Ambient Play: Understanding Mobile Games in Everyday Life

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Abstract In this chapter, we seek to conceptualize the shifts in mobile gaming through two key rubrics – ambient play and digital wayfaring—to coalesce the multiple forms of domestic, casual and urban play that constitute mobile gaming. This chapter begins with a contextualization through a short history followed by a discussion of pervasive games as vehicles for transforming urban environments into playspaces. We finish with a brief discussion of the *Pokémon Go* phenomenon as exemplary of both the possibilities and limits of contemporary mobile gaming. The chapter brings together three areas often disconnected—pervasive urban games, casual mobile games and domestic gameplay on mobile devices—to think about how mobile play has become ubiquitous and diversified.

1 Introduction

For 12-year-old Esther Madison, mobile games encapsulate everything from the digital urban wayfaring of *Pokémon Go* to the creative world-building of *Minecraft.* For Esther, play in and around mobile devices is a key part of her everyday rhythms, both inside and outside the home. Mobile devices accompany Esther everywhere—at home, at school, on public transport, or hanging out with her friends. In these various forms of mobility and stillness, she plays with her parents and animals physically co-present, as well as friends and strangers virtually co-present via games such as *Minecraft.* Esther's experiences of mobile games echo those participants in many of the sixty Australian households we followed ethnographically over three years.

The Madison family's media practices are indicative of the multiple ways in which mobile games inhabit our everyday lives. As Dean Chan (2008) noted in his study of mobile games in Japan, most mobile games are played in domestic con-

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texts—especially bedrooms. However, with the rise in accessibility of augmented reality (AR) functionality on smartphones, mobile games such as *Pokémon Go* have become increasingly visible and mainstream in urban spaces. Mobile game revenue now accounts for $41 billion of the $91 billion in-game revenue worldwide.

As we will discuss, *Pokémon Go* is one of the most popular mobile games; even though its peak has passed, the game still has 5 million daily active users, has been downloaded 750 million times, generating a total revenue of over $1.2 billion, and accruing $2 million daily. As now "old" and mundane media, *Pokémon Go* has now developed different features to enhance social engagement with place through Raid Boss meet-ups coordinated by Telegram or WhatsApp. This has seen a rapid take up by the elderly in Japan, Singapore and Spain to encourage ageing well attributes in the form of social engagement and exercise.

In this chapter, we seek to conceptualize the shifts in mobile gaming through two key rubrics—ambient play and digital wayfaring—to coalesce the multiple forms of domestic, casual and urban play that constitute mobile gaming. In the first two sections, we provide a definition of these two terms, and then a short history of mobile casual gaming in terms of the mobilization of private space. This is followed by a discussion of pervasive games as vehicles for transforming urban environments into playspaces. We finish with a brief discussion of the *Pokémon Go* phenomenon in terms of what constitutes mobile gaming today (Fig. 1).

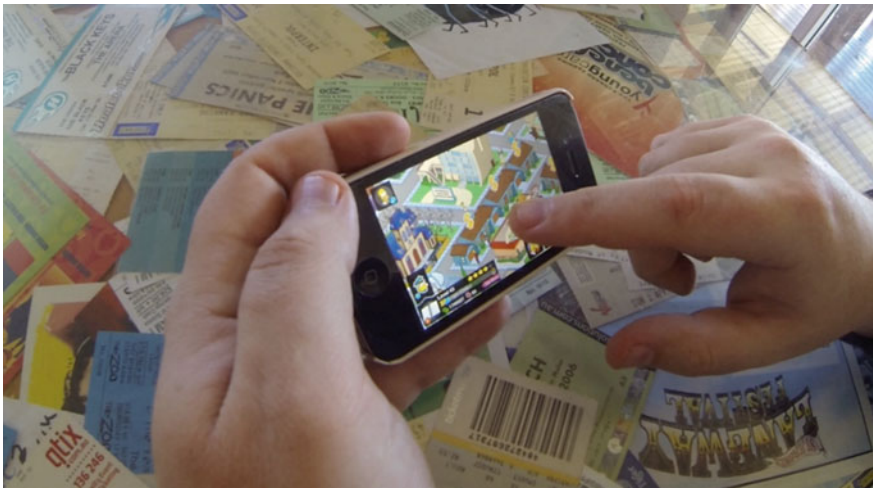

Fig. 1 Understanding haptic screens and mobile games (*Photo* Hjorth)

