
In the Footsteps of Smartphone-Users

Traces of a Deferred Community in *Ingress* and *Pokémon Go*

Anne Ganzert, Theresa Gielnik, Philip Hauser, Julia Ihls,
Isabell Otto

Abstract

In this article, the authors carry out conceptual and theoretical reflections on smartphone communities by closely investigating two apps: Ingress (Niantic 2012) and Pokémon Go (Niantic 2016). While the games' narratives fabricate reasons for the players to move, it is the Smartphone – understood as an open object between technological and cultural processes – that visualizes and tracks players' movements and that situates and reshapes the devices, the users and their surroundings. A central aspect is that the 'augmented' cities that become visible in the apps are based on the traces of others: other processes and technologies, as well as other players. These traces of practices and movements structure the users' experience and shape spaces. Traces are necessarily subsequent and we therefore develop the concept of a deferred (smartphone) community and analyse its visibility within the apps. By close reading the two case studies, we examine potential "smartphone communities" in their temporal dimensions, as well as their demands and promises of participation. In order to gain a perspective that is neither adverse to new media nor celebratory of assumed participatory community phenomena, the article aims to interrogate the examples regarding their potential for individuation/dividuation and community building/dissolution. In doing so, the games' conditions and the impositions placed on the players are central and include notions of consent and dissent. Drawing upon approaches from community philosophy and media theory, we concentrate on the visible aspects smartphone-interfaces. The traces left by the various processes that were at work become momentarily actualized on the display, where they manifest not as a fixed community, but as a sense of communality.

Introduction

Pokémon Go and *Ingress* are two Augmented Reality Games (ARGs) produced by the North-American software developer Niantic, Inc.¹ Both games appeal to their players to go out and move while the app augments mapped representations of their surroundings.² The ARGs challenge the blurring borders between the physical and the virtual world,³ between game narrative and reality, based on locative media technologies with a Global Positioning System (GPS) (cf. Buschauer/Willis 2013). Shortly after it was launched, *Ingress* was praised in marking a turning point in the changing social acceptance of gaming and virtual realities (Stingeder 2013: 7). In the case of *Pokémon Go*, Niantic was able to fall back on Nintendo's trademark and a pre-existing fan base from various previous iterations of the game's world.⁴

In the public debate and scientific research about both games, the question of community has been one of the core topics: since its release for Android in 2012, *Ingress* has often been discussed in relation to its innovative character and ability to evoke new forms of 'communitarization' (Stingeder calls it "Vergemeinschaftung" in German [2014: 4]). It has been said to harbour the ability "to build transformative and collaborative communities both regionally and globally" (Chess 2014: 1108). According to Karl H. Stingeder (2013: 4), *Ingress* supports 'social condensation' and the 'social communitarization' through the possibility of In-Game-Communication, e.g. game-chat and log windows, and external networking in

- 1 In her 2017 article about "Pokémon GO as an HRG", Adriana de Souza e Silva defines four main aspects of an HRG (hybrid reality game): "mobility, sociability, spatiality, and surveillance." (ibid: 21). While her approach to both games is compelling, the visible alteration of space through interfacing and visualizations is what this article focuses on and the reason for describing the games as ARGs first.
- 2 An Augmented Reality Game builds upon the implication that one's individual environment becomes the playground, or more specifically, the field of play. These games are taking place in what we might call 'reality', but with the difference that this reality is in some way augmented. It can in fact be argued, "that our realities have always been augmented in a fundamental way by our collective and individual imaginaries, and more recently (as exemplified by Pokémon GO), by the instrumental and mediatic extension of our narrative worlds through (mobile) media games." (Hjorth/Richardson 2017: 7)
- 3 The border itself between the real and the virtual space – if it ever existed – is certainly highly questionable. In this regard, we prefer to operate with the term of the 'hybrid space', as the augmented reality and mobile game researcher Adriana de Souza e Silva (2009) has suggested.
- 4 Starting in 1996, many generations of Game Boy games, twenty movies, a long running anime series, and a multitude of merchandise have attracted fans and players worldwide. This might be one of the reasons for the popularity of the ARG, which was so popular in the first weeks after its release that it provoked crowds of players to gather in public spaces all over the world (Chen 2017: no pag.).

communities on Facebook, Google+ or websites with forums that have been set up specifically. Majorek and du Vall (2015) describe *Ingress* as “a tool for [sic!] new kind of socialization; it helps people return to typical interactions and frees individuals from functioning only in the virtual world” (2015: 685). They continue to write about the game’s capability of “restoring coexistence in the real world and of utilizing new technologies to create true bonds” (ibid: 685f.) and include other games of this kind.

