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Social Playfulness - Memorable Family Co-Play Experiences with *Pokémon GO*

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Abstract

Pokémon GO, a very popular location-based augmented reality game, has appealed to a wide range of age groups, and encouraged entire families to play. This paper examines family social interactions in the context of digital gaming through an exploratory qualitative survey study (n=263) of *Pokémon GO* players' memorable experiences. We studied siblings and partners in

addition to children and parents to chart the many forms of family interaction around *Pokémon GO*.

Our results suggest that playing digital games in a family context can facilitate diverse positive experiences and interactions and support family bonding, but this is contingent on a variety of gameplay features. In the case of *Pokémon GO*, a key element was the playful mindset elicited by the game, in turn encouraged by its location-based gameplay. *Pokémon GO* can augment everyday interactions by adding a playful layer to them, since it is easily embedded in and combined with other activities.

Keywords: family, playfulness, Pokémon GO, player experience, location-based games

Introduction

Digital gaming is a common pastime enjoyed by children, adolescents, and adults alike. The social aspects of gaming, such as playing together, discussing games, and participating in gaming communities, are a common reason for people to play games, and games are played with both friends and family (e.g. Eklund, 2015; Lenhart, Smith, Anderson, Duggan & Perrin, 2015; Schiano, Nardi, Debeauvais, Ducheneaut, & Yee, 2017). This study focuses on the latter group, specifically in the context of the mobile game *Pokémon GO* by Niantic (2016).

Existing studies on *Pokémon GO* and social, family-related experiences have often concentrated on the relationship between parents and underaged children (e.g. Lindqvist, Castelli, Hallberg, & Rutberg, 2018; Sobel et al., 2017). However, interactions between parents and children are only one type of family interaction. This study fills gaps in our knowledge about family experiences with *Pokémon GO* by also studying siblings and romantic partners,

as well as adults playing with their own parents. We explore memorable social experiences around the game to discern the ways in which *Pokémon GO* facilitates, supports, and augments family interactions. We argue that a playful mindset is an important part in these experiences.

Pokémon GO: Blending physical and digital

Pokémon, derived from the words "pocket monsters", is a media franchise about collecting Pokémon, a massive variety of fantasy creatures. The franchise, launched in 1996, consists of digital and non-digital games, animation series, movies, and an extensive assortment of merchandise.

In *Pokémon GO,* the player catches, collects, and evolves Pokémon creatures, and battles other players' Pokémon. The game is location-based; the player's location in the physical world is connected to a virtual world through GPS (Global Positioning System). As the player moves around in their physical environment, Pokémon appear in the virtual world. When using the augmented reality (AR) feature of the game, the player is able to see the Pokémon against the real-world scenery on their mobile device. The player can capture these creatures by moving their finger on the device's screen to throw Poké Balls[1] at the Pokémon. The game also rewards the player for different actions, such as hatching Pokémon eggs[2], spinning PokéStops[3], and conquering Gyms[4].

[1] An item with which the player is able to capture the Pokémon creatures.
[2] Players can hatch Pokémon from eggs by walking a specific distance.
[3] A location in the game that provides the player with items and quests. Represents a fixed real-world location, such as a landmark.
[4] Has the same features as a PokéStop, but in addition you can battle against other teams' Pokémon to conquer the Gym for your team. When the ownership of the Gym is on the player's team, the player has the option to add their own Pokémon to gather Pokécoins, which can be used to purchase in-game items.

Background

Why family relationships matter

The family, regardless of its composition, is a basic unit in society, and holds tremendous significance for individuals' well-being and development (e.g. Buehler, 2020). Earlier research, discussed below, shows that close and supportive family relations benefit well-being through different pathways, changing through an individual's life and depending on their life situation.

In the context of children, adolescents, and their parents, close family relations have been shown to protect against risky behaviors such as substance use (Mahabee-Gittens et al., 2011; Moore et al., 2018) increase sleep quality (Tsai et al., 2018) and support psychological well-being (McConnell, Birkett, & Mustanski, 2016; Moore et al., 2018). Family relationship quality in adolescence can have far-reaching impacts: a longitudinal cohort study by Berg, Kiviruusu, Karvonen, Rahkonen, and Huurre (2017) found that poor family relationships in adolescence were associated with economic adversity in mid-adulthood. The importance of family relationships also extends to siblings, as less sibling conflict has been found to be associated with less internalizing (e.g. depression, anxiety) and externalizing (e.g. aggression) problems (Buist, Deković, & Prinzie, 2013).