2 Locating Ambient Play

Understanding play—mobile, haptic, ubiquitous and ambient—is central to understanding contemporary forms of mobile gaming. Play and playfulness have attracted much-needed attention in recent research (Frissen et al. 2015). In *Play Matters*, Miguel Sicart (2014) fleshes out the multiple dimensions of play as an activity, and playfulness as an attitude. Through a variety of tropes derived from politics and architecture, Sicart maps how play and playfulness migrate across all facets of contemporary life. Given the broadness of play as a category that spans cultural practice (Sutton-Smith 1997), animal play to current do-it-yourself (DIY) strategies (Gauntlett 2011), Sicart explores "playfulness" as the key characteristic of contemporary media.

Similarly, Kerr identifies play as a "key concept for understanding the interaction of users with new media" (2006, 69), in which all media interfaces could be said to be part of the "collective playful media landscape" (Frissen et al. 2015, 29). Within this context, we suggest that mobile media and mobile games engender a mode of ambient play, or play that traverses multiple contexts and diffuses throughout daily life. The ambience of mobile media is also deeply entangled within practices of wayfaring across online and offline spaces.

Wayfaring describes the way that knowledge and meaning are produced through walking, movement and traversal. As we move from place to place, we develop an embodied sense of knowing and being in the world. As explored by Hjorth and Pink (2014), contemporary entanglements between the online and offline can be interpreted through the conceptual and embodied metaphor of digital wayfaring. Hjorth and Pink (2014) further revise Tim Ingold's notion of wayfaring as a type of embodied mobility that is both routine and familiar (e.g. commuting) in which knowledge is produced through repetitive movement. Hjorth and Pink repurposed this notion to reflect upon the way in which the digital entangles itself in our everyday practices and movements, especially through mobile media. As we will discuss below, the experience of digital wayfaring is further complicated within a hybrid reality game.

Notions of ambience, as well as atmosphere (Böhme 1993), have taken on a certain currency in recent scholarship, as a way to understand the increased digital mediation of everyday life and how this is reshaping the relation between embodiment and modes of attention. From Malcolm McCullough's *Ambient Commons: Attention in the Age of Embodied Information* (2013) to Paul Roquet's *Ambient Media* (2016), the ambient has been used as a lens that can reveal how contemporary media moves in and out of different forms of engagement with spaces, places, bodies, practices and performances. Here, the notion of ambient play considers how the increasing popularity of mobile gaming lies in its capacity to move between and across co-located and networked spaces, adapting or fitting into the patterns of quotidian life. While ambience has been given significant attention in human–computer interaction (HCI) and the study of urban environments—exemplified by McCullough's aforementioned *Ambient Commons*—it is the bringing

together of ambience and play that can help us to understand the embodied, intimate and affective relations of media in the home.

As we argue elsewhere (Hjorth and Richardson 2016), ambience is about the sensorial and affective texture or atmosphere of a place. As McCullough suggests, ambient awareness reflects "a more general mindfulness", a social and embodied sensibility of one's immediate and mediated surroundings (2013, 13). There are many features of gameplay that are ambient—most explicitly the soundtracks that play a pivotal role in developing the mood, genre, and emotional cues for the player. Without their soundscapes, many games would fail, and yet, like ambience, the importance of sound is also relatively overlooked in game studies despite its pivotal role in player embodiment. Ambience is about the "game feel"—that is, the often-tacit affects and relative "stickiness" of the play (Swink 2008; Isbister 2011).

In a more expansive textural sense, what constitutes ambience within the context of mobile gameplay—especially as it moves across different modes of mediated and co-located presence, and thus different experiences of emplacement—needs to be more robustly developed and articulated. In mobile games, audiovisual ambience is augmented by the haptic, social, networked and locative elements of the game experience. As we have suggested, interpreting mobile gaming as ambient play "contextualizes the game within broader processes of sociality and embodied media practices", and defines play as something that takes place both in and out of games, reflecting broader shifts in everyday cultural practices and phenomena (Hjorth and Richardson 2014, 60).

In this chapter, we bring together three areas often disconnected—pervasive urban games, casual mobile games and domestic gameplay on mobile devices—to think about how mobile play has become ubiquitous and diversified. It is the productive tensions between mobile play in public spaces and domestic spaces that we argue need reconciling if we are to have a nuanced and resilient definition of mobile games. Indeed, understanding mobile games as both ambient play and digital wayfaring requires us to recalibrate notions of engagement beyond dichotomous interpretations of attention and distraction. It enables us to locate play as part of everyday practices which are messy and always in flux, and to comprehend the complex and contested ways play and the playful are activated and practiced across different modalities, spaces and places and forms of embodiment (Fig. 2).

Play is a much contested, interdisciplinary and complex term, especially in the context of contemporary media cultures (Malaby 2009; Sicart 2014; Flanagan 2009). While the cultural dimensions of play have been discussed in detail by Sutton-Smith (1997) and in the context of games by Salen and Zimmerman (2003) who draw upon Huizinga (1955) and Callois, urban play has a long history that can be linked to historical motifs like the fláneur and the 1960s movement Situational International (de Souza e Silva and Hjorth 2009; Montola 2010). In keeping with these historical and socio-cultural dimensions of play, we argue that mobile games have emerged from these earlier phenomena, yet also suggest that place has always involved variable modes of co-presence and ambient play. As Sicart points out (2014), play is increasingly becoming recognized as an integral part of all facets of

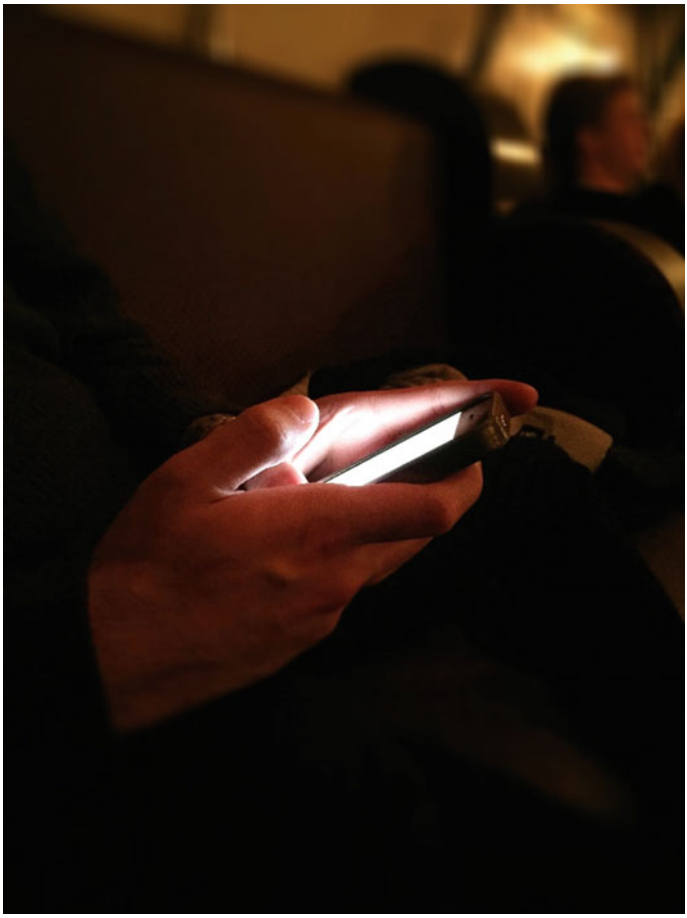

Fig. 2 Waiting and Playing: Oscillating between background, middle and foreground (*Photo* Hjorth)

life and not confined to specific contexts. Play is fundamental to being human and has multiple cultural, social, historical and emotional entanglements.

Ambient play suggests a need for nuanced and dynamic readings of mobile media as it moves in and through place. As Paul Dourish argues, "ambience draws our attention to distractions between focus and periphery… and different ways in which information can be incorporated into an environment" (Dourish 2005, 25). Dourish et al. (2005) encourage us to understand information, ambience and intelligence as cultural categories that are continually contested and reimagined. Ambience, along with interaction, has become a key cornerstone in HCI and especially ubiquitous computing; moreover, both are modes of engagement that are culturally specific and locally informed. For Kjeldskov et al. (2013) the term

"digital urban ambience" is a more refined lens for interpreting the role of mobile devices mediating urban contexts.

In the following sections, we first outline how mobile casual games deploy a form of ambient play through the mobilization of private space into urban environments, and then turn to hybrid reality play as a form of digital wayfaring.

3 Casual Gaming in Public: The Mobilization of Private Space

Genealogically, we can trace the roots of mobile play to the late nineteenth century. As Parikka and Suominen (2006) identify, the various situational contexts of modernization at that time—including industrialization, transportation, and urbanization—enabled particular forms of mobility and movement. These processes entangled changing notions of leisure, spectatorship, and the rise of personalization and individualization. From playing cards to portable chess and the stereoscope, games were part of the Victorian mediascape, which emphasized mechanization, consumption, and mobility. For Parikka and Suominen the mobile phone reenacts a "third place" between public and private space. It is a new form of an old habitual practice already common in the nineteenth century:

> [W]hat is new in this division of space and creation of a place of one's own? Instead of seeing this solely as a trend of digital mobile culture, we argue that this is more a phenomenon that took off with the creation of modern urban space and the new paradigms of media consumption… [T]he pattern of mobile entertainment usage as the creation of a private sphere was already part of the railway culture of the nineteenth century—even if people consumed such media content as newspapers and books instead of digital entertainment. (Parikka and Suominen 2006, n.p)

This mediated closing-off is perhaps more common with the ubiquity of mobile interfaces, prompting Groening to comment that a society of "portable personal electronics is a society in which private space is as physically mobile as the populace and privacy itself is radically mobile" (Groening 2010). For Hjorth, the mobile phone is frequently used as a micro-mobile home or metaphoric caravan, allowing us to carry private space in our pockets and activate it when needed (Hjorth 2012).

Mobile games also exemplify and extend Raymond William's (1975) notion of mobile privatization. Williams coined the term in the 1970s to highlight the deep contradictions around domestic television which traversed and provided access to the public domain but made users feel more "at home". Mobile privatization has been heightened within the rise of mobile media, which has seen a further tethering to notions of the home (i.e. the containment of familiar content and services, and provision of familial connectivity enabled by the mobile device) whilst also setting the user "free" to roam (Morley 2003).

Domestication approaches to technology acknowledge the blurring distinctions between work and leisure with mobile media (Ling and Haddon 2003). One way of understanding this entanglement between work and leisure in terms of contemporary mobile media is through Sicart's notion of "playfulness". Many of the affordances of mobile media apps draw on users' playful engagement with media, and frequently employ gamification strategies, as in the case of productivity, self-monitoring and fitness apps that reward the user with game-like digital objects such as badges, icons and virtual currency.

Wilmott et al. (2017) argue GPS (global positioning systems) enabled smart-watches and smart-bands invite us to redefine our quotidian environments as playful labourious playgrounds where leisure activities are redefined in terms of work and quantifiable data. This blurring of work and leisure practices by mobile media has been highlighted by many cultural scholars (Gregg 2013; Wajcman 1991) and is also encapsulated by Kücklich's (2005) term playbour, which describes how various player practices (such as modding, remixing, sharing and liking) produce social, creative and cultural capital. In these terms, mobile media can be mutually characterized by both ambient play and soft labour (Hjorth 2017).

Mobile media practices are often characterized by paradoxes. They allow us to roam physically but oblige us to be constantly on-call. Yet despite this tethering, our use of mobile screens is quite different to the dedicated attentiveness we give to other screens such as television, cinema and even home computers. We often 'turn towards' them momentarily and for minutes at a time (checking for messages, social media posts or a missed call, playing a level of *Kick the Buddy* while waiting for the bus). Mobile phone engagement is characterized by interruption, and sporadic or split attention betwixt other activities.

This has been recognized by mobile phone game developers who have labelled the mobile player a "casual gamer"; casual mobile games are typically interruptible, allowing play to become intertwined with everyday routines and the existing patterns of daily life. Within the game literature, casual games are often described in terms of their properties; that is, they are designed for casual use, are easy to learn (such as simple puzzle, card, and word games), offer quick rewards and consist of levels of short duration. Thus, casual gaming is often understood as a mode of engagement that requires relatively low-level skills and only sporadic attention up to a threshold of around five minutes. When we ask our research participants to describe their mobile game play, they often pass it off as an incidental distraction, a peripheral and unimportant activity. Some are even embarrassed to admit they play such trivial games.

Yet the pejorative term "casual" actually disguises the substantial investments made by some casual gamers, and oversimplifies an increasingly diverse and rapidly developing mode of gameplay (Taylor 2012). As Mia Consalvo notes, smartphones and mobile touchscreens have put mobile gaming platforms "in the hands of millions of people who would never consider themselves gamers" (Consalvo 2012, 184). Like being "online", games have become normalized, embedded in the many other navigational, informational, productivity and social media apps within our mobile mediascape, all of which change the way we move

through and experience the urban environment. It is this normalization of mobile games, together with their mode of perpetual availability, which renders mobile play ambient, as it increasingly infiltrates our habitudes and routines.

