*Article*

Games and Culture
2015, Vol. 10(1) 57-80

DOI: 10.1177/1555412014557028
gac.sagepub.com
SAGE

# User-Generated Video Gaming: Little Big Planet and Participatory Cultures in Italy

**Francesca Comunello[1] and Simone Mulargia[1]**

**Abstract**

Digital technology users are growingly involved in what has been described as convergence culture or participatory cultures. In this context, a major role is played by user-generated content. This article focuses on the participatory practices related to Little Big Planet (LBP) 1, a PlayStation platform video game that encourages users to create and share their own gaming levels. Our theoretical framework refers both to convergence culture and to a specific perspective of game studies that focuses on the cultural and social dimensions that are to be found in gaming and modding practices. A total of 8,829 Italian PlayStation Network (PSN) users were surveyed regarding their gaming practices, their attitude toward digital technology, and their LBP usage experiences. The results show that familiarity with digital technology and a socially oriented attitude to digital technology are clearly related to "active LBP engagement." Moreover, PSN users are more likely than other digital platforms users to create their own content.

**Keywords**

user-generated video gaming, participatory cultures, PlayStation Network, Little Big Planet

[1] Department of Communication and Social Research, Sapienza University of Rome, Rome, Italy

**Corresponding Author:**
Francesca Comunello, Department of Communication and Social Research, Sapienza University of Rome, Via Salaria 113, 00198 Roma, Italy.
Email: francesca.comunello@uniroma1.it

The aim of our article is to analyze the participatory practices related to Little Big Planet (LBP) 1, a PlayStation *platform* video game that encourages users to create and share their own gaming levels. The interactive environment offered by the PlayStation Network (PSN)[1] plays a major role in sharing user's creations, while hundreds of videos showing user-generated levels are to be found on different online environments. The article refers to the empirical findings of a broader research project aiming at studying the relations between gaming and social network sites, with regard to the PSN environment and to the Italian population.

## Background: Networked Sociability and Participatory Cultures—The Social Side of Video Gaming

In order to gain a deeper insight on what can be defined as "the social side of video gaming," we rely on a wide range of theories covering digital technology, social relations, participatory cultures, and gaming practices.

First, we devote a focus to the wide research on the connections between digital technology, identity performances, and social relations. As we will show in the following paragraph, Wellman's and Castells' understanding of *networked individualism* and *networked sociability* are powerful frameworks for understanding the transformations of contemporary sociability. In such a context, digital platforms can be considered as powerful environments for articulating users' (networked) social relations; this applies not only to social network sites (SNSs) but also to a wider variety of digital platforms. As we will argue in the following pages, the PSN, in general, and LBP, in particular, can be analyzed from such a perspective.

We also rely on Jenkins' definitions of *convergence culture* and *participatory cultures* (Jenkins, 2006a, 2006b; Jenkins, Purushotma, Clinton, Wiegel, & Robison, 2009), arguing that such concepts constitute a proper framework for contextualizing user content cocreation and sharing practices that can be observed in relation to LBP. An important concept for understanding participatory practices is also (new media) literacy, as we will discuss in the following pages. Such a broader framework has also been applied to analyzing game-related practices: our work also relies on games scholars who have specifically focused on the social dimensions related to gaming (e.g., Yee, 2007) and to modding practices (e.g., Banks, 2013; Postigo, 2007; Sotamaa, 2004, 2010a).

### *Networked Sociability and SNSs*

Wellman has described the shift from communities to networks as the main structure organizing social life: most of the time, and in most contexts, people are immersed in sparsely knit self-centered networks, rather than in densely knit communities (Rainie & Wellman, 2012; Wellman, 2001); nevertheless, personal networks can also include densely knit groups (Boase & Wellman, 2006). In moving from *place-to-place* connectivity toward that of *person to person* and *role to role*, "the person

becomes the portal" (Wellman, 2001). Such a shift in the nature of social relationships has been facilitated by both mass transit and telecommunication systems.