Pokémon Go certainly qualifies as a similarly ‘communitarizing’ game, but is more often discussed in a much less optimistic manner, particularly regarding its (social) health impacts. (cf. Clark/Clark 2016: 1, Raj/Karlin/Backstrom 2016). Taking this public visibility of mobile gaming into account, this article asks about new forms of community that arise from the practices and interactions of players. Putting the emphasis on the medial conditions of community means neither investigating (self-regulatory) player communities (cf. Pearce 2009), nor empirically approaching player groups with a shared experience (Ducheneaut et.al. 2005: 407) or values (Egenfeldt-Nielsen/Smith/Pajares Tosca 2016: 182), nor focusing on producer supported online communities (cf. Ruggles/Wadley/Gibbs 2005). Instead, we are interested in the appearances of communality on smartphone displays; a “smartphone communality” that precedes, accompanies, and follows the (crowded) visibility of players. Hence, we seek to explore the medial dimension of “smartphone communities” as well as their demands and promises of participation. In order to gain a perspective on *Ingress* and *Pokémon Go*, that is neither adverse to new media nor celebratory of assumed participatory community phenomena, this article aims at analysing the examples regarding their potential for individuation/dividuation and community building/dissolution. Therefore, our focus lies on theoretic, fundamental research, with the aim that examinations of actual gameplay by researchers in game studies can substantiate the claims made in this article. In doing so, the conditions of the games and the impositions placed on the players demand further elaboration, as do notions of consent and dissent. Prerequisite to any of these considerations are, of course, the smartphone apps, which will be explained briefly, especially with reference to their narrative justification for community building on the one hand and to their impulses for player movement on the other.

Playing the game(s)

“The future is in danger and the world is not what it seems to be” – what sounds like a dystopian surveillance report is in fact the teaser for *Ingress*. In the game world of *Ingress*, the smartphone user, or rather the game player, becomes an agent in a hidden global war, fighting for the survival of humanity, which is endangered by an alien invasion. Therefore, the players have to choose sides between the alien faction, the ‘Enlightened’ (marked as green) and the ‘Resistance’ (blue). To

achieve victory,⁵ each side tries to cover the globe with a net of strings and fields, which they can establish between so called portals that are typically prominent places like historic buildings, artworks in the public space or other exposed sites. These portals are visible within a radar simulation on the smartphone screen that enables the user to only interact with portals in a twenty-meter range.⁶ In order to be able to interact with a multitude of portals, 'it is time to move'. The game logic forces the agents to actually move to the respective locations of the *Ingress* portals [Figure 1]. While moving, players also collect the 'Exotic Matter' (XM), a form of in-game currency that is needed to perform any interaction with the portals and that has been scattered during the alien invasion.

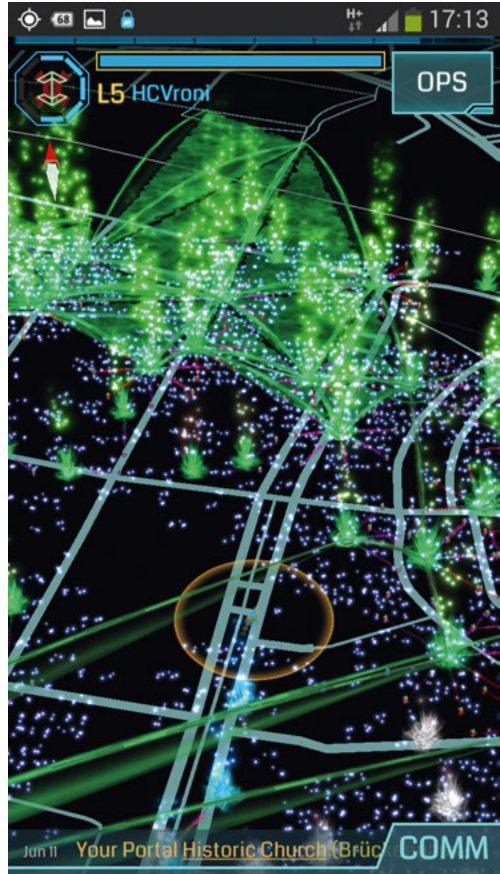


Figure 1: Player/Arrow with scanner radius and linked portals. Screenshot taken from *Ingress*.

The narrative set up of *Pokémon Go* is much less apocalyptic. The players are supposed to take on the role of a Pokémon Trainer and roam their personal local space to find and catch Pokémon – a portmanteau of pocket and monster. In this diegesis, containing Pokéstops, Pokéballs and arenas, the driving idea is in fact to 'catch them all'. To fulfil this goal, players must move through neighbourhoods and cities, different landscapes or countries and look for Pokémon on their map, which appear when a player is close enough to them. Fittingly, the

5 Which is always elusive and seems unreachable, even after three years of worldwide gameplay with over 14 million downloads. Players have deployed 5.64 billion resonators and walked a total of 258 million kilometers (Niantic 2016: no pag.).

6 It is an interesting idea to consider whether a map mirrors the territory all the better as it becomes smaller and more fragmentary (cf. Thielmann 2013: 53).

slogan with which the game is advertised in *Google Play*, is: “Go out and catch a Pokémon in the real world.” The mention of *Google Play*, or the *App Store*, refers to a seemingly simple fact: potential players have to use a smartphone to play *Pokémon Go* or *Ingress*, at least if they want it to play in the way the game is supposed to be played. Without a proper device, players will neither be able to sense a nearby Pokémon, nor catch it. For that matter, the same goes for creating a net for the players’ *Ingress* faction. Furthermore, without movement by the player and the device, the in-app-in-game scanner cannot detect Pokémon or collect XM either. Without movement, players cannot be led to portals or Pokéstops and the apps cannot force them “to visit, revisit [historical sights], and reconsider the value of that space that they may not have noticed before playing the game” (Chess 2014: 1113).

This is precisely why the smartphone, as a device of mobility, is the crucial subject of the following investigation. There is no question that the user can play *Ingress* and *Pokémon Go* with tablets or even desktop computers (provided that they use some hacks to ‘virtually’ move through the space).⁷ However, it is part of this article’s thesis and presumption that the smartphone, its medial qualities, mobility and practices intertwine with any practice the two games can create. The way of using the smartphone both fabricates and is fabricated by the games. Furthermore, it is essential for contemporary individuation processes as well as considerations of locality and community dynamics in relation to the apps.

In order to analyse any of these topics, we suggest (re)focusing on the appearances, namely, that which becomes visible, audible or tangible through smartphone interfaces in the respective app. Display symbols, sounds and vibrations enable the interaction between the user and the app via the gaming interface.⁸ In our research, we have concentrated on the visible side of this interaction and documented the gameplay through screenshots, which were subjected to a close reading process. The insights gained from this are combined with approaches borrowed from community philosophy and media theory. We have structured the following thoughts based on an implicit subtitle that is assignable to both games:

-
- 7 It can be argued that players who play *Ingress* or *Pokémon Go* on their personal computer in their warm and dry home have an unfair advantage over those players who have to walk around by themselves to reach the arenas and Pokéstops and who need good endurance and luck (and battery power) to get hold of the truly rare Pokémon. However, that does not change the fact that they still have an advantage over smartphone players in a smartphone game, even if they never use a smartphone themselves. The smartphone remains relevant as a basic condition and prerequisite, even in such practices of undermining or dissent.
 - 8 Other aspects, such as economical background information about the apps or considerations about the games’ engine or aesthetics, cannot be considered within the scope of this article.

“I was here”. This sentence will be split up and emphasis put on its different constituents to form chapters, and to serve as a guiding expression throughout the following explorations.⁹

I was here

When considering the expression “I was here”, one of the first questions might be, who or what exactly was here? Who is uttering this statement? At this point, there are two aspects that merit a closer look. First, the relation between the user, the smartphone and the app. While, intuitively, these three entities seem to be ontologically distinct, if we draw attention to the processes between them, we can find reciprocal interplay that makes a precise distinction nearly impossible. It is therefore insufficient to claim that *I* might be a *me* who plays the game, because since *I* is now playing the game, it is no longer the same *me* as it was before. *Me* as an *Ingress* or *Pokémon Go* player is another *I* than the *me* as a non-player. Hence, the question of “who was here?” is not so much aimed at a human subject, but at a player subject.

However, the player subject is generally a user being, since it is a human smartphone user who is addressed in the *App Store* or in *Google Play* to download *Ingress*; it is the human *Pokémon* fan who is addressed by the specific subject. It is also the human non-smartphone user who might be motivated to buy a smartphone because he or she has been caught up in the hype and wants to play either game. The player subject that may be the *I* that was here, is therefore not ‘just’ a human user, but the human user with their smartphone. In this aspect, the *I* we describe is for example different to the “I” that utters the “Here, I Used to Be”, which Frith/Kalin (2016) have described as the equivalent of the inscription of place in the context of apps such as *Foursquare*, where a “digital network memory” emerges from individual and collective mobilizing practices. The player subjects as we understand them are a specific aspect of the smartphone users, who “experience and practice the relationship between memory and place.” (ibid: 44) A common denominator of the two concepts is that in each case both the human user and the smartphone are constituted as black boxes in relation to each other: the human user must, for example, have the potential to move and to operate via the smartphone display, while the smartphone has to be able to connect to the internet via mobile sources as well as be equipped with an appropriate operating system that is capable of running the app. The latter point, in particular, leads us to a third constitutive aspect of the player subject: the player subject is always the human user *with* their smartphone *with*

9 “I was here” also marks a first distinction from other community building or participative smartphone applications, where, for example, *Grindr*’s comparable statement would be “Who else is here and gay?” (cf. Liegl/Stempfhuber 2016).

the *Pokémon Go* or *Ingress* app. A statement that is as simple, as it is essential (cf. Latour 1999).

An example is given here to elaborate on this connection: during the gameplay of either app, the user is simultaneously located on a map in the game via the GPS capability of their smartphone and in the street or room they are currently located in. If the body of the player moves in the physical world, an abstraction of this movement (e.g. no height information) is mirrored on the screen. Moreover, the interactions in the game world that become visible on the smartphone display, for example, the hacking of an *Ingress* portal or spotting a Pokémon, affect the players' behaviour in the 'real world': they pause in unusual places, take detours or walk in circles.

Another example of the undeniable interrelation between human user, app and device is when the smartphone runs out of battery and thereby interrupts the gameplay. There are plenty of possible examples for this phenomenon, which we want to describe as a constant shifting between dedication and dependence – a form of relatedness that Antoine Hennion described as *attachement* (2011: 93). As a consequence, we want to refrain from regarding the human user, smartphone and app as three different parties, but rather as one interwoven entity, which permanently individuates (cf. Simondon 1958) through practices in the process of playing.

Accordingly, it is this triad of human user/smartphone/app that we nominate to constitute the player subject. Other aspects are included within this nomination, such as an Internet connection. However, since the 'smartness' of the smartphone contains mobile Internet access, as well as a touchscreen and location services (GPS), these aspects are subsumed under the smartphone. The same applies to the movement that is demanded by the apps, which requires the dual mobility of the human subject and of the mobile device. Similarly, mobility is inherent to both – at least within the discourse of the game. The proposed triad is hence adequate for considering the player subject.¹⁰ It takes important aspects into consideration and is detailed enough to ensure that the different black boxes can be handled without losing important aspects. Finally, it clarifies who might be the source of "I was here".

10 The aforementioned player, who plays the game at home on a personal computer, makes the proclaimed trinity seemingly obsolete, or at least questionable. To run the apps on, e.g., a windows system, an emulator is required, a second program or application that simulates the intended device. The player subject then becomes a conglomerate of human being/personal computer/app/emulator. We can adapt our formula and preserve the trinity since the smartphone can be considered as a kind of computer and both app and emulator can be subsumed as programs. Accordingly, the player subject now consists of human being/computer/program, which is nothing less than the widely known classification of hardware, software and wetware, but with the crucial distinction that the player, who was previously always determined in the demarcation of hard- and software, now emerges in the union.

I was here

The second interesting aspect in *Ingress* and *Pokémon Go* is the map as part of the game design, and – based on this – the trace or mark. Maps form the core for the interface design of both apps. *Ingress* is built upon the data and map material created and provided by *Google Maps*, which itself plays a crucial part in the (inter) action of users, smartphones and apps.¹¹ The following section elaborates on how appearance and address merge with aspects of temporality and community-building in the *was* of “I was here”.

Considering the display visibilities as the object of our investigation, we need to follow the traces of the *Ingress* agents on the screen. *Ingress* players see themselves represented by a small arrow within the map on the screen. Concentric circles emanate from this arrow, similar to the aesthetics of a radar sending radio waves that locate enemies. The Pokémon trainer’s position is also visualized by an avatar on the respective map and, like in *Ingress*, concentric circles scan the surrounding area. However, even though these maps depict streets and buildings and locate in-game points of interest, no other player subject answers the scanner’s signal, at least not instantly. This is because the player always acts alone on the screen. Or, put differently: the avatar that visualizes the player’s position on the map is the only one that appears on the apps’ maps.¹² There are no visualized traces in the actual game play, that the player has to follow, or, put differently, tracing is not practice of playing *Ingress*.¹³ Even if there are thousands of other co-players around, they are never visualized as additional ‘arrows’ on the screen. Instead, they remain invisible, a fact that – in our consideration – highly influences the question of a potential game ‘community’.

In this context, we would like to differentiate between two kinds of potential community: on the one hand, a form of ‘instantaneous’ community that forms physically when players meet, e.g., to plan game actions [Figure 2].¹⁴ On the other hand, a ‘deferred’ community that is strongly characterized by an inherent asynchronous temporality and posteriority. This concept understands the deferred community as a

11 Niantic was started as an internal start up at Google and became an independent entity in October 2015.

12 The avatar can be both the arrow and the human figure. Exceptions for *Pokémon Go* are in the arenas and in the very few dialogue or cut scenes. In *Ingress*, on the other hand, no human-looking avatar appears whatsoever.

13 In an early version of *Pokémon Go*, small paw prints indicated the distance to nearby Pokémon, but it was the number of paws that determined how close they players where, not a trace on the map itself.

14 In the summer of 2017, Niantic added ‘Raid Battles’ to the game, promising a “cooperative social gameplay experience” (Niantic Press Release, June 19, 2017), a development that also warrants further research. Yet this development does not change the fact, that the ‘deferred community’ as it is developed here is a condition for this newer option as well.

necessary condition for the formation (and collapse) of other communities, reaching from small co-present player groups to large online communities.



Figure 2: *Ingress* players coordinating their efforts. Picture taken by the research group.

For example: When an *Ingress* agent interacts with a portal, they have the option of attacking it, if it is an enemy portal; refresh it, if it is a friendly one; or conquer it, if the portal is neutral. If they choose any of these actions, they brand the portal with their agent name. Then, however, as the game logic commands, the agent has to move on, because the main goal of the game is to establish links between the portals and to connect them to create fields. In other words: a player leaves their mark or trace on a portal and only becomes visible to another player *afterwards*, as an absence that was previously present. Subsequent players can then respond to this trace in different ways: acknowledge it, support it, erase it, or overwrite it. Because this can only happen as a temporarily succeeding action, however, any potential community of *Ingress* players it is eternally split up and fragmented through time. This is a deferral that, according to Nancy (2007), is necessary, because the process of interplay and therefore of individuation would otherwise stop.

In summary, appearance is highly tied to disappearance in both apps, such that we can only read the traces of an absent presence of community (cf. Krämer 1998). Nonetheless, there is in fact an ongoing process of tracing, acknowledging, erasing, and overwriting. However, the very object of investigation – the visibility on the smartphone screen – is a rather fragmented actualization in this constant interplay. The trace is therefore strongly connected to updates of the GPS coordinates, which are visualized on the *Ingress* screen as coloured marks (portals) or an arrow (the user-smartphone-app-subject) and on the *Pokémon Go* screen as

coloured pols (Pokéstops) and an avatar that represents the player (the user-smartphone-app-subject). We understand traces as inscriptions or markings within the game, rather than literal traces that are actively or unconsciously left by the players through their game play.

In *Pokémon Go*, for example, such a trace is left when a player captures an arena. To do so, a Pokémon from the player's stock has to be left in that arena, which also results in further rewards in the form of Pokécoins and Stardust. This reward is maximized with every Pokémon the player places. To mark an arena therefore requires giving up on a previously acquired possession. This mark, just like the hacked *Ingress* portal, is temporary, as other players will subsequently claim the arena for themselves. When they succeed, they find the previously placed Pokémon. They can also see an image of the player's avatar that was previously present, including their trainer name and current level. Leaving a Pokémon in an arena is therefore also a message to a succeeding addressee. It is a delayed "I was here" and also means: "This arena was mine for a certain period". If the succeeding player is in the same team as the previous player, the capacity of the arena can be expanded by adding a further Pokémon. This means that every captured arena will inevitably either be reclaimed or shared. If the currently occupying team does not frequently return and maintain their claim to an arena, it can constantly change its tenancy.¹⁵ Players can therefore only leave traces of having been there and having taken part. Similar to a tagger, who sprayed their name or the sentence "I was here" on a wall, but does not own the building, the Pokémon trainer does not own the arena. They can only claim it temporarily with the knowledge that their mark will be overwritten in the not-so-distant future.

Yet the traces can be read for as long as they exist and, as it stands with most traces, it is also hard, or even impossible, not to leave a mark. This holds even more true when we extend the understanding of trace to the gestures of using the smartphone interface. It can then be said, that "[t]he gesture that transpires in real time at the mobile interface is a deictic 'doing' that produces a fleeting trace in the form of activating a click or moving a map view." (Verhoeff/Cooley 2014: no pag.) 'Tracing' the movement of throwing a Pokéball by swiping the finger on the touch screen towards the Pokémon is such deictic trace. These traces are conditional for the deferred community as it is understood here and most gesture in the gameplay can be interpreted like that. Furthermore, the traces that highlight the deferral emphasize a different facet. Even if a player chooses not to leave a Pokémon behind after clearing an arena, a mark is left showing *that* someone has in fact cleared the arena, even though it is unclear who. In the case of *Ingress*, the former owner of a portal receives a message stating that his or her portal has been attacked or taken over by 'an unknown player'. Similarly, the information on

15 Here, effects of repetition and seriality are of the essence. For example, Winkler (2015: 96) writes: "The everyday notion of traces at least has a quantitative side. And a privileged reference either to the mass or to the *repetition*."

when this (re)marking took place is not legible, only the fact that it has happened in the recent past is implicit. The *was* in “I was here” hence clearly refers to a past, a before, and relates to a present or future, depending on the standpoint. Nevertheless, the player who left the mark *was* present and *now* they are absent: this is what, by definition, turns the mark into a trace (Krämer 2007: 14).

As much as players are incapable of not leaving traces, they are also incapable of not following the inevitably existent tracks of their precursory co-players, e.g. in the case of an arena. Whereas Pokéstops allow a different reflection on temporal deferral, as they may all have been previously visited by other players, this does not become visible on the screens. Instead, a player’s individual “I was here” is directed at themselves: when a player visits a Pokéstop, they can tap the respective symbol on the map. An icon then appears with a picture of the site where this specific Pokéstop is located in relation to the player’s surroundings, such as a clock tower, a statue, a fountain or a unique building. This picture is framed by a blue circle, which turns purple after the icon is swiped and the obtainable items have been collected. For as long as a Pokéstop’s icon on the map stays purple, the player cannot spin it again for the next five minutes. [Figure 3] To the player, a purple symbol therefore means that they themselves have been there recently. The icon, as such, is visible to all players, but the purple “I was here (within the last five minutes)” is individual to each player’s screen. The deferred temporality of the *was* is nonetheless similar, whether “I was here” addresses the players themselves or subsequent players.

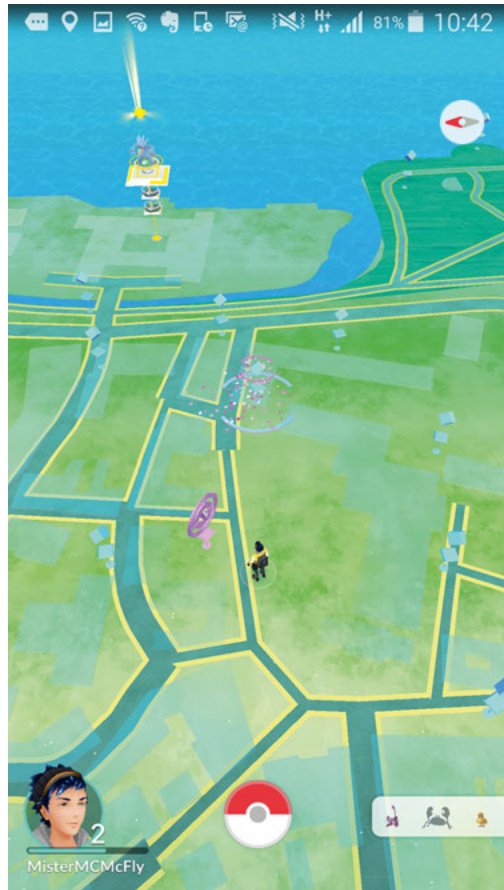


Figure 3: Avatar, Pokéstops, Arena etc. as visible traces of gameplay on the map. Screenshot taken from *Pokémon Go*.

I was *here*

In order to complete the contemplations of this article's guiding expression, we now have to ask about the place or space to which the *here* might refer in the context of the two apps. At least three features characterize this *here*: the maps, GPS tracking, and the position of the players as they relate to their surroundings.¹⁶ On a first level, the maps in both apps function as typical maps, in that they are guiding devices that lead players to Pokéstops and portals. In a second step, these maps reveal themselves as interfaces that mediate between the player and the game. On a third, and perhaps most important level, the maps become a tracking device that enables players to identify the traces of those who were *here* before them.

Generally speaking, *here* refers to the place from which the utterance occurs and – as an act of deixis – to the *I* who speaks. But what does *here* mean in the context of *Ingress* and *Pokémon Go*? At first glance, the situation again seems simple: arenas, Pokéstops, and portals are sites that are only visible when mediated by the map on the smartphone display. However, they also relate to a 'real' place which existed in the actual terrain before being integrated and augmented by the apps. Hjorth and Richardson describe this relationship as "a transformation of the local environment into a game resource, where place is literally made relevant by the extent to which it is populated by virtual currency, game objects, and rewards." (2017: 10) Due to this relation between the in-game places and the actual territory, and the relationship to the user-smartphone-app-subject who 'utters' this relation by referring to a place both in the game and in the territory, the *here* becomes concrete. To make matters even more complicated, those 'real' places are also coordinates on a virtual map. In the context of the apps, the crucial aspect of the *here* is not that a player is at a specific topographic location, but that the (mobile) device sends and receives the corresponding GPS data. Only then can the game's maps appear in full with all the aspects mentioned above. Furthermore, only then can the app determine if the players have reached a defined range and are therefore able to interact with a specific virtual object on their maps (cf. Hui 2012). It does not make any difference to the apps whether this GPS data is in fact the result of a mobile device having moved with its user or the result of a GPS hack.¹⁷ In

16 The movement of players could certainly be measured and marked for example in a real-world diorama as Hägerstrand (1982) suggested. However, neither this methodology, nor comparable approaches from time geography, are applied in this article.

17 Potential circumventions of the gameplay (practices like hacking or modding) have to be considered elsewhere. Most developers, for example, do not offer the players to the option of freely manipulating their GPS data and, instead, demand that they change their data output by physically moving. Accordingly, the so called *softbans* are not a penalty imposed by the program code but rather a sanction imposed by the developer.

any case, the assumed topographic *here* becomes a topological *here* (see below). It is no longer a player with a smartphone at a 'real' location that matters, it is an individual mobile GPS receiver in relation to a common static GPS location. It is a matter of a virtual *here* that can be updated in different ways with a player subject that individuates in accordance with their state of being, past and present, and their location.

The attached and interwoven assembly of user, smartphone and app permanently individuates itself through the practice of playing, as was stated earlier. However, regarding the processes of mapping, tracing and tracking it becomes more and more questionable if this term is not missing the plurality of a deferred community which is (dis)connected through time via the trace on a map. For this reason, we would like to introduce the additional term of *dividuation*, coined by media scholar Michaela Ott (2015). Ott describes in-/voluntary forms of participation and reciprocal entanglement in which we find ourselves in the media ecology of the 21st century. Following Ott's train of thought, the map should be considered less topographically, but rather more topologically. A map can never be thought of as a self-contained entity, but rather a dividuated phenomenon of 'being-in-relation', like the community that is at work on it. This dividuation is, unlike sharing, to be understood as a form of involuntary participation that applies to modifiable as well as fixed maps.¹⁸ Consequently, it is in this constant oscillation between individuation and dividuation where an asynchronously deferred smartphone community temporally manifests. In this regard, every pixel or shining dot on the screen, every short sound or GPS signal and every user who leaves their 'virtual' mark with their smartphone is part of a highly interwoven complex of dividuated player subjects. It is therefore all the more important to take the described appearances seriously and to adequately trace individuation and dividuation practices.

"I was here" can thus only ever be considered as processual and non-static. Every instance of the sentence can change its status at any time and inevitably will do so. The transition of the personal, temporal and spatial determination is constitutional for the technological condition: exemplified by the GPS, on which both *Ingress* and *Pokémon Go* are based upon. Localization through GPS is made possible by a network of satellites that is dispersed across the Earth's orbit. A connection to four satellites is required to obtain a correct topographic position. The data that are continuously sent by those satellites are their individual identifier: the exact time based on their embedded atomic clock and their specific coordinates (cf. Misra/Enge 2006). Put differently, the satellites send an endless

18 *Ingress* players used to be quite literally be able to work on the map, as they had the option of adding new portals that other players could then interact with. In September 2015, this was suspended by Niantic, due to the large amount of submission (Niantic Post 2015) and the formerly changing map was stabilized by the cooperation. Consequentially, *Pokémon Go* players never had the opportunity to shape the map of the game other than leaving their traces as it is intended by the game.

stream of “I am here” to Earth. This signalling happens in so called ‘real time’. Nevertheless, time has passed once the signal reaches earth (a fraction of a second) and the satellite’s position is no longer the same. This means that when the signal is received by the GPS navigation device, the satellite’s “I am here” has already changed into an “I was there”. This temporal shift indicates that GPS tracking inevitably entails following a trace from the past, even though this past might barely be distinguishable from the present. Playing *Pokémon Go* or *Ingress* means that the player does not merely navigate an avatar across a digital map by moving through actual territory. The players also follow their own digital path, which enables the emergence of a game through technical conditions that accumulate with the smartphones in the players’ hands. In this sense, each player subject is in the process of a deferred individuation as it is part of a deferred community of multiple in-/dividuated player subjects.

I was here *at work*

When we read a statement like “I was here” tagged in a public bathroom, the place it refers to is pretty obvious. The tagger might have vanished, but their place of having-been-at-work¹⁹ persists. The same situation can be described for the *Pokémon Go* arenas. The most recent player might be still around, but doesn’t need to be. Either way, their work is still present, for much longer than any other trace. To be more accurate: it is not the player who leaves a trace, it is their being-at-work which is inscribed.²⁰ The readers of this trace enter into a temporarily delayed connection with the worker, such that the deferred community that was described above emerges between traces of absent players and present players who were reading these traces while simultaneously leaving new traces of their work themselves.

Unbeknown to many *Pokémon Go* players, they also follow the footsteps of countless *Ingress* players before them, who worked on establishing sites for portals in their maps. Niantic took advantage of their pre-existing data when they created the interactive map for *Pokémon Go*.²¹ The *Ingress* players’ work, their mobile

19 We understand ‘work’ here as strictly differentiated from ‘labour’. What we want to describe has nothing to do with the ‘free labour’ of users in digital cultures, as described, for example, by Tiziana Terranova (2000). We rather want to refer to ‘at work’ as a process of making something.

20 These work traces do not have to be intentional. Footprints in sand are not necessarily intentional either, but nonetheless they are the marks of a person’s feet and can be read as the trace of the person as such.

21 A benefit for those users who play both games is the fact that areas where the amount of XM that is present is particularly high coincide with areas in which Pokémon will appear. However, running both games at the same time can significantly drain both battery power and data allowance.

devices, GPS tracking and cameras, plus the *Ingress* app, which is operated by the developers with their computing systems, find their way into *Pokémon Go*, where all this work is then visible on the screen and readable as a trace. [Figure 4] It is this trace, we argue, which leads to a different kind of community, which derives from those common online or offline communities, where players meet to play together or share their experience to gain advantages or generate new codes of behaviour, may it be in videos or in discussion forums or special game wikis. This different kind of community occurs beforehand and in a belated fashion. In the present, it is almost invisible. However, it leaves traces on the smartphone screen as momentary actualizations, not as a fixed community but as a sense of communality. We consider this communality of a deferred community to be essential to understanding the impact and popularity of ARGs like *Ingress* and *Pokémon Go* and for future considerations of mobile ARGs and related smartphone applications.

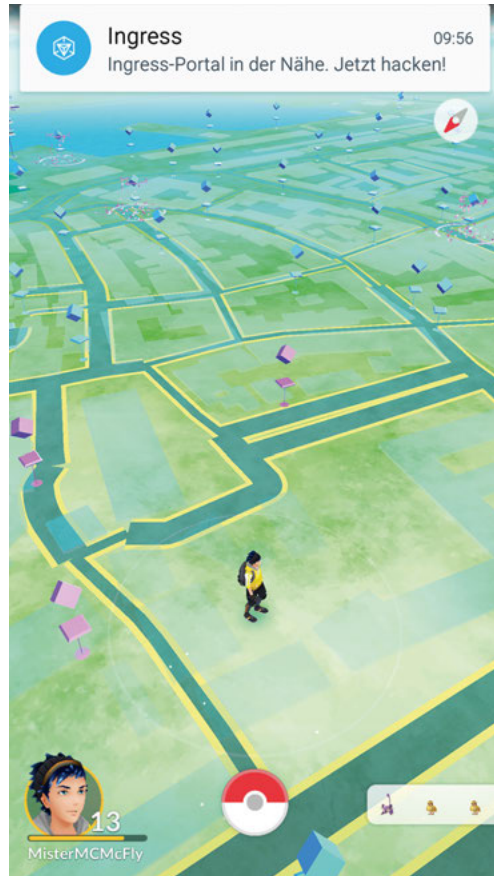


Figure 4: Push Notification “Ingress Portal Close by” overlaying the *Pokémon Go* screen. Screenshot taken from *Pokémon Go*.

References

- Buschauer, Regine/Willis, Katharine S. (2013): *Locative Media – Medialität und Räumlichkeit*, Bielefeld: transcript.
- Chess, Shira (2014): “Augmented regionalism: Ingress as geomediated gaming narrative.” In: *Information, Communication & Society* 17/9, pp. 1105–1117.
- Chen, Joyce (2016): “Pokemon Go: Crowded Stampedes Through Central Park After Rare Vaporeon Sighting.” In: *Us Weekly* July 16, 2016 (<http://www.us>

- magazine.com/celebrity-news/news/pokemon-go-crowd-stampedes-after-spotting-rare-pokemon-w429525).
- Clark, Alexander M./Clark, Matthew T.G. (2016): "Pokémon Go and Research: Qualitative, Mixed Methods Research, and the Supercomplexity of Interventions." In: *International Journal of Qualitative Methods* 15/1, pp. 1–3.
- Davis, Michael (2016): "Ingress in Geography: Portals to Academic Success?" In: *Journal of Geography* 116/2, pp. 89–97.
- De Souza e Silva, Adriana (2009): "Hybrid Reality and Location-Based Gaming: Redefining Mobility and Game Spaces in Urban Environments." In: *Simulation and Gaming* 40/3, pp. 404–424.
- De Souza e Silva, Adriana (2017): "Pokémon Go as an HRG: Mobility, sociability, and surveillance in hybrid spaces." In: *Mobile Media & Communication* 5/1, pp. 20–23.
- Ducheneaut, Nicholas/Yee, Nicholas/Nickell, Eric/Moore, Robert J. (2006): "'Alone together?' exploring the social dynamics of massively multiplayer online games." In: CHI 2006 April 22–27, New York: ACM, pp. 407–416.
- Egenfeldt-Nielsen, Simon/Heide Smith, Jonas/Pajares Tosca, Susana (2016): *Understanding Video Games*, New York: Routledge.
- Frith, Jordan/Kalin, Jason (2016): "Here, I used to be: Mobile media and practices of place-based digital memory." In: *Space and Culture* 19/1, pp. 43–55.
- Hennion, Antoine (2011): "Offene Objekte, offene Subjekte?" In: *Zeitschrift für Medien und Kulturforschung* 2/2, pp. 93–109.
- Hinsliff, Gaby (2016): "Why Pokémon Go Really is a National Health Service". In: *The Guardian* July 22, 2016 (<https://www.theguardian.com/commentisfree/2016/jul/22/pokemon-go-health-service-silly-mobile-phone-game-parenting-holy-grail>).
- Hjorth, Larissa/Richardson, Ingrid (2017): "Pokémon GO: Mobile media play, place-making, and the digital wayfarer." In: *Mobile Media & Communication* 5/1, pp. 3–14.
- Hui, Yuk (2012): "What is a Digital Object?" In: *Metaphilosophy: Special Issue on Philosophy of the Web* 43/3, pp. 380–395.
- Krämer, Sybille (1998): "Das Medium als Spur und als Apparat." In: Sybille Krämer (ed.), *Medien, Computer, Realität. Wirklichkeitsvorstellungen und Neue Medien*, Frankfurt am Main: Suhrkamp, pp. 73–94.
- Krämer, Sybille (2007): "Was also ist eine Spur? Und worin besteht ihre epistemologische Rolle? Eine Bestandsaufnahme." In: Sybille Krämer/Werner Kogge/Gernot Grube (eds.), *Spur. Spurenlesen als Orientierungstechnik und Wissenskunst*, Frankfurt am Main: Suhrkamp, pp. 11–33.
- Latour, Bruno (1999): *Pandora's Hope. Essays on the Reality of Science Studies*, Cambridge: Harvard University Press.
- Liegl, Michael/Stempfhuber, Martin (2016): "Intimacy Mobilized: Hook-Up Practices in the Location-Based Social Network Grindr." In: *Österreichische Zeitschrift für Soziologie* 41/1, pp. 51–70.

- Majorek, Marta/du Vall, Marta (2015): "Ingress: An Example of a New Dimension in Entertainment." In: *Games and Culture* 11/7-8, pp. 667–689.
- Misra, Pratap/Enge, Per (2006): *Global positioning system. Signals measurements and performance*, Lincoln, MA: Ganga-Jamuna.
- Nancy, Jean Luc (1991): *The Inoperative Community*, Minneapolis: University of Minnesota Press.
- Nancy, Jean Luc (2007 [2001]): *Die herausgeforderte Gemeinschaft*, Zürich: diaphanes.
- Niantic: Three Years of Ingress and the Road for Niantic, January 28, 2016 (<https://www.nianticlabs.com/blog/three-years/>).
- Ott, Michaela (2015): *Dividuationen. Theorien der Teilhabe*, Berlin: b-books.
- Pearce, Celia (2009): "Communities of Play. Emergent Cultures in Multiplayer Games and Virtual Worlds." Cambridge, MA. and London: The MIT Press.
- Pias, Claus (2000): *Computer Spiel Welten*, Munich: Sequenzia.
- Raj, Marc Alexander/Karlin, Aaron/Backstrom, Zachary K. (2016): "Pokémon GO: Imaginary Creatures, Tangible Risks". In: *Clinical Pediatrics* 55/13, pp. 1195–1196.
- Ruggles, Christopher/Wadley, Greg/Gibbs, Martin R. (2005): "Online Community Building Techniques Used by Video Game Developers." In: Fumio Kishino/Yoshifumi Kitamura/Hirokazu Kato/Noriko Nagata (eds.), *ICEC 2005: 4th International Conference*, Sanda, Japan, September 19–21. Proceedings, Berlin/Heidelberg: Springer, pp. 114–25.
- Simondon, Gilbert (1958): *On the Mode of Existence of Technical Objects*, Paris: Aubier.
- Stingeder, Karl H. (2013): "Googles Augmented-Reality-Game 'Ingress'." In: *medi-enimpulse* 4/2013, no pagination.
- Terranova, Tiziana (2000): "Free Labor: Producing Culture for the Digital Economy." In: *Social Text* 18/2, pp. 33–58.
- Thielmann, Tristan (2013): "Auf den Punkt gebracht: Das Un- und Mittelbare von Karte und Territorium." In: Inga Gryl/Tobias Nehrdich/Robert Vogler (eds.), *geo@web. Medium, Räumlichkeit und geographische Bildung*, Wiesbaden: Springer, pp. 35–59.
- Verhoeff, Nanna/Cooley, Heidi Rae (2014): "The navigational gesture: Traces and tracings at themobile touchscreen interface." In: *Necsus #5: Traces* (<http://www.necsus-ejms.org/navigational-gesture-traces-tracings-mobile-touchscreen-interface/>).
- Winkler, Hartmut (2015): "Traces: Does Traffic Retroact on the Media Infrastructure?" In: Marion Näser-Lather/Christoph Neubert (eds.), *Traffic. Media as Infrastructure and Culture Practices*, Amsterdam: Brill Rodopi, pp. 92–113.