My Grandpa and I "Gotta Catch 'Em All."
A Research Design on Intergenerational Gaming Focusing on *Pokémon Go*

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Abstract. Intergenerational gaming is gaining growing scholarly attention, as it can be considered a means of fostering relationships between younger and older players, a way of overcoming real or perceived differences between generations, a chance to (re)negotiate norms and roles, and a way to question age-related stereotypes. In this paper, we conduct a literature review on intergenerational gaming and pervasive gaming and present a research design to conduct an intergenerational gaming study focusing on *Pokémon Go*. We aim at exploring gaming practices, role negotiations, and the presence/absence of age-related stereotypes. To reach our goals, we elaborate and evaluate different research methods and tools, discussing their strengths and weaknesses and designing further research steps.

Keywords: Intergenerational gaming · *Pokémon Go* · Location-based mobile gaming · Augmented reality games

1 Introduction

In recent years, scholars have started devoting growing attention to intergenerational gaming practices, while video gaming itself is undergoing a "mainstreaming" process, which is enabled by the diffusion of both specific devices and new gaming practices.

Intergenerational gaming can be considered a means of fostering relationships and connections while producing positive emotions for both generations [1]. As underlined in the context of social network games, playing together among family members can enrich the family's existing relationships [2] and overcome (or positively exploit) real or perceived differences in digital skills among young and older people [3], thus contributing to playful interactions, appealing to both grandparents and grandchildren [4–6].

In this paper, we analyze intergenerational gaming practices, focusing on *Pokémon Go*, which has been massively adopted worldwide by both young children and adults. From a conceptual perspective, we rely on literature analyzing intergenerational gaming and focusing on mobile, location-based, and augmented reality gaming, also considering literature addressing the "social side" of video gaming. After exposing our theoretical framework (which builds on literature addressing both intergenerational gaming, and

location-based gaming), we describe the design of a research project aimed at analyzing intergenerational gaming practices involving grandparents and their young grandchildren (age up to 11) playing *Pokémon Go*. More specifically, we briefly describe the game and the reasons we decided to focus on it; specify our goals and research questions; and elaborate on research methods and the tools to be used to answer our questions, also considering recruiting issues and ethical concerns. We conclude by critically addressing both the goals and the methods in the broader framework of the proposed background and by discussing our further research steps, as well as the research project's limitations.

2 Background

2.1 Intergenerational Gaming

Intergenerational gaming represents a promising but controversial area of application of video games to promote social interactions between different age cohorts. On the one hand, video games could represent "an interactive environment where collaboration and cooperation occur" [7, p. 48] among different generations of users, thus contributing to lessening age segregation and consequently ageism [8]. More specifically, playing video games can facilitate intergenerational relationships and offers a playful context of interaction through which a new equilibrium can be negotiated in terms of social roles, thus contributing to mutual respect between young people and the elderly [9]. On the other hand, a stereotypical representation of older people [10, 11] seems to affect the public debate on video games and the elderly, as underlined by De Schutter and Abeele [12] in their "gerontoludic manifesto". In this context, video games are framed as useful tools to improve older people's skills, or they are considered only in terms of features aimed at reducing age-related limitations, disregarding the playfulness associated with gaming and implicitly depicting the elderly as a monolithic social group [12].

To avoid a deterministic approach, it is necessary to carefully evaluate advantages and disadvantages, refusing to consider video games as the "panacea" for intergenerational relationships but avoiding disregard of their potentiality. As underlined by Chua et al., "perceptual changes between different groups are not assured by mere contact or interactions but depend on a series of factors" [9, p. 2304], even if "video games can be an effective facilitator to enhance intergenerational perceptions when members from different age groups are paired to play video games together as a novel leisure activity, as compared to daily routine activities used to facilitate intergenerational bonding" [9, p. 2308].

Several studies have addressed the topic on a participatory-design level, allowing both older and young people to take an active role in designing video games that can facilitate mutually satisfying interactions. As a result of this approach, a series of recommendations for intergenerational gaming design are now available [6]. Besides the need to create an *ad hoc* intergenerational video game, such recommendations offer a manifold theoretical framework to better refine our project. As summarized by Costa and Veloso [13] in a recent literature review, intergenerational video games have to promote peer-to-peer mentoring, taking advantage of specific age-related skills and avoiding unidirectional knowledge transfer; they also have to offer communal activities, trying

to balance skills and challenges, thus fostering individual well-being. In this respect, intergenerational video games can represent a shared context hosting social interaction, prioritizing physical mixed-reality (i.e., the integration of physical objects and digital communication tools) [13] to properly address older people's potential concerns with digital interfaces. In line with these recommendations, Rice et al., as a result of inter-generational game design workshops, outline that intergenerational games have to build on users' intrinsic qualities, sustain mutual engagement, balance challenges to promote long-term commitment, and exploit public spaces for community engagement [14]. Siyahhan et al. [15], observing pairs of players composed of parents and children playing *Quest Atlantis* (a multiuser 3D educational video game), focus on specific characteristics of the dyads (i.e., being a novice vs. an expert). Key points in fostering intergenerational exchange are the convergence of intentions among players and a fruitful negotiation of norms and roles that can potentially reveal opportunities to question the traditional roles of adults and children.

If these recommendations apply to a wide variety of intergenerational games and video games, a more specific interest in game experiences that mix traditional games and video games (augmented games) or physical and digital environments (as in the case of augmented reality games) is growing among scholars. Al Mahmud et al. [16] experimented with an augmented table-top game for intergenerational gaming, observing that technology played a special role in enhancing young people's gameplay experience. As a result of their experiment, the authors outline that children involved in the project liked their own customized (in terms of references to a fantasy universe) version of the game more than the adults' version, while the adults were quite uncon-cerned about specific game versions. To promote gratifying social interaction among participants, special attention has to be paid to games' rules, exploiting uncertainty as a means of maintaining interest in the game but also trying to balance immersion with social interactions (as young users tend to focus more on the game than on their partners) [16]. The analysis of Khoo et al. [17] of the process leading to the prototype of *Age Invaders* (a so-called intergenerational social and physical game) offers useful insights about mixing physical and digital games for intergenerational interactions. In this respect, as older people can potentially be intimidated by traditional interfaces, such a game exploits the physical space as an interface (users move on an LED-enriched roof that recognizes their movements through RFID technologies), thus stimulating older people's motivation to play while engaging young users through the well-known meta-phor of a traditional video game like *Space Invaders*. Allowing users to naturally interact in the same physical environment, mixed-reality games seem to offer a naturalistic setting for intergenerational interactions, promoting face-to-face conversation and body-language expressions during the game, thus acting as a stage that hosts users' perform-ances [17]. Despite these promising examples, researchers have devoted scarce attention to alternate reality games (ARGs) in the context of intergenerational gaming [7]. To contribute to the debate, Hausknecht et al. [7] illustrate some potentiality of ARGs and point out some design considerations. ARGs can act as intergenerational learning tools promoting collaboration among adults and young people and stimulating counterfactual thinking (enacted by users to solve quizzes and puzzles embedded into the ARG's narrative). In this respect, ARGs can offer possible gaming situations where different

age cohorts have to exchange their own points of view and negotiate roles and positions of power [7]. Moreover, as discussed by Costa and Veloso [18], relying on Bonsignore and colleagues' analysis of ARGs in the context of 21st-century literacy skills [19], ARGs can promote specific core literacies that can be beneficial for both adults and children. To actualize these potentialities, game designers must find a balance between the canonical trajectory of the game's narrative (i.e., the narrative path imagined by the game creator) and the participant trajectory, creating an equilibrium in the openness of the game. Specific characteristics of users need to be capitalized on, and ARGs can potentially exploit users' prior knowledge and their former experiences as gamers, thus promoting a satisfying division of labor in the case of young and older people playing together [7].

Despite these optimistic considerations about ARGs' potentialities to promote and facilitate intergenerational interactions and collaborative learning among different age cohorts, Hausknecht et al. [7] and Costa and Veloso [18] express cautious concerns. More specifically, as outlined by Costa and Veloso, playing ARGs can result in "(a) addictive experiences; (b) identity crises; and (c) disparities in (grand) child–(grand) parents' relationships of authority" [18, p. 5]. In more general terms, as underlined by Iversen in her application of the Foucauldian concept of discourse to digital game research and older adults, the growing interest in older people and video games is characterized by a utilitarian approach that tends to depict old age as a problem to solve, implicitly considering older people unproductive subjects who can be re-assimilated in the system as consumers through video games: "Digital games in this regard are both offered as training equipment for body and mind and more implicit markers of youthfulness" [10, p. 17].

2.2   Mobile, Location-Based, and Augmented Reality Gaming in the Urban Playground

In recent years, scholars have devoted growing attention to a particular set of digital games that are designed to be played on mobile devices, exploiting urban environments as a playground and incorporating, at various levels, augmented reality features as well as relational practices between players. While "pervasive gaming" has been proposed as a unified label to address such a broad set of games [20, 21], several partially overlapping definitions have been used to describe the different features, as well as the different gaming practices, related to such games, including mobile games, location-based games, augmented reality games, and so on.

One of the first attempts to historically and theoretically contextualize digital gaming practices in urban spaces was proposed by De Souza e Silva and Hjort [22], who focus on the term "mobile gaming," underlining how "location awareness and global positioning system (GPS) devices embedded in mobiles turn them into interfaces to navigate physical spaces" [22, p. 603]. Even before mobile devices spread, the social construction of urban spaces could be considered "inherently playful" [22, p. 603], as several playful usage forms of such spaces can be documented historically (the authors include, as relevant examples, Baudelaire's *flâneur*, the situationist idea of *dérive*, and the subculture of *parkour*).

A broader framework for contextualizing similar processes can be identified in literature analyzing locative media, as well as in the concept of "geomedia" [23]. The term "locative media" was "first used by Karlis Kalnins in 2003 in Latvia to set apart 'the corporation use of location-based services from artistic propose' (…) [and] is defined as a 'mobile media with geographical positioning and context sensitivity'" [24, p. 2]. Geomedia, in contrast, can be defined as platforms that "merge existing electronic media +the Internet+location-based technologies (or locative media)+AR (augmented reality) technologies in a new mode of digital composite imaging, data association and socially maintained data exchange and communication" [23, p. 14].

The first generation of experimental location-based mobile games was developed in the late nineties and aimed at transforming urban spaces into playful places [25]. Early pervasive games were often oriented toward educational applications, as well as toward reshaping previous digital games. Early literature on the topic, in contrast, focused on chances to bridge the physical and digital domains [20], consistent with more general trends in Internet research, underlining how networked individuals seamlessly operate between the physical and digital worlds [26, 27].

Scholars have proposed several attempts at the categorization of pervasive games. For instance, De Souza e Silva and Hjort distinguish between urban games (UGs), "games that use the city space as the game board. UGs are often multiplayer games played out in the streets of the city" [22, p. 612]; location-based mobile games (LBMGs), "games played with cell phones equipped with location awareness (…). Like UGs, LBMGs use the city space as the game environment. However, they additionally allow the linking of information to places, and players to each other via location awareness" [22, p. 614]; and hybrid reality games (HRGs), which "have an online component, represented as a 3D virtual world, so they take place simultaneously in physical and digital spaces. It is the shared game experience among multiple users that creates the hybrid reality" [22, p. 618].

When analyzing *Ingress* (a game that can be considered a predecessor of *Pokémon Go*), Hulsey and Reeves describe it as combining different game design genres: it is "a multiplayer location-based mobile game (LBMG) […] that also incorporates augmented and alternate reality" [28, p. 390], underlining the centrality of hybrid spaces [29] in its game design and practices. Similarly, Chess [30] refers to *Ingress* as a game combining geomedia [23] and AR, negotiating "complex relationships between community and space on both global and regional levels" [30, p. 1105]. From such a perspective, the player is bound to proximity (several actions can be performed only when one is next to a physical place), to the digital layer overlapping the physical world (the gaming arena displayed on mobile devices), and to a broader social and gaming context, at a regional or even at a global level (the evolving *Ingress* storyline, as well as the overall scores, are related to the global performances of the two opposing factions operating in the game). In such a context, the AR layer both allows and "forces" the player to see the world differently, pushing him to notice regional points of interest [30, p. 1107]. According to Chess, furthermore, *Ingress* should also be considered through the lens of the ARG model [30], which is an immersive form of gaming "that combines narrative, collaborative storytelling, mixed media, and puzzle solving" [7, p. 52].

Addressing the debate surrounding pervasive game definition, Kasapakis highlights several game genres that can be defined as "contiguous" with pervasive games, underlining that most authors propose genre-focused categorizations. Among the most commonly proposed genres are AR games; mixed-reality games; LBMGs; trans-reality games; and cross-media games [21, p. 24]. Kasapakis' proposes a definition for pervasive games that elaborates on Huizinga's [31] concept of "magic circle," which refers to the (conventionally agreed upon) boundaries between the game and ordinary life. More specifically, in Kasapakis' definition, "pervasive games expand the spatial, temporal or social borders of the magic circle while also utilizing pervasive technologies" (p. 23). Other authors [22, 25, 32] rely on such a concept, exploring the ways in which such boundaries are blurred in pervasive gaming. Majorek and du Vall, for instance, underline that,

> Today, games intended for mobile phones using AR technology have given a completely new meaning to the magic circle. […] when dealing with applications using AR technology, it is important to note that they lead to a certain connection between the virtual world and the real world, and these two dimensions become nearly identical [32, p. 674].

While several scholars struggle in attempting to categorize pervasive games, mainly distinguishing between different genres (or features), others, such as Hjorth and Richardson [25], propose a comprehensive framework for analyzing the convergence between social, locative, and mobile media gaming, underlining that such a distinction is a heuristic strategy [25, p. 2] rather than an intrinsic characteristic of game design and gaming practices. On the contrary, "in contemporary game practices, we would more commonly experience a variable intersection of these features [25, p. 2]. The authors also underline how

> Mobile networked technologies not only transform how we understand place in everyday life, they also remind us that place is more than just physical geographic location; it is constructed by an ongoing accumulation of stories, memories, and social practices (…) This is particularly the case within the realm of urban mobile gaming, which seeks to challenge everyday conventions and routines that shape the cityscape [25, p. 6].

Furthermore, while mobile gaming has traditionally been associated with "casual gaming" practices, the traditional distinction between "casual" and "hardcore" gamers needs to be overcome. Following Consalvo, the pervasiveness and mainstreaming of mobile gaming practices in everyday life means that mobile phone gamers "defy categorization" [33, p. 193], underlining the need to overcome the conventional distinction between casual and hardcore gamers to build a more nuanced picture that, as may be the case for *Ingress* and *Pokémon Go*, supports both gaming attitudes, leaving to each player room for calibrating his/her engagement with the game according to various situational, attitudinal, and contextual considerations.

While the first generation of LBMGs was mainly oriented toward serious applications, with a main focus on educational outcomes, the following generations dedicated more emphasis to playful attitudes and to the social side of gaming [25]. This does not mean that such attention toward serious outcomes has been dismissed, as shown by several applications in the fields both of education and of "exergames" [34].

Literature on pervasive gaming, as well as the few articles analyzing *Ingress*, or *Pokémon Go* [35], highlight several themes that are relevant to our research, also considering their broader social implications.

The first area is related to the relation between players and the urban space. In this regard, the literature explores the ways in which players negotiate their presence between different realms and their understanding of the domains they are operating in: on the one hand, the physical and the digital realms and, on the other hand, the local, regional, and global levels that might be implied in pervasive gaming [30]. Furthermore, relying on the concept of "ambient play" helps "to reconcile the cyclic debates around intimacy and co-presence" in digital media scholarship [25, p. 62], reshaping the very concept of presence [22, p. 618]. Moreover, an analysis of data from mobile networks in Santiago, Chile highlighted the effects of *Pokémon Go* on the pulse of the city, resulting in more people being outside at certain times, and, in more general terms, in people slightly adapting their daily routines to play [36]. Both the reshaping of presence and the negotiation of space and place, on the one side, and the modification of daily routines and itineraries through the city are relevant aspects to be explored through the lens of intergenerational practices.

Moreover, the game offers the chance to coordinate, at various levels, with other players to achieve relevant goals with teammates (from conquering a single gym to "controlling" a neighborhood) or with general players (i.e., taking profit from lure modules) or even just to experience a more enjoyable and playful gaming practice [35]. This implies, on the one hand, that young children are commonly in need of adult supervision when interacting with strangers through the game and, on the other hand, that this relational dimension adds further layers to the role-taking and negotiating processes taking place around gaming practices.

Finally, even the growing consumption of mobile data (see [36]) might translate into a need for adult assistance and is likely to be an arena for intergenerational negotiations.

3   Presenting a Research Design for an Empirical Intergenerational Gaming Study

In this section, we present a research design for an empirical intergenerational gaming study, focusing on *Pokémon Go*. After briefly presenting the game and the motivation for the choice to focus on it, we discuss our goals and research questions, and elaborate on research methods and the tools to be used to answer our questions, also considering recruiting issues and ethical concerns.

3.1   *Pokémon Go*

Pokémon Go (Niantic) is a location-based AR game available for iOS, Android, and Apple Watch devices. The gamer uses his/her smartphone's GPS tool to move his/her own avatar through a game map representing the real physical space. As a result of users' explorations, virtual creatures, called Pokémons, appear on the map when the user is physically close to a specific location. The main goal of the game is to locate, capture,

battle, and train these virtual creatures. The game calls for physical space exploration, as the gamer has to move into the (real) playground to find new Pokémons and obtain game resources. More specifically, game maps are characterized by the presence of points of interest (i.e., Pokéstops that provide gamers with items such as eggs, Pokéballs, berries, and potions and gyms that can be conquered and defended through Pokémon matches). The game also allows for social interactions, as the users are called to join a specific worldwide team (i.e., red for Team Valor, blue for Team Mystic, or yellow for Team Instinct) in a collaborative and competitive struggle for gym conquest.

A relevant share of intergenerational gaming literature analyzes *ad hoc* video games (i.e., games created for research purposes). In our research, we decided to focus on a widespread commercial video game to observe interactions in a "natural," non-research-driven setting. Indeed, playing a well-known game that has received a great deal of coverage even in mainstream media, is likely to activate users' relational networks (talking with friends and relatives who know the game), which, as already observed in the case of mobile phone usage practices among the elderly [37], plays a relevant role in motivating older users in digital media adoption, providing a richer social context to their practices.

Furthermore, *Pokémon Go* is an interesting case study because (a) the game promotes face-to-face social interaction between players [35]; (b) young children, even if they have access to a smartphone, need adult support to safely move in the urban space; (c) compared to serious games (or games developed for research purposes), such a successful commercial game allows researchers to observe interactions that take place in a "natural" (i.e., not a research-driven) setting; (d) the large user base potentially allows researchers to reach a significant number of respondents.

3.2   Goals and Research Questions

Relying on both intergenerational gaming literature and pervasive gaming literature, the overall goal of our research is to explore intergenerational gaming practices related to *Pokémon Go* taking place in Italian urban areas. In this regard, we aim at observing usage practices and motivations, specific usage patterns, goals and achievements, and so on.

Besides this overall goal, we aim at observing particular aspects of intergenerational gaming practices. More specifically, our research questions are as follows:

- Did interacting with and through the game contribute to setting shared game-related goals? If so, to what extent?
- What are the negotiation practices related to goal-setting and gaming strategies?
- Did game-related interactions contribute to shaping the mutual role recognition of both the young child and the older adult (with regard to both representational level and storytelling practices)? If so, to what extent? If so, how were such representations built?
- What is the user attitude toward the game? Does it change over time?
- Are there any age-related stereotypes at stake? If so, how do respondents elaborate on them? Do such stereotypes evolve over time?

In such a context, participants quitting the game, as well as any unpleasant experience with the game itself or with the research protocol, will also be considered as highly meaningful.

3.3   Research Methods: Participant Selection

To explore the aforementioned dimensions (see Sect. 3.2), we decided to focus on children age 6–11 and to their older adult relatives (generally grandparents). The age range was chosen to include children attending primary school, who are likely to be used to adult supervision for most of the activities they conduct outside their homes. Nevertheless, as some of the oldest children in this age cohort might also be experiencing growing levels of autonomy, a preliminary informal interview with children's family members or teachers will aim at verifying whether the hypothesis of playing with an older family member might match the children's needs and routines (mainly regarding the need for adult supervision to move in the urban context or to use mobile data).

As for older participant selection, we decided not to set a fixed age range. In this case, participants will be chosen from among each child's older family members. In general terms, we aim at recruiting grandparents, but other older family members (e.g., great uncles, great aunts, etc.) can also be involved if they are older than the child's parents.

We decided to focus only on major urban areas in Italy. This decision is related to both game-specific considerations (urban areas offer a higher Pokéstop and gym density, as well as higher chances to meet and coordinate with other players) and broader contextual considerations (young children living in urban areas are commonly more likely to need adult supervision to move through the city).

A major choice needs to be made with regard to participant recruitment. We might decide to recruit only people already playing *Pokémon Go* ("players"), to recruit only people who have not already played it ("non-players"), or to recruit both types of people. On the one hand, recruiting people who have never played *Pokémon Go* might ensure higher uniformity in game progression, allowing us to observe the early gaming stages, during which identity performances, gaming goals and strategies, and time allocation are negotiated. However, such a strategy would have some drawbacks: our intervention would "force" the adoption of a game that has no explicit educational overcomes and has been the target of criticism addressing several aspects, including its pervasiveness and its highly time-consuming nature. After evaluating the advantages and disadvantages of the two options, we decided to include both categories (players and non-players), using slightly different research tools to address the two cohorts, and being aware of their peculiarities when conducting interviews and analyzing research results.

Participant recruitment might be performed by involving schools, community organizations, or game-related informal groups (such as local Facebook groups or Telegram channels related to the gameplay). The first contacts will be established with adults, while children will be interviewed only after their parents or legal guardians have signed the informed consent form, approved by the Ethical Committee at the first author's university and specifically designed for conducting research with young children. Participant recruitment will be stopped once we reach saturation.

3.4   Research Methods and Tools

Ours is an exploratory study aimed at understanding user perceptions, motivations, sense-giving processes, and negotiation strategies. Therefore, we rely on qualitative research techniques, among which a major role is played by a set of semi-structured interviews to be integrated by focus groups and/or a diary.

We decided to rely on semi-structured interviews as our main research technique because we are interested in grasping the particularities of each dyad (child + older adult) involved in the research. Having different characteristics, as well as being likely to follow different game progression stages, each dyad will likely develop specific game practices as well as game-related negotiation strategies. A focus group will be employed as an integration method to better address the broader social considerations implied in gaming practices. Interviews will be administered at different stages to both dyads and individuals (subject to express parental – or a legal guardian's – authorization in the case of young children).

While interviews will cover the same topics when addressing both players and non-players interview timing will differ for the two groups. More specifically, we plan to conduct two interviews with players and three with participants who did not play before participating in the project. The interview scheduling and content will be as follows:

First interview (day 1)

- Shared content (both players and non-players)
  - Socio-demographic dimensions
  - Digital media usage
  - Video gaming activities
  - Leisure and mobility
  - Shared experiences between the child and older adult
  - Overall opinions toward the other age cohort as they emerge when exploring digital media ideologies [38] and social representations
- Only for players
  - Gaming experience (*Pokémon Go*)
  - Experience playing with others
  - Previous intergenerational gaming experience
  - Cognitive walkthrough of the player's profiles (user profile, achievements, favorite Pokémons, collected objects, diary, etc.)

After this first interview, players will be assigned specific tasks to be performed by playing together. Tasks will be selected according to participants' gaming levels from among those that are more likely to activate negotiations and interactions between the child and the older adult.

Second interview for non-players (at least one month after the first interview)

- Gaming experience (*Pokémon Go*)
- Experience playing with others
- Previous intergenerational gaming experience

- Cognitive walkthrough of the player's profile (user profile, achievements, favorite Pokémons, collected objects, diary, etc.); thinking aloud

After this first interview, players will be assigned specific tasks to be performed by playing together. Tasks will be selected according to participants' gaming levels from among those that are more likely to activate negotiations and interactions between the child and the older adult.

Second interview for players, third interview for non-players (at least one month after tasks have been assigned)

- Gaming experience with *Pokémon Go*, with regard to:
  – Shared goal setting
  – Game-related negotiations (with regard to playing times, areas, activities to be carried out); role negotiations in child/older adult relations
  – Attitude toward the game
  – Cognitive walkthrough of the player's profile; thinking aloud
  – Overall opinions toward the other age cohort as they emerge when exploring digital media ideologies [38] and social representations

Such interviews will be integrated with focus groups, aimed at emphasizing the social negotiation aspects related to gaming practices (social norms and roles, shared representations and practices, etc.). Furthermore, some users might be involved (on a voluntary basis and only if highly motivated) in keeping a game-related diary, structured around specific questions and open fields, with the goal of keeping track of long-lasting processes. The diaries will be compiled online and commented on during the final interview.

4   Conclusion

This paper presented the early steps of an ongoing research project aimed at exploring intergenerational gaming practices related to *Pokémon Go* and taking place in Italian urban areas. More specifically, we built the theoretical framework of the paper, discussing literature addressing both intergenerational gaming and pervasive gaming, and designed the research question and methods.

From a conceptual perspective, literature reviewed in this paper proposed that video games can be, under certain conditions, powerful tools for intergenerational interaction. In such a context, as age-based stereotypes are also related to age-cohort segregation, video game-mediated interaction can play a role in overcoming them. More specifically, mixed-reality games can represent an interesting playground for intergenerational interaction, as gamers need to deal with both the digital and the physical worlds, thus experimenting with game practices as well as role negotiations that are typical of both domains.

When considering intergenerational interaction, we are willing to dismiss any patronizing attitude toward both young children and older people. Moreover, we are not conceptualizing the transmission of knowledge in a unidirectional way. We believe that

it does not occur just from one individual to the other (e.g., from the older individual to the younger, or vice-versa): on the contrary, it represents a complex phenomenon that could challenge traditional assumptions related to both young and old people (in their relationship to each other, as well as with regard to their interaction with digital technology and with the physical world).

In this respect, to problematize the implicit functionalist approach that partially characterizes the debate on intergenerational gaming, we do not consider *Pokémon Go* a "tool to solve problems" (as implicitly assumed in literature focusing on "exergames" or on the educational outcomes of video games) but, instead, an environment that can potentially host meaningful interactions. More specifically, we elaborate on the difference between, on the one hand, approaches focusing only on games as tools to reach goals that are completely external to the game experience (such as exercising or cognitive training) and, on the other hand, approaches aimed at focusing on the social and relational practices that can be enabled by the gaming practice. The latter case refers to specific forms of gratification that are actually looked for by a relevant number of gamers, particularly if we consider pervasive games. Consequently, we aim at "giving voice" to the respondents instead of trying to set external goals or to adopt any form of patronizing approach toward respondents themselves.

As we aim to deal with representations, motivations, and role negotiations, a set of qualitative approaches appears to be the best option to reach our goals. Nevertheless, future projects, building on qualitative research results, should also gather and analyze quantitative data. Furthermore, different local contexts (different countries and smaller town or villages), as well as different age cohorts, should also be explored to build a more comprehensive picture of the phenomenon.

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