In modern societies, we have witnessed a shift toward individualism: According to this perspective, individualism leads neither to social isolation nor to the atomization of individuals. Through their personal networks, people negotiate and obtain support, information, and a sense of belonging (Wellman & Haythornthwaite, 2002, p. 34). In other words, they also experiment with new forms of sociability, but they are more likely to experience them as individuals, rather than as part of a broader group (Castells, Fernández-Ardèvol, Linchuan Qiu, & Sey, 2007).

Following this conceptual framework, one of the main points of interest of SNSs, besides their ever-growing popularity among Internet users worldwide, is that they represent powerful environments in which to observe "publicly articulated" (boyd, 2004) identity performances as well as social relations and "friending" strategies. Early research on SNS has mainly focused on self-presentation practices (e.g., Livingstone, 2008; Mallan & Giardina, 2009; Rybas & Gajjala, 2007; Walther, Van Der Heide, Kim, Westerman, & Tong, 2008; Zhao, Grasmuck, & Martin, 2008) and *impression management* processes (Ellison, Heino, & Gibbs, 2006), as well as on social relations and friending strategies (see, among others, Andon, 2007; Boase, Horrigan, Wellman, & Rainie, 2006; boyd & Heer, 2006; Donath, 2007; Ellison, Steinfield, & Lampe 2007; Fono & Raynes-Goldie, 2006; Ito et al. 2008; Tong, Van Der Heide, Langwell, & Walther, 2008) and on privacy-related issues and their supposed paradoxical dimensions (Acquisti & Gross, 2006; Barnes, 2006; Gross & Acquisti, 2005).

More recently, as SNSs turn into "mainstream sites of relational maintenance" (Baym, 2010, p. 134; see also Hunsinger & Senft, 2013), academic research has become more specialized, covering different fields, such as civic engagement and political participation, branding and consumption, and so on (see, among others, Comunello, 2011; Papacharissi, 2011). Moreover, research covering the growing amount of *specialized* SNS is gaining importance in literature. These sites are mainly interest driven or even task oriented: as an example, see environments such as Anobii or Last.fm, which are focusing on specific cultural consumption, where *taste performances* (Liu, 2007) and *homophily* appear to be important (regarding the peer recommendations and homophily dynamics taking place on Last.fm, see Baym & Ledbetter, 2009; for further research on interest-driven SNSs, see, among others, Golbeck, 2011, an article focused on pet-centered SNSs).

According to boyd and Ellison (2007), SNSs can be defined as

> web-based services that allow individuals to: (1) Construct a public or semi-public profile within a bounded system; (2) Articulate a list of other users with whom they share a connection; (3) View and traverse their list of connections and those made by others within the system. (p. 211)

Even if the PSN is not a *web-based* environment, it meets most of the requirements to be considered as an SNS, that is, (1) it allows users to construct a semipublic

profile; (2) it allows to articulate a list of users with whom they share a connection (this includes "friends" and a list of players met in previous gaming activities). Moreover, (3) users can view and traverse their list of connection, while this is not the case for "those made by others"; this limitation, however, does not appear crucial in order to define a platform as an SNS: in an updated definition of SNS, Ellison and boyd (2013) underline that "traversing connections has lost its salience as the core participation activity" (p. 157). In previous years, traversing connections was a key element for "lowering the barriers to initiating contact with other users" (p. 157); in the PSN, such a goal can be easily reached through the "players met" function. Moreover, many other SNS are nowadays increasingly used through their specific "app," turning into platforms that are not only "web-based"; in their updated definition of SNS, Ellison and boyd (2013) refer to "networked communication platform[s]."