In romantic relationships, relationship status and quality appear to be connected to subjective well-being. Married individuals in satisfying relationships have reported the highest levels of subjective well-being and exhibit fewer depressive symptoms, while singles have reported the lowest levels of well-being (Dush & Amato, 2005; Kim & McKenry, 2002; Soons & Liefbroer, 2008).

Gaming and family life

Research that addresses families and gaming has often approached the subject in the context of mediation, risks, or problems. Examples of this are studies on gaming mediation strategies (e.g. Jiow, Lim, & Lin, 2017; Martins, Matthews, & Ratan, 2017; Nikken & Jansz, 2006) and studies detailing conflict and communication between parents and their children (e.g. Brus, 2018; Su et al., 2018) or between spouses (Lianekhammy & van de Venne, 2015) in problematic gaming situations.

In contrast, there is a body of research that examines other types of impact digital gaming can have on families. It has been suggested that co-playing digital games can improve family closeness, especially in families with poor family communication (Wang, Taylor, & Sun, 2018). Playing digital games together can also provide ways to connect and maintain closeness with family members by encouraging conversation and self-disclosure (Osmanovic & Pecchioni, 2019; Zhang, 2018), and promote learning through playful socialization (Gee, Siyahhan, & Cirell, 2017) The digital divide between generations can elicit interaction, allowing children to display expertise and regulate adult participation in digital games, and parents and grandparents to initiate dialogue and celebrate a child's competence (Aarsand, 2007; see also Zhang, 2018). This seems to happen not only between children or adolescents and adults, but also between younger and older adults (Osmanovic & Pecchioni, 2019).

Research on playing together with a romantic partner suggests gaming to be a common form of interaction for existing couples interested in games. This shared interest can be beneficial to romantic relationships by facilitating spending time together with a mutually enjoyable activity, whether co-situated or over a distance (Bergstrom, Jenson, De Castell, & Taylor, 2017; Consalvo et al., 2018; Evans, Craig, & Taylor, 2018) Having a shared knowledge of a game

has been described as a form of 'togetherness' that transcends gameplay (Carr & Oliver, 2009). However, co-play can also elicit conflict, such as when players assign blame to their partner for in-game events (Evans et al., 2018). It is apparent that playing digital games together cannot be separated from the rest of the relationship but is instead an everyday way of spending time. Couple co-playing research has commonly featured sedentary games such as *League of Legends* (Riot Games, 2009) and *World of Warcraft* (Blizzard Entertainment, 2004) (e.g. Carr & Oliver, 2009; Evans et al., 2018).

Research on sibling gaming is limited and focused on gaming between young siblings, with little research on adults. Childhood sibling play can differ considerably from play with non-related peers (Go, Ballagas, & Spasojevic, 2012). In a study of children's gaming with siblings, patterns of competition, dominance, and social roles could persist between games (Go et al., 2012). Whether these dynamics carry on beyond childhood is unknown, but earlier research has shown that new sibling roles are negotiated during the transition to adulthood while time spent with siblings lessens (Conger & Little, 2010; Shortt & Gottman, 1997).

To the authors' knowledge there is currently very little research that examines *Pokémon GO* in the context of playing with partners, and very few mentions about playing with siblings (e.g. Sobel et al., 2017; Vaterlaus, Frantz, & Robecker, 2019). There are, however, studies about *Pokémon GO* related to parents and children. Sobel et al. (2017) found that the game enabled joint media engagement, promoted family bonding, and alleviated parents' concerns about gaming, producing experiences and interactions that went beyond the content of the game. Lindqvist et al. (2018) discovered that cooperation and togetherness were highly valued in play between children and parents. According to parents' reports, the physical and outdoor activities encouraged by the game were another positive element (see also Koskinen, Alha, Leorke, &

Paavilainen, 2019b; Militello, Hanna, & Nigg, 2018). The game has been argued to improve social well-being and connectedness in families (e.g. Militello et al., 2018; Vella et al., 2019). The intergenerational appeal of the game has been noted in earlier research: players can have different types of goals in *Pokémon GO*, and the game supports multiple play styles, allowing children of different ages and parents to play together (e.g. Comunello & Mulargia, 2017; Tran, 2018).