It has been argued that portable music devices such as the Walkman, iPod, mp3 player and mobile phone provide us with a kind of "auditory privatization" of urban space, transforming how we behave in public (Helyer 2007). As Michael Bull has commented: "Mediated isolation itself becomes a form of control over spaces of urban culture in which we withdraw into a world small enough to control" (Bull 2005, 169). For Amparo Lásen (2017), mobile listening also can be understood as a form of public engagement with urban spaces, which has a long history of portable media including the transistor radio, boom boxes, personal stereos (Bull 2000) and the boom car (Bull 2007).

Yet while music players provide discrete sound bubbles or "sonorous envelopes" that allow us to shut out the bustling noise of urban life, the mobile phone is also a communicative and networked device. It is unpredictable and disruptive, puncturing the soundscape as users pepper urban space with their own "noises" of familiarity and intimacy, irruptions of personal ringtones, bleeps and one-sided conversations. Nevertheless, a number of studies have found that much like listening to music, mobile phone use and casual gaming are often used as a proxy "do not disturb" sign when we are alone in public. This kind of behaviour is now one that we all recognize, a mode of media distraction similar to book- or newspaper-reading on public transport, an indicator of privacy well understood by those around us.

When gameplay is mobile and situated in public places, the particular way we engage with the game is determined by the motility and mobility of the pedestrian body, taking place in the interstices of productive and goal-oriented activity. We play casual mobile games while waiting (for a friend, at a bus stop, or for a journey to end), and use our mobile devices as a means managing the bodily agitation of impatience, aloneness and boredom in public, enabling a mobilization of personal entertainment while "being-with-others" (Hjorth and Richardson 2010). In this way the mobile device becomes co-opted into the labour of waiting, filling and suturing the "dead" or "fractured" times and spaces that are part of everyday urban life (Bissell 2007).

Here, the activity of casual gaming enacts a particular kind of "face-work" in Goffman's sense—the deliberate posture we present to the public—yet at the same time it permits an "environmental knowing", or a peripheral awareness of our surroundings in readiness for the busy-ness of life to resume (Goffman 1972). This transient and non-dedicated attentiveness to the small screen—you can "switch off" but "not totally"—allows us to remain alert to the "arrival" which marks the end of waiting, yet also able to cooperate in a kind of tacit social agreement of non-interaction among strangers. For many of our research participants, this kind of engagement with the mobile screen provides safe seclusion from unwelcome interaction in potentially risky situations of co-present waiting, while still remaining "open" or attentive to the proximity of that risk.

As we will explore below, mobile location-based gaming enacts and enables a quite different experience of space and place in urban environments, opening up a hybrid space that coalesces physical location and online networks, transforming urban spaces into ambient and collaborative playgrounds.

4 Location-Based Mobile Games: Transforming Urban Environments into Playspaces

Over the past decade, we have seen a proliferation of location-based games and playful apps that invite us to upload and share our personal and local content in-the-moment. In this way, we enact a hybrid, layered and multifaceted experience of place, presence and communication.

Location-based services typically provide situational information about the urban environment via online databases and media libraries, such that informational changes on the mobile screen change both our navigation and experience of physical space. In this way 'being online' becomes enfolded inside present contexts and activities, as we find our way through the city, search for a good place to eat, drive to a friend's house for the first time, or tag our location on location-based apps such as Foursquare. Location-based mobile gaming is a particularly robust example of this emergent hybrid experience.

Historically, location-based games—referred to as urban games, big games, pervasive games and mixed reality games—emerged out of avant-garde new media art, and involved creative experimentation with new media interfaces, platforms and networks. In the 70s and 80s the New Games Movement, currently experiencing a revival, sought to popularize cooperative and creative urban play, and deliberatively challenged and disrupted the mundane and familiar by transforming public spaces into playful places. Yet although location-based social games were once considered experimental, they have more recently been mainstreamed and commodified, and part of the more general cultural shift towards gamification, where game techniques are embedded into non-game activities. For example, the playful app-based service Foursquare, (with a purported 30 million users) invites users to share first-hand recommendations of 'the best places to go', integrates the tagging of places visited into friend-networks, and offers consumer rewards for the most prolific taggers.

Against this turn towards gamification and commodification, creators of urban and community games such as UK new media group Blast Theory continue to deliberately 'hack' public space, inviting players to experience a de-familiarization of their everyday perceptions of the urban environment. In this way, location-aware and hybrid reality mobile games can transform urban spaces into participatory gameworlds. This potential can be seen in "sandbox" games that encourage an emergent mode of play that often embeds player-centred design and relies on community feedback and content contribution. New York game designer Frank Lantz, who has been involved in such pivotal projects as Pac-Manhattan, argues

that big urban games will play a significant role in the future of gaming. Big games are, for Lantz, "large-scale, real-world games that occupy urban streets and other public spaces and combine the richness, complexity, and procedural depth of digital media with physical activity and face-to-face social interaction" (Lantz 2006).

In his analysis of geocaching, Jason Farman describes the mixed or augmented realities of pervasive location-based games where bodies, networks and material space converge (Farman 2009). Played in over 200 countries, Geocaching is treasure hunt game requiring game players to hide "geocache containers" marked with GPS data in public places; players then "use their mobile devices (from GPS receivers to iPhones) to track down the container, sign the log, and leave tradable and trackable items in the cache" (Farman 2009). In such games, we must seamlessly combine and accommodate both immediate and mediated experience of the world.

In an early incarnation of location-based gaming, the game Mogi, launched in 2003, represented the city of Tokyo both as a map on players' mobile phones and on the web, the latter of which provided computer players with an expanded view of the gamespace overlaying the city, along with both the geographic and game-world location of all players. Mobile and computer players both accessed different views of the gamespace, and collaborated to collect virtual objects and creatures at various locations throughout the city. It is this collaboration that worked to "construct" the hybrid space. Licoppe and Inada described players of the game Mogi as "hybrid beings" who are able to "smoothly integrate the embodied lived experience of the body and the mediated perception of oneself and of the environment" (Licoppe and Inada 2006).

Location-based mobile games generate hybrid experiences of place and presence, requiring the player to integrate their own situated and embodied perception of the world with dynamic GPS-enabled information, embedded within an augmented and networked game reality. As Farman notes, this is one of the characteristics of mobile technologies, which have effectively transformed our experience of presence and absence into perpetual co-presence (Farman 2012, 108). Indeed, we would suggest that mobile media users experience different kinds of presence: co-located presence (while in the same physical space as others), telepresence (while talking on the phone), absent presence (viewing blog or Facebook posts), distributed presence (online multiplayer gaming) and ambient presence (the perpetual sense of others in the network) (Okabe and Ito 2005; Hjorth and Richardson 2014). In this way, location-based mobile games and applications can be said to add a complex dimensionality to place and space.

The consequence of this is that we need to rethink the spatial and place-based experience of being-in-public, as we increasingly integrate online information about our immediate environment into the patterns of urban life and pedestrian movement. Gordon and de Souza e Silva have argued that such hybrid practices generate what they term net-local public space, which describes our movement between "the immediately proximate and the mediately distant" (Gordon and de Souza e Silva 2011). Net-local public space includes those engaging in location-based activities

with mobile devices, those (both co-present and online) participating in this network activity, and those non-participants who are co-located in the urban setting.

For Pellegrino, hybridity is the keyword that describes this "co-constructed dimension of participation" in contemporary media culture (Pellegrino 2010). De Souza e Silva (2006) and Pellegrino use the term hybridity to refer to the way our experience of presence and participation have been transformed in contemporary life, through multiple forms of proximity, both physical and virtual" (Pellegrino 2010, 99). We used to clearly differentiate between the actual and the virtual, and the online and offline, but now these dichotomies have collapsed, such that our attention and sense of presence has become ambient and dispersed.

In what follows we discuss one recent example of location-based augmented reality mobile gaming, *Pokémon GO*, to highlight the hybrid and contextual nature of mobile play as it transforms the urban environment into a ludic or playful space.

5 Pokémon GO

Within the first weeks of its launch in July 2016, millions of people across several countries downloaded the *Pokémon GO* app onto their iOS and Android devices, and entered an augmented reality, wandering their neighbourhoods and public spaces in search of Pokémon and PokéStops, and competing with other players at virtual Pokémon gyms. In this location-based hybrid reality, users are required to move through physical space as they tag, collect, trade, and battle for digital artefacts and player achievements. Effectively, they access a game microworld through their smartphone via the digital overlay of game objects and virtual locations across the actual environment.

Through this augmented layering of the digital onto place, banal and familiar surroundings are transformed to become significant game locations. A Pokémon can be found and caught in one's own bathroom, a gym or PokéStop might be situated at the local library, cafe, or graveyard. The popularity of *Pokémon GO*—touted as the first ever really successful location-based game—has already been the subject of much criticism and celebration. The unprecedented success of *Pokémon GO* in the first months of its release, provides us as urban media researchers with an opportunity to explore and document the experience of *en masse* location-based mobile gameplay. It is clear that the game and its uptake is situated within historical, social, and cultural contexts. It brings together decades of mobile media use, locative arts, gaming practices, and Japanese culture.

For some, *Pokémon GO* is a positive experience—the gameplay evokes twenty-something nostalgia (McCrea 2017; Surman 2009) encouraging physical exercise, facilitating "genuine human-to-human interaction," (Wawro 2016) and effectively enhancing our sense of wellbeing and belonging (Vella et al. 2017) Yet as with mobile media and mobile games more generally, *Pokémon GO* can be flexibly deployed by users as a way to facilitate social interaction, or as a "shield" to avoid engagement with others in public spaces.

For others, the game forces us to reflect on the ongoing gendered, racial, socioeconomic, age-based, and bodily inequities of urban mobility that affect many of us on a daily basis (Isbister 2016). Jordan Frith explores the "commercial potential of augmented reality," and how *Pokémon GO* can be used by businesses to attract foot traffic through the placement of "lures," revealing how digital "objects" can influence our movement and behaviour in the physical world (Frith 2017). As we enact the pedestrian labour of location-based gaming, and interweave digital and physical information, the "spatial legibility" of urban space—or the way urban environments appear as coherent and recognizable patterns—is transformed (Frith 2013) Yet as Miguel Sicart warns, while *Pokémon GO* may open up new possibilities for design and play in augmented reality, we should be wary of the potential for corporate appropriation of public spaces enabled by the game (2017).

Pokémon GO is manifestly ambient, as the game becomes diffused throughout our daily routines, pedestrian movement, and interaction with the familiar strangers populating our neighbourhoods and urban spaces. As we have suggested, in a very fundamental way the mobile interface changes what we pay attention to, and the modalities and duration of that attentiveness. This is clearly evidenced by the wide-scale integration of casual mobile games such as Candy Crush and Angry Birds into our daily lives (Keogh and Richardson 2017). Yet even more significantly and poignantly, our involvement with location-based hybrid reality games such as *Pokémon GO* require us to adopt an "as-if" structure of experience, moving through the environment "as if" it were game terrain or an urban playground. That is, *Pokémon GO* is not just a casual mobile game, for while we might play it in the midst of other daily activities, it also explicitly intervenes with and modifies those activities and relations.

As some media theorists have suggested, there is evidence that games such as *Pokémon GO* may act as catalysts for large-scale changes in people's "destination choice" or "trip distribution" (Colley et al. 2017). In other words, such games have the potential to incentivize "people to do something they rarely do: substantially change where they choose to go" (Colley et al. 2017). Although it is just a game, *Pokémon GO* reveals how our experience of public space is mediated by networked connectivity and increasingly "transformed through collisions of the digital and the urban" (Iveson 2016).

As media become more mobile and playful, and games embed geo-locative data, our everyday experience of place is interwoven with playful virtual environments. Familiar neighbourhoods and urban environments are transformed into ludic spaces. Lammes (2016) has explored the way location-based games (such as RunZombieRun and others) effectively turn maps into "navigational interfaces and gameboards", a description that can equally be applied to *Pokémon GO*. With developments in mobile technologies and the rise of collaborative platforms, making and sharing maps has taken on new playful, ambient, and co-present dimensions.

Yet we are also reminded of the inherently spatial and mobile nature of popular culture and media more generally, and how popular culture forms have always been part of our everyday geographies (Horton 2012, pp 11–12). In bringing together

childhood and play studies with human geography, for example, Horton documents how his young research participants integrated Pokémon play into the structure of their mundane spatial practices and daily space–time routines, effectively remaking their homes, local shops, and neighbourhoods as part of the Pokémon universe (Horton 2012).

In the context of location-based AR games, it is important to highlight the uneven ways players come to the game space and how gameplay is interwoven with our own culture and location. These uneven attributes of PokeStops and Gyms are more of a reflection of the advanced players of Niantic's original AR game, *Ingress*, than the discriminatory intents of Niantic. As Salen Tekinbaş (2017) argues, certain bodies have more latitude to deviate from normalized practices, while others don't. Salen turns to the potential disempowerment and marginalization that affects players of augmented reality games and mobile location-based apps such as *Pokémon GO*. That is, *Pokémon GO* requires users to explore their (sub)urban environment, a form of gameplay that is underscored by issues of racial inequity and the relative freedom people have to move playfully through their neighbourhoods and cities.

Salen asks, what can *Pokémon GO* teach us about mobility, accessibility, race, and privilege? It is clearly more dangerous for some bodies to be in some places at certain times, and there is undoubtedly a hierarchy of risk at work that acts upon our bodies differently, depending on our age, gender, ethnicity, or social milieu. In their study of the racial and ethnic bias of *Pokémon GO*, Colley et al. examine how the game's data and code that "augments" reality often "reinforces preexisting power structures" and "geographic contours of advantage and disadvantage", as PokéStops and game resources are distributed more densely in wealthier areas with predominantly white non-minority populations (Colley et al. 2017).

Since its highly successful launch in mid-2016, *Pokémon GO* has gone through a few iterations. As noted in the introduction, elderly players in Japan, Singapore and Spain to name a few are using the game to combat social isolation and develop healthy exercise routines. Moreover, some of the features of the original *Pokémon GO* have been revised to enhance social meet-ups in urban spaces. Features like Raid Boss battles, coordinated through applications like Telegram and WhatsApp, create improvised events for people to meet-up physically and work together. Some of these Raid Boss battles can have up to 500 people meeting at a physical place (Fig. 3).

Pokémon GO highlights the paradoxical and dynamic role of mobile games in contemporary society. On the one hand, it points to the power of play in contemporary media cultures, and consolidates decades of urban and hybrid reality gaming and place-making experimentation. On the other hand, we might argue that *Pokémon GO* players are narrowly goal-oriented, driven to collect and compete for virtual items as they engage in what is essentially a gamified activity. That is, *Pokémon GO* could be seen as a simplified reduction of a popular but fairly complex trading game that was originally targeted at preteens.

In this view, as appealing as it may be to contain and control an imaginary microworld, *Pokémon GO* is not an open-ended playground full of creative

Fig. 3 *Pokémon Go* Raid Battle meet up in Badalona, Spain (*Photo* Hjorth)

possibility, but rather a transformation of the local environment into a game resource, where urban loci are literally made relevant by the extent to which they are populated by virtual currency, game objects, and rewards.

6 Conclusion

As noted in the introduction, in everyday contexts from homes to public spaces an assemblage of mobile devices and play practices can be found. Far from being mere casual games on mobile phones, what constitutes mobile gaming is as ubiquitous as it is divergent. In this chapter, we have considered the informal and formal practices of intentional and unintentional mobile game play in everyday life through two tropes—ambient play and digital wayfaring.

In the first sections, we have conceptually sketched the burgeoning and dynamic field of mobile gaming in the context of broader cultural and historical trends. As a way of capturing the various worlds of mobile play—domestic, casual and urban—

we brought together two modalities of media practice: ambient play and digital wayfaring. As we have argued, mobile games extend and transform earlier patterns of media use that saw the increasing mobilization of private space. As a casual form of gaming, they have become infused into our daily routines and habitudes.

Finally, we traced the emergence of augmented or hybrid reality gaming, culminating in the mainstream popularity of *Pokémon Go*. In each of these instances of mobile gaming, we can see the coalescence of ambient play—the diffusion of gameplay across temporal and spatial dimensions of everyday life, and digital wayfaring—the incursion of digital information into our experience of place and our movement through the urban environment.

Along with contextualizing mobile gaming historically, we can also see a few emerging fields for the future of mobile gaming research. With global phenomenon such as ageing societies, the demographics and types of games are changing. *Pokémon Go* is one example where it is increasingly being used by the elderly as a means to counteract social isolation and also as a form of exercise. As the future of society moves towards aged communities, the power of mobile games could be used to fuel innovative forms of care, engagement and sociality. In the convergence of technology with future imaginaries, it is perhaps the older examples like *Pokémon Go* or *Minecraft* that could provide solutions in the designing for socially active and more mindful futures.

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