Nevertheless, the PSN shows relevant differences from more widespread SNS (such as Facebook, for instance). While Facebook (and other popular SNS) can be described as *mainstream* sites, the PSN, like other interest-driven SNS, is highly focused on the specific interest it is devoted to, that is, gaming. On the PSN, gaming not only constitutes the main activity people perform or the main topic they refer to but also constitutes the *symbolic fabric* people build on while performing their self-presentation or relational activities. Our broader research on the PSN, for instance, has highlighted specific friending patterns that differ from other mainstream platforms but are consistent with people's behavior in other interest-driven SNS. On the PSN, users tend to have a lower number of friends; moreover, their friending strategies appear strongly related to gaming practices: sharing the same tastes vis-à-vis game genres (or specific games) and having played together are the main drivers for accepting/requesting friendships on the PSN (Comunello & Panarese, 2010).

Therefore, while the PSN cannot be considered as an equivalent to Facebook or other mainstream SNS, research on this topic appears to be consistent with the growing attention that is nowadays reserved to specialized and interest-driven SNS.

## *Convergence Culture, Participatory Cultures, and New Media Literacy in Game-Related Practices*

Digital technology users are increasingly involved in what has been described as convergence culture (Jenkins, 2006a) or participatory cultures. Following Jenkins (2006a), a convergence culture is understood as a culture "where old and new media collide, where grassroots and corporate media intersect, where the power of the media producer and the power of the media consumer interact in unpredictable ways" (pp. 259–260). According to Jenkins, Purushotma, Clinton, Wiegel, and Robison (2009), a participatory culture is "a culture with strong support for creating and sharing one's creations [. . . .]. A participatory culture is also one in which members believe their contributions matter, and feel some degree of social connection with one another" (p. 3).

An important topic for understanding participatory cultures and the productive practices of users is (new media) literacy. Literature on the topic underlines how an advanced degree of literacy has to be related not only to operational, formal, or information skills (as defined by, among others, van Dijk & Van Deursen, 2010) but also to *productive skills*. Sonia Livingstone, for instance, defines media literacy as "the ability to access, analyze, evaluate and create messages across a variety of contexts" (Livingstone, 2003, p. 3). In Livingstone's words, information production was a key element even in (traditional) media literacy, because through it people acquire a better understanding of the medium:

> The internet par excellence is a medium which offers hitherto unimagined opportunities for ordinary people to create online content. To exclude this from a definition of media literacy would be to greatly under-utilize the potential of the internet for the public. (p. 3)

Similarly, the ability to use digital technology as a tool for social relations also has a central role in building a comprehensive concept of multimedia literacy (see, for instance, the concept of "computer mediated communication literacy," as defined by Hsieh's, 2012; Warschauer, 2003 understanding of online social networking skills). Both such elements (digital skills and the ability to produce multimedia content; a social-oriented attitude to technology) are a constitutive part of participatory cultures as defined by Jenkins et al. (2009):

> A participatory culture is a culture with relatively low barriers to artistic expression and civic engagement, strong support for creating and sharing one's creations, and some type of informal mentorship whereby what is known by the most experienced is passed along to novices. A participatory culture is also one in which members believe their contributions matter, and feel some degree of social connection with one another (at the least they care what other people think about what they have created). (p. 3)

A major role in convergence culture is played by user-generated content (UGC), a cultural and social phenomenon that has been studied by a number of scholars (e.g., Baldwin, Hienerth, & von Hippel, 2006; Burgess & Green, 2009; Shirky, 2008). The study of *fandom*, and especially of fan productions (see Hills, 2002; Jenkins, 2006b), constitutes another important background. Such concepts have been recently also applied to gaming practices (see Banks & Pott, 2010; Djaouti, Alvarez, & Jessel, 2010), considering a large array of phenomena such as users' customization of game options through the video game's interface; game conversions (which includes modification, or *modding*, of in-game characters, objects, play levels, games rules and play mechanics); the use of Machinima and particular forms of modding with artistic purposes; and custom gaming PCs and game console hacking (Scacchi, 2010). Bostan and Kaplancali (2010) recognize the innovation function of modding related to digital game industry, considering the activity

of modifying video games as an example of a shift from participatory culture to participatory design. Sotamaa (2010a) underlines that the study of players as fans can contribute to the challenge of the idea that video games are antisocial and isolating, considering the motivation and the shared values of a particular community of modders.

Furthermore, