time the players seem to live in a wider societal space is

characterized by a craving for constant thrill yet a fear of wasting time. As a response, the players have themselves - as well as aided by Niantic - developed strategies to keep on playing without the need to look at the screen, to integrate the game into their daily routines and, thus, feel agentic and empowered. This involves interesting practices that seem to assign devices the role of a partner and an individual agent that one can outsource even parts of the experience, and question the role of a rich visual interface in mediating the lived space of the game.

Although the user-generated initiatives explored above have increased their experience of agency and structure, interestingly, they seem to also have been an instance that has given the game a better access into the flows of their everyday lives. The game does, indeed, seem to penetrate and influence their days, even in situations where they don't have access to the representational space the game conveys through the mobile screen. Moreover, while augmented reality as a technology is barely mentioned in the interviews, the multitude of descriptions that highlight the ability of the game to enrich their daily routines makes me suggest considering AR rather as a lived space. No matter if the fight over agency results in a tie or in slight win for Pokémon GO, at least the game has provided the players with pinches of enchantment throughout their everyday lives, similarly to what Denegri-Knott and Molesworth (2010) hypothesized about digital virtual consumption.

5 Discussion

In this part of the research paper I will discuss the secondary research question around gamification by building on the existing literature in that area. This topic is approached by reflecting on the acquired understanding of the lived experience of playing Pokémon GO in relation to the two core theories of gamification.

As shown in the Findings section, the game seems to, indeed, do a remarkable job in adding a little bit of fantasy across all the spaces of their everyday lives. This extends to even those spaces where phone is not acceptable or allowed to be used as a mediator. For example, several interviewees would engage with the game world in the middle of an interview, or find ways to discreetly play without the game disturbing one's holidays, "*your time with people*" (Male, 30). It has its roots planted even in remote places, such as at an informant's home in the mountains, far away from the buzz of the city and Pokémon GO content to go running after. Even though the informant refers to home as kind of a protected area, it is the Whatsapp discussions that find their way there: *"So, it's kind of a break during the evening and night. Although, still the groups are spamming me in the app."* (Female, 25). The game consumes informant's very last thoughts in the evening, and again in the morning during when commuting to work.

As understood by Deterding et al. (2011) gamification refers to application of game mechanics in contexts that are not game related. The researchers summarize thinking behind the practice in two points: the integral role videogames are acquiring in consumer lives and the hopes of spurring similar intensity of engagement in other consumption situations with the help of game-like elements. Based on all the examples above about how the Pokémon GO finds its ways to the mundane routines of our lives, it's justified to say that the LBMG in question corresponds to this definition of gamification.

The services marketing take on gamification developed by Huotari and Hamari (2012) views gamification as construction of playful experiences around a core service to enhance the service and to create more value for the consumer. The value-creation is viewed as a co-creative process, and the quality of the service is crystallized as the 'flow' experienced at the time of game play. This flow experience is tightly linked to the construct of immersion (Csikszentmihalyi & Robinson, 1990, p. 182). The difference between the states is in the

way they engage the player: while a player in flow voluntarily focuses his full attention in the challenge at hand, immersion describes a state where one becomes "physically or virtually a part of the experience itself" (Kiili, et al., 2012). While flow is especially interesting to developers of educational games (Kiili, et al., 2012), immersion seems to suit the context of Pokémon GO.

All the four experiential dimensions of immersion defined by Burbules (2004) can be argued to be present in the game: interest arises from the various quests that it challenges its players with, while the sense of involvement is portrayed e.g. in the informant descriptions of reaching these goals: "*I do definitely feel a sense of accomplishment*" (Female, 31). As the very nature of the game is characterized by embodied movement in space to chase creatures of fantasy, also the dimensions of imagination and interaction are inevitably present. Pokémon Go seems to possess the foundation for a highly immersive experience and, thus, can provide the player added value.

In fact, Huotari and Hamari (2012) find that games, too, can be forms of gamification. This comes with a side note that this is not automatically the case in all service and game mixes. They use an example of Geocaching to exemplify this, and state that gamification is only present if the application (gamifying part) adds value to the experience at the end location where it directs people to, e.g. from a tourism standpoint (core service). I argue, although Pokémon GO seems to take consumers from physical site to another *without* the aim of specifically enriching the experience attached to those locations, this should not be taken as a reason to disqualify this game and service combination from being gamification. It does not imply that the game (gamifying part) is the one taking advantage of the material environment as a source of added value to the game experience. Instead, Pokémon GO seems to be in its own sphere of location-based mobile applications, where the core service should be understood not as the physical space but as the lived space and the daily rhythms of the players. The game elements would be in an important role enriching all the micro moments across the players routinely lives. This implies that the game is also a form of gamification.

Huotari and Hamari (2012) view that the core service does not need to be provided by the party that delivers the gamifying aspect of the service. Also in the case of Pokémon GO the core service – interpreted as the lived space of the players - is socially produced. Considering

all the alternative interfaces and representations of space developed by the user community that were explored in previous chapters, one can also argue that neither is the gamifying part of the service mix solely a product of the game developer Niantic. The players have had their fair share of impact into how the game can be played.

As mentioned in the introduction of my research, neither of the existing definitions would, by default, label LBMGs such as Pokémon GO as occasions of gamification as they are fundamentally games. However, my findings suggest that there would be reason to consider Pokémon GO as a gamified application. Both definitions (Huotari & Hamari, 2012; Deterding, et al., 2011) seem to leave a leeway for consumer's subjective interpretation and social practices developed around the service combination.

All in all, it is my conclusion that location-based mobile games of our time that can root themselves into the lived spaces of our everyday lives and constantly enrich (or 'augment') experiences in them, are an extreme form of gamification. In such form, it's almost impossible to separate the game from the core service. While this gamification can not only entertain, but also empower, it makes players engage in a constant negotiation over their agency in the equation. In between these contradicting spaces one can, of course, contemplate if this gamification imposed on the whole of our daily lives turns life into an everyday spectacle (Firat & Venkatesh, 1995), or if its presence in everyday routines turns game play into a mere daily chore.

6 Conclusions

To summarize, the research objective of the study has been to describe the co-creation of players' everyday spaces through the consumption of the location-based mobile game Pokémon GO. Where previous research on spatiality in the mobile gaming context is either outdated or focuses mainly on the observable consumer behavior, this research investigated the lived experience of an individual and the full spectrum of social spaces. Following Lefebvre's (1991) triad of social spatiality, the research pays attention to not only spatial practice (perceived spaces) but also representations of space (conceived spaces) and representational spaces (lived spaces). Furthermore, the study taps into how agency and spatial structure are experienced and constantly negotiated between the players and the game mechanics in the process of co-creating spaces. This furthers understanding of experienced spatiality within the digital virtual consumption (DVC) that combines elements of the physical and the fantasy.

The three main themes identified among the informant descriptions are labeled as I) Trusting the Community to Fill in the Blanks, II) Negotiation Between Spaces of Play and Duty and III) Making the Most of Both Worlds. The first theme describes players' struggle over agency in structuring their realities and showcases joint community efforts taken to supplement the 'inadequate' representations of space of the game itself. This practice of 'mapping' seems to have implications to the meaningful places of their worlds. The second theme revolves around a conflict experienced between spaces of nostalgia and adulthood. Physical presence is found to have impacts on one's immersion in space, expose to other players' identities and, consequently, cause switches between these spaces of carelessness and responsibility. The reluctance to give away one's anonymity, on the other hand, results in strategies avoiding physical presence which can cause distortion of space.

Thirdly, the players seem to occupy a society-wide space of optimizing to experience more in less time. This has spurred not only a need to integrate the online spaces into the offline ones across players' daily routines, but also new interfaces for constant engagement with the game spaces overcoming physical and social limitations. This union of online and offline spaces has made me argue that technologies such as augmented reality should not be understood merely as interfaces but as lived spaces. Furthermore, the study provides new

understanding also in the field of gamification research. The findings imply that Pokémon GO and similar future location-based mobile games might represent a new form of gamification, where the core 'service' being gamified is, in fact, an individual life.

Limitations of the study include the fact that all the informants belong to the demographic group of Millennials. It should be noted that it is highly likely that the experience of spatiality mediated through hybrid reality applications vary greatly between age groups and generations, because of their different relationships to mobile technologies and constant connectivity. In fact, an interesting area for future research would be to investigate the experiences of middle-aged and more senior players that, based on informant descriptions, seem to represent another major consumer group of Pokémon GO. Moreover, because of the nature of interpretive and phenomenological research that focus on attaining a subjective description of how the phenomena is lived, one should not expect the informant responses to remain the same over time. However, the fact that the interviews have been conducted in English rather than in their native languages might have impacted the depth of description and the narrative choices they made in talking about their experiences. Ultimately, despite the efforts to ensure quality of research, the findings are inevitably subject to the individual interpretation of the researcher.

The study has implications for scholars and managers in a variety of fields such as sociology, consumer culture and gaming, to name a few. For instance, the study represents a good basis for the future game research on the new generation of location based mobile games with augmented reality capabilities - of which Pokémon GO is expected to be only the first major success of its kind. The study should provide game developers a good look into the player mindset, the level of integration they expect between the game and their everyday lives, and the ways they attempt to adopt agency in the co-creation of the gaming experience. A further deep dive into the role that the augmented reality plays in the creation of the spatial experience is recommended as an avenue for future research.

This notion of the game world having access to the micro moments the consumers routinely lives should also prove interesting for marketing professionals that wish to establish their brands across consumers' everyday spaces. Moreover, the research furthers understanding of how social spaces become constructed in the era of digital virtual consumption, and how the growing adoption of location-aware technology impacts the observation acquired in

spatial research on mobility as such. This is a welcome contribution to the colorful field of socio-spatial research that seems to struggle in keeping up with the fast pace of technological development that molds our understanding of the world.

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Appendix A: Glossary of Pokémon GO Terminology

Adapted from Niantic (2017)

Term	Definition
Battle	At rival Gyms, you can battle other teams' Pokémon for a chance at claiming the Gym. Each rival Pokémon you defeat reduces the Gym's Prestige and potentially lowers the Gym's level. Reduce the Gym's Prestige to zero to capture the Gym for your team.
Combat Power (CP)	A Pokémon's attack strength is measured in units of Combat Power. A Pokémon's CP determines how well it will perform in battle.
Dragon Scale	See Evolution items
Defender Bonus	You can receive a daily reward of Stardust and PokéCoins for defending a Gym. The Defender bonus can be claimed at the shop.
Eggs	Pokémon Eggs are items that can be found at PokéStops. Once you place an Egg in an incubator and walk a specific distance, the Egg will hatch into a Pokémon.
Evolution	Evolution is the process of using Candy to change a Pokémon into an individual of an evolved species of Pokémon.
Evolution items	Items used evolve select Pokémon. There are five different types of Evolution items: Sun Stone, Metal Coat, King's Rock, Up-Grade, and Dragon Scale. You can collect Evolution items by visiting PokéStops.
Candy	You acquire Candy by catching Pokémon, hatching Eggs, and transferring Pokémon to the Professor. Candy is used to evolve and strengthen Pokémon
Experience Points (XP)	Your advancement is measured in Experience Points (XP). Increase your XP to advance to higher Trainer levels.
Fainted Pokémon	A Pokémon faints when its HP is depleted to zero. Fainted Pokémon must be revived using the items Revive or Max Revive.
Gyms	Gyms are locations where you can battle the Pokémon of rival teams, or train your Pokémon by battling against the Pokémon assigned there by other members of your team. Gyms belonging to your team are known as friendly Gyms, and Gyms that have been claimed by other teams are known as rival Gyms. Gyms that have not yet been claimed are known as open Gyms.
Hit Points (HP)	A Pokémon's health is measured in Hit Points (HP). A Pokémon with zero HP faints. Use a Revive or Max Revive item to revive fainted Pokémon.
Incense	Incense attracts wild Pokémon to your location with its aromatic scent.
Incubator	Placing an Egg into an incubator allows it to hatch into a Pokémon as you walk.
Lure Module	You can double the amount of XP you earn in a certain amount of time by using a Lucky Egg.
Lucky Egg	You can double the amount of XP you earn in a certain amount of time by using a Lucky Egg.
Medals	Medals are awarded to you for an array of gameplay achievements.

Pinap Berries	During an encounter, you can feed this item to a wild Pokémon to double the amount of Candy you'll receive if your next catch attempt succeeds.
Poké Balls	Poké Balls are items used to capture wild Pokémon. They can be found at PokéStops and purchased in the shop. Great Balls, Ultra Balls, and Master Balls are high performance Poké Balls with a greater ability to catch wild Pokémon.
PokéCoins	PokéCoins are currency that Trainers can exchange for premium items in the shop. Users can also buy PokéCoins in the shop.
Pokédex	Your Pokédex is where you'll find info about all the Pokémon species you've caught or encountered.
PokéStops	PokéStops are locations where you can gather items such as Poké Balls, Potions, and Eggs. A PokéStop will change its shape when you walk close enough. Touch it to interact with it, and spin the Photo Disc to get items.
Potions	There are various Potions you can use to heal Pokémon. These items restore their HP (Hit Points).
Power Up	Using Stardust and Candy, Trainers can power up their Pokémon to increase their CP and HP.
Prestige	Prestige is how a Gym's progress is measured. Prestige is earned when Pokémon train at the Gym. Increase a Gym's Prestige to advance the Gym to higher levels.
Raid Battle	Raid Battles occur when a Boss Pokémon takes over a Gym. Your goal is to defeat this powerful Pokémon. Raids have five tiers of difficulty. The higher the difficulty, the stronger the Raid Boss and the more players you'll need to succeed. If you and your fellow Trainers are successful, you'll be rewarded with special items and a chance at catching that Pokémon.
Razz Berry	During an encounter, you can feed this item to a wild Pokémon to make it easier to catch.
Stardust	Stardust is acquired by catching Pokémon, hatching Eggs, and earning the Defender bonus. It is used to Power Up Pokémon.
Training	At friendly Gyms, Trainers can battle Pokémon assigned there by other members of their team to increase their XP and the Prestige of the Gym.
Trainer	Trainers are people who play Pokémon GO.
Up-Grade	See Evolution items
Wild Pokémon	Pokémon that have not been caught are known as wild Pokémon.