Playing and playfulness

Play is often a social activity (Burghardt, 2005). The role of play and playfulness in bringing people together has long been acknowledged (e.g. Caillois, 2001; Huizinga, 1949), and as Stenros (2015) points out, the social situation can be an integral part of play. Play can bring people together in a variety of ways, from sharing a gaming hobby (Carr & Oliver, 2009) to collectively fending off embarrassment (Deterding, 2018).

The concepts of *game*, *play*, and *playfulness* are important to this study. A game is a system of rules, playing, whether as free play or in the context of a game, is an activity, and playfulness is a mindset. While these three concepts are often closely linked, they are separate (Stenros, 2015; see also Makedon, 1984). In the context of our study, *Pokémon GO* is obviously the game. Play refers to both playing the game and playful interactions around the game, and playfulness is the adopted mindset that drives these playful interactions.

The definition of the word game is contested (see Stenros, 2017). In this study, we adopt the widely accepted and in practice useful (Stenros, 2015) definition proposed by Salen and Zimmerman (2004), in which "a game is a system in which players engage in an artificial

conflict, defined by rules, that results in a quantifiable outcome" (p. 81). In *Pokémon GO*, examples of conflicts are the contests between players and teams, the rules are those imposed by the game on the players, and the quantifiable outcome consists of the various achievements the game tracks, for example Pokémon collected, distance walked, and the player's level.

When discussing playfulness, we refer to Apter's reversal theory. In this approach, Apter (1991) identifies two metamotivational mindstates between which people oscillate in their everyday life: the *telic* and the *paratelic*. While the telic mindstate is purposeful, serious, and goal-oriented, the paratelic in contrast is a playful mindset focused on instant gratification, spontaneity, and avoiding boredom (pp. 15–17). A paratelic or playful mindset does not require the social act of game play to be present, nor does playing a game automatically bring about a playful mindset (Makedon, 1984; Stenros, 2015). Instead, an individual can participate in a game, such as a competitive sport, without a playful mindset (Apter, 1991; Makedon, 1984), or adopt a playful mindset in a non-gaming context (Deterding, 2018).

Methods

In this study we explored memorable social interactions players had with their family members while playing *Pokémon GO*, to discern different ways of how digital gaming facilitates family interaction. Expanding on existing research, we drew from a large set of qualitative data and adopted a broad definition of family to chart the many forms of family interaction around *Pokémon GO*. We formulated our research question as follows: how does playing *Pokémon GO* facilitate, support, and augment family interactions?

Our data is a part of a larger data set that was collected through a Finnish online survey focusing on game experiences with *Pokémon GO*. The survey, including both qualitative and

quantitative questions, was launched in September 2016. It was shared on Facebook in 15 Finnish *Pokémon GO* and other related groups. In addition, two Finnish gaming news portals advertised the survey. The survey was online for one week, attracting a total of 2611 valid responses. This data has been used in studies on players' positive and negative experiences concerning the game (Paavilainen et al., 2017) and reasons to start, continue, and quit playing the game (Alha, Koskinen, Paavilainen, & Hamari, 2018). In addition, Koskinen, Leorke, Alha, & Paavilainen (2019a) have researched the topic of players' memorable experiences with *Pokémon GO* more generally, as well as from the point of view of middle-aged players (Koskinen et al., 2019b).

For this study, the open-ended question "Could you tell us a memorable game experience with *Pokémon GO*?" was examined. This question had 2400 valid responses in the original data set. The wording of the question was designed to highlight events that the respondents personally considered important: memories which had stayed with them. The wording 'a memorable game experience', rather than 'most memorable experience' or 'favorite memory' was chosen to leave space for negative memories as well, as they have been understudied in games research (Poels, De Kort, & IJsselsteijn, 2012). This data was originally thematically coded and analyzed for the earlier mentioned study (see Koskinen et al., 2019a).

Instead of considering only parent-child relations (cf. Lindqvist et al., 2018; Sobel et al., 2017; Tran, 2018), we studied families more broadly. We separated from the previously coded data the answers that included one or more of these four family-related codes: *Children (related)*, *Parents*, *Partner,* and *Siblings***.** *Children (related)* had been coded when the respondents appeared to mention their own children or other related children such as nieces, nephews, and grandchildren. *Parents* had been used when the respondent mentioned their own parents or

grandparents, *Partner* when the respondent mentioned their romantic partner, and *Siblings* when the respondent mentioned one or more of their siblings. Since we concentrated on family interaction, we removed responses that only mentioned a family member but no interaction with them, resulting in including 263 responses for the qualitative analysis.

We re-coded and analyzed this separated data set by using thematic analysis. It is a flexible method useful for summarizing key features of large data bodies, and generating unanticipated insights (Braun & Clarke, 2006). To ensure a diversity of observations as well as agreement between observers, both authors coded two thirds of the data independently, forming their own individual codebooks. After discussing and comparing the coding, the codebooks were combined into one and similar codes merged. The remaining third of the data was coded together, and the codebook was iteratively edited during the process. Through a hermeneutic process of analysis, discussion, and re-analysis, the codes were sorted to construct the themes presented in the next section.

Results

Our data featured a wide variety of memorable social experiences around family gaming. Through our analysis, we were able to identify four distinct themes: *Game-centered experiences*, *Embedded gaming experiences*, *Out of the ordinary experiences*, and *Experiences of togetherness*.

Results are presented according to the above mentioned four themes. The illustrative quotes have been translated from Finnish. While spelling mistakes and minor grammar issues such as lacking capitalization in the original language have been corrected in the translation, we have sought to retain the tone of the original responses (e.g. “didn’t” instead of “did not”). The

spelling of *Pokémon GO* as well as specific game terms has been made uniform throughout the data. Themes, example codes included in themes, as well as names of individual Pokémon, have been italicized. After the quote, we have reported the respondent ID. Additionally, while we have not explored the effects of age and gender (see Malik, Hiekkanen, Hussain, Hamari, & Johri, 2020), we have elected to report them for added context.

Our approach is qualitative, but we have utilized some descriptive wording related to quantity. There are different conventions for reporting prevalence in qualitative studies (see Braun & Clarke, 2006); we have opted for this approach to illustrate a substantial majority of responses or individual, exceptional responses in a given theme when we have considered it important.

Game-centered experiences

The theme of *Game-centered experiences* included memories stemming explicitly from *Pokémon GO* gameplay. Although all the responses in the data are somehow related to playing the game, the experiences in this theme were directly connected to in-game elements. These included for example completing an in-game task or finding a specific Pokémon together for the *first time*, playing around with the game's *AR function*, *learning together* about the game, *achieving something together* in the game, or *thrill* or *disappointment* over gameplay events. While game content was central to these experiences, sharing the in-game event with another person typically augmented the experience (see Juul, 2009).

> The moment when *Dragonite* appeared at a lure[5]. I didn't catch it, but luckily neither did my boyfriend. Shared moments of happiness and disappointment remain with you the longest. (ID 1530, female, 26)

[5] An item a player can attach to a PokéStop, making it attract more Pokémon for a given time.

> While sheltering from the rain with the children, a *Drowzee* appeared, and we took several photos with it. (ID 1672, female, 37)

Memorable experiences were not always the result of the respondent's own gaming, suggesting that personally playing a game is not a prerequisite to enjoying a shared gaming experience (Consalvo et al., 2018; see also Sjöblom & Hamari, 2017) *Witnessing happiness* was coded when respondents described witnessing another's, typically their child's, joy, excitement, and pride when they caught specific Pokémon, conquered a Gym, hatched an egg or simply shared their enthusiasm over in-game events.

> I was playing with my son and he caught an awesome Pokémon. We were driving home after hunting and I saw such huge feelings of success and happiness in my son that I was taken aback. My son hollered and whooped because of his fortunate hunting trip. (ID 1188, female, 37)

> I was sitting at my computer, when my little brother, who had been outside, called out to me in a panic that *Blastoise* had appeared in the front yard. I didn't catch it though, but my little brother's excitement was fun. (ID 2539, male, 21)

Embedded gaming experiences

Some memorable interactions happened while gaming, yet were not directly related to gameplay. These memories, that were *not just about gaming*, included other activities in addition to playing *Pokémon GO*, for example dating, picnics, birthday parties or amusement

park days. The theme reflects the ease of incorporating *Pokémon GO* into everyday social activities. The observation finds purchase in previous research (e.g. Vella et al., 2019), and appears to be an important aspect of the game when discussing social interaction.

> *Pokémon GO* date. I went on a first date with my current boyfriend while playing *Pokémon GO*, and we played for six hours together in the city. (ID 619, female, 27)

> Looking for *Mr. Mime* with the children at Linnanmäki amusement park. The children did not know whether to go on rides or play *Pokémon GO*. (ID 966, female, 38)

> We went to the beach with my brother's family to see the Perseids [meteor shower] after eleven at night. There was also a PokéStop at the beach, so we combined watching shooting stars with catching Pokémon :) (ID 1191, female, 35)

Exploration consisted of traveling to different cities to play, sightseeing, and discovering in new places, as well as exploring more familiar surroundings (see Tran, 2018; Vella et al., 2019). While both parents and children and couples reported memorable experiences related to sightseeing, the experiences and the importance of playing the game differed: whereas parents and children specifically went to new locations to play *Pokémon GO*, couples reported using the game to add an extra layer of fun to sightseeing. These experiences underline the spatial nature of *Pokémon GO* gameplay, driven by its location-based mechanics.

> On the day the game was released we played a lot with my girlfriend in a city that I was unfamiliar with. We cycled over 10 km and walked as much. In addition to the time spent together, the PokéStops offered information about the surroundings. (ID 1390, female, 21)

Out of the ordinary experiences

Some memorable moments were out of the ordinary experiences, often playful exceptions to everyday behavior and rules. These experiences included playing outside during *night-time* and *changing children's gaming rules*, and often featured *novel experiences*, such as dashing outside in the middle of a rainstorm in order to catch a Pokémon. These suggest both the paratelic mindstate described by Apter (1991), and playful gaming as discussed by Makedon (1984); in other words, participating in the game in a playful manner. There were also instances of the game *facilitating something new*, such as exercise with family members who did not normally enjoy walking.

> One summer night we traveled 35 km by foot and bicycle chasing Pokémon until the morning hours with childhood friends and my brother. Almost a marathon! (ID 783, male, 18)

> I looked at the app late one evening. The list showed a *Snorlax,* a rare Pokémon missing from both mine and my 7-year-old son's collection. It was past his bedtime, but we couldn't help but run outside in our pajamas to look for it. Even the drizzle did not bother us. In the end we managed to locate *Snorlax* and we both caught it. As we were contentedly walking back home, the man living next

> door to us came running towards us holding his phone. We didn't have to guess what it was all about (even though we had never discussed anything relating to playing). I immediately told him where to find *Snorlax*, he laughingly thanked me, and kept running. (ID 1355, male, 34)

> My partner and I were visiting my mother, and went for a walk. We simultaneously found *Jynx* for the first time, and it felt as if we had actually met this *Jynx* there on the street corner. Funny. (ID 2171, female, 35)

> Just the fact that because of this game I've had my spouse take a walk with me for the first time! They don't do any sports or go out, so it was an accomplishment. One time we were outside during the night for many hours walking and looking for Pokémon. (ID 177, female, 23)

Respondents sometimes reported situations in which they ended up having *unusual interactions* with their family members. Some, mostly adult, respondents played together with their own parents, especially mothers. In some cases, the parents did not even have the game installed, but were still eager to join in. Respondents sometimes felt that their parents might have been more excited about the game than the respondents themselves. This was different from the previously discussed dynamic, in which parents of young children shared the happiness of their playing child. Instead, here it was sometimes the non-playing family member who was more excited.

> I was surprised by how enthusiastic my mother was about playing the game with me, even though we never set it up on her mobile device. During the

> summer it was more common for my mother to say "is it time for a Pokémon chase?" than for me. (ID 741, female, 25)

> I went home to visit my parents. The first words out of their mouths were whether we should go chasing Pokémon. We drove around the city center, and every time I made a sound in the backseat, my father would call out from behind the wheel and ask if we should stop. (ID 1150, female, 23)

Some out of the ordinary experiences revolved around *children's expertise*. In these situations, typical generational dynamics were reversed, and children took the role of teachers and specialists in relation to adult game players (see Sobel et al., 2017; cf. Tran, 2018). In addition to highlighting children's genuine gaming expertise (see VanDeventer & White, 2002), this may also represent adults engaging in play activity from the position of a novice, while allowing the child to control the activity (Aarsand, 2007). However, rather than demarcating gameplay as a non-adult space (cf. Aarsand, 2007), children appeared to be happy to include adults in *Pokémon GO* play.

> My 4-year-old granddaughter took care of all my Pokémon, evolved the possible ones and taught the technique of throwing [Poké] Balls and the use of Razz Berries[6]. (ID 1113, female, 60)

> I went to Suomenlinna [a historical district and popular tourist site in Helsinki] to play *Pokémon GO* and there my nephews taught Gym battles to me, my husband, and my friend. It was fun when we conquered the Gym as a group

[6] An item that you can throw at the Pokémon to make it easier to catch.

> and the under 10-year-olds taught the 30-somethings to play. (ID 2524, female, 31)

Experiences of Togetherness

Many of the experiences respondents mentioned were about doing something together that helped family members bond and strengthened social ties. Some respondents explicitly reported *bonding* with their family members through the game (see Sobel et al., 2017; Tran, 2018). Having a common hobby and sharing a mutual interest, parents felt closer to their children while playing together. This also worked the other way around, when adult players connected with their own parents, with whom for example in one case they had a complicated relationship. For some siblings, playing *Pokémon GO* together was a great means for bonding, in some cases even despite a relatively large age difference. Non-game related *discussions* also took place, sometimes explicitly enabled by the new, shared activity (see Sobel et al., 2017).

> Well for example the first time when we conquered the Gym with my boy, and the first time that our own Pokémon were able to hold the Gym for over 24 hours straight ;) For me the game has meant a new kind of bonding with my children, although we were close before, but with the game a new way of sharing interest in something has emerged, a lot of nice memories and experiences are attached to that. (ID 1145, female, 36)

> [...] Another thing worth mentioning is that my mother, with whom I have an up-and-down relationship with, also plays *Pokémon GO* and the game is one thing in common for us. (ID 2220, male, 24)

> My little brother (aged 23) asked me to join a Pokéhunt, which surprised me because we don't normally hang out together or see each other except sporadically. While hunting Pokémon we ended up chatting a lot and even about the sort of things that we don't usually talk about. (ID 1686, female, 24)

Sometimes a respondent described spending *quality time* together with family members, or sharing a *special moment*. *Quality time* meant families spending leisurely time together in general (see Milkie, Kendig, Nomaguchi, & Denny, 2010), whereas *special moments* were individual, memorable occasions.

> We were out grilling at the nature trail lean-to with my child and grandchild, because there's a PokeStop there! We went up and down the trails with the little one to make eggs hatch! It really was quality time with the family!! (ID 181, female, 55)

> We went on a pub crawl walk together with my spouse and were catching Pokémon and racking up kilometers while getting tipsy. The weather was beautiful and the pizza at one of the locations was good.
> (ID 1436, female, 33)

> While hunting Pokémon, we have been spending more time together with my spouse than in a long time. Something memorable last week was when we were walking during the night on the outskirts of the city while hunting Pokémon, and saw a gorgeous sunset. (ID 644, female, 37)

For some respondents *Pokémon GO* had become a *shared subject* to discuss with their family members, whether face-to-face or via social media. Respondents also mentioned the game eliciting elements of *boasting* and *competition* in their interactions with their family members. These discussions and interactions illuminate how the game's social aspects are not limited to the actual play situation, but extend beyond it.

> We have a WhatsApp group together with my siblings (we live in different cities), where we share our most fun play experiences and pictures of best catches. The game and this mutual whimsy have connected us even more (the age difference between the youngest and the oldest sibling is 11 years). (ID 572, female, 27)

> I went jogging and took my phone with me. When I left, I was one level and 30 000 points behind my son. When I came back, I had passed him in levels, and in points I was ahead by over 20 000. The look on my son's face when I showed my game was the best. (ID 962, male, 43)

> When I got *Snorlax* from a 10 km egg almost right after starting [the game], and how serious competitiveness exploded between me and my spouse. :D Shared time became fun and goal-oriented at the same time.
> (ID 1019, female, 25)

Discussion

Our thematic analysis reveals that *Pokémon GO* facilitated a broad variety of positive social interaction between family members, from shared play between parents and children to

bonding between adult siblings over intimate discussions while playing the game, and shared adult playfulness between romantic partners. The results are supported by previous research (Lindqvist et al., 2018; Loveday & Burgess, 2017; Sobel et al., 2017; Vella et al., 2019) and expand upon it. They indicate that *Pokémon GO*, much like other types of digital games, can be a highly enjoyable shared recreational activity and a way to bond and connect with family members, both within and across generations (see Aarsand, 2007; Carr & Oliver, 2009; Wang et al., 2018).

The positive interactions stemmed from both sharing a mutually enjoyable gaming activity and specific features of *Pokémon GO* itself. Many of the reported positive interactions, such as game-related discussion or enjoying a shared activity, are commonly found around other games and hobbies. However, *Pokémon GO* facilitated not only these interactions, but a wide variety of others, including shared picnics, sightseeing, and even pub crawls. As a pervasive game built around movement in the physical world, *Pokémon GO* enables a different kind of joint experience for families than traditional digital games, often played at home on gaming consoles and computers. The location-based gameplay combined with other gameplay elements helped players adopt a playful mindset, while also making the game accessible and appealing to a broad range of different players.

Based on our data, we argue that a playful mindset (Stenros, 2015) is an important element in the shared enjoyment of *Pokémon GO*. Parents were willing to suspend rules on gaming or bedtimes to keep playing with children and did not express concerns over screen time (see Tran, 2018; cf. Sobel et al., 2017), partners shared romantic sightseeing walks while also catching Pokémon, and adult siblings drove around the countryside looking for fictional creatures. Time spent with the game was described by many players as quality time, and above

all appeared to be *fun*, suggesting the adoption of the paratelic mindstate described by Apter (1991). Many of the memorable experiences described spontaneous action which can be seen as nonsensical when removed from the play context, such as darting outside after imaginary creatures in the middle of the night, wearing pajamas. For adult players, the game provided both an alibi for play (Deterding, 2018) and an extra layer of playfulness (Stenros, 2015) to other activities such as sightseeing or going for walks, thus augmenting existing enjoyable activities and social interactions as well as facilitating new ones (see also Koskinen et al., 2019b).

The most obvious gameplay element crucial to both cultivating a playful mindset and separating *Pokémon GO* from the vast majority of digital gaming, is the game's pervasive (see Montola, 2009), location-based nature. The game is often played outside the home, it encourages players to explore their physical surroundings, and often brings players into contact with other players as well as bystanders (see Montola, 2009; Vella et al., 2019). The game was played together on family picnics, dates, theme park visits, and long sightseeing walks, all of which can be argued to be atypical digital gaming contexts. The location-based gameplay mechanics of *Pokémon GO* prompted shared playful experiences, as players dashed out into pouring rain to catch Pokémon, got lost together, or were caught up in mass events with tens or even hundreds of other players.

As shown by the themes of *Out of the ordinary experiences* and *Embedded gaming experiences*, the ease of integrating *Pokémon GO* into other activities (see Vella et al., 2019) allows the game to facilitate interactions that may be uncommon or even impossible with other types of gaming. Games that demand intense concentration or require the player to be stationary, as is the case with most computer and console games, are far more difficult to combine with

discussion or other activities. This underlines the importance of the relaxed, location-based gameplay: it is not what the mechanic causally achieves, but rather what it enables. By taking gameplay outside and providing our physical world with a digital overlay, *Pokémon GO* becomes pervasive. It blurs the boundary between the domain of play and the domain of the ordinary (see Montola, 2009), promoting a playful gaming (Makedon, 1984) experience. This happens most concretely with the game's AR function, as fictional creatures can be seen in everyday surroundings through the phone's camera, but it is also visible in the ways play is integrated into everyday activities.

As Huizinga (1949, p. 12) states, exceptional, playful situations retain their magic beyond the duration of the game. This was evidenced by our respondents reporting how for example the game was discussed in messages between adult family members, children would show their new Pokémon to parents, and parents of adult players would wait for them to visit in order to play together. These examples suggest that the interactions facilitated by the game extend beyond the immediate gaming situation. We argue that engaging in these playful activities together serves to reinforce social bonds between players, as seen in the *Experiences of togetherness* theme. It may also be especially important for adult players, as play is more uncommon for adults than it is for children, and can even be perceived as embarrassing or inappropriate (Deterding, 2018; Koskinen et al., 2019b). However, embarrassing ourselves together with others in a non-serious manner can build trust and even out status differences (Deterding, 2018).

Pokémon GO does not require intense concentration or mastering difficult controls, making low-intensity participation easier and leaving more space for other activities. In our data, *Pokémon GO* blended seamlessly with other family activities and augmented both them and

family relations, not only between parents and young children, but also between siblings, romantic partners, and adults and their own parents. *Pokémon GO* is what Juul (2009, p. 20) calls a *socially embeddable* game: the game by itself is not the only source of the interesting experience, but players add a significant part to it. Whereas Juul (2009) notes that playing games *against* a friend or family member adds special meaning to the game, it is obvious from our data that the same applies for sharing and collaboration.

Despite the socially embeddable nature of *Pokémon GO*, it needs to be noted that the theme of *Game-centered experiences* suggests that for some players, a considerable part of the game's enjoyment explicitly lies in the game content itself. One of the biggest reasons to continue playing *Pokémon GO* is progression in it, especially collecting Pokémon creatures (Alha et al., 2019). Many of the memorable moments mentioned by the respondents stemmed directly from in-game events, such as capturing Gyms, hatching eggs or catching specific Pokémon. This suggests a delicate balance between *Pokémon GO* offering engaging gameplay with clear goals, yet keeping this gameplay at a suitably low level of intensity. The brand itself seems to be approachable to different generations (see Koskinen et al., 2019b), and is very suitable for this type of game: wandering around and collecting different Pokémon creatures lies at the core of Pokémon stories, regardless of medium.

Although the AR overlay feature of the game added another playful element to the gameplay experience, it mainly appeared to provide minor novelty value instead of profoundly impacting gameplay. To date, other location-based mobile games with successful brand tie-ins, including Niantic's own *Harry Potter: Wizards Unite* (2019), have not been able to replicate *Pokémon GO*'s success. This demonstrates that technological elements such as AR and location tracking are not in themselves guarantees of a game's phenomenal success, but instead the success of

digital games relies on the links between technology, gaming content, and culture (see Mäyrä, 2017).

Our study has some limitations. The data we have examined focuses on the respondents' memorable experiences with *Pokémon GO*. Thus, it may present a more positive view of the game, not accurately reflecting the respondents' broader views or experiences — although respondents were not specifically asked about a *positive* memorable experience. The themes listed in the results section are our interpretations of open responses, and other researchers could conceivably interpret the data differently. This is, however, less of a limitation, and more an integral feature of thematic analysis (see Braun & Clarke, 2006) and qualitative research in general. Despite the large original sample, our results reflect only Finnish families and *Pokémon GO* players. As the survey was primarily shared in *Pokémon GO* online communities and on gaming websites, it is possible that the respondents represent a particularly active and invested segment of *Pokémon GO* players.

The timing of the survey has two-sided effects. Since the survey was conducted in 2016, less than two months after the game was released in Europe, the responses reflect the time of a *Pokémon GO* craze: the phenomenon was at its peak and the game had considerable novelty value. Due to the game's summer release and the visibility of its masses of players in central everyday locations, the conditions were especially conducive to social interaction. On one hand, the responses illustrate *Pokémon GO* at a unique time when enthusiasm for the game was at its highest. In addition, people had ample time to play it during their summer holidays, which likely also contributed to the experience of quality time. Because of this, our data presents a snapshot of gaming circumstances ideal for family interaction. On the other hand, this data

might not reflect the situation now, when enthusiasm for the game has waned. The memorable experiences of current *Pokémon GO* players might turn out to be very different.

Pokémon GO is an example of the potential power of games to bring people together, yet there are several questions that warrant future study: how has the tailing off of the phenomenon affected interactions around the game? Have positive and playful family interactions faded now that the biggest *Pokémon GO* hype has ended, or has it instead been easier to find new games and playful activities to share? Have shared gaming experiences brought about lasting changes in family relationships?

Conclusions

Through a qualitative exploration of survey data, our study suggests that playing digital games, in this case *Pokémon GO*, in a family context can elicit a variety of positive experiences between family members such as parents and children, partners and siblings. *Pokémon GO* is a potent reminder of how digital games can both facilitate new family interactions and augment existing ones. It also underlines the importance of gameplay elements and design approaches that support these interactions: all digital games do not turn into shared family activities, nor are they intended to do so. We argue that *Pokémon GO* succeeds in being one largely due to the playful mindset it is able to facilitate.

Pokémon GO facilitates new family interactions through a new kind of shared playful activity. In addition to providing an engaging gameplay experience, it supports and strengthens interpersonal connections by affording experiences of togetherness and bonding through quality time spent around the game. *Pokémon GO* augments existing family relationships by enabling new and novel, out of the ordinary experiences and interactions with the aid of the

playful mindset it helps to adopt. It also augments everyday interactions by adding a playful layer to sightseeing, family picnics, and generally being outdoors, since it is easily embedded in and combined with other activities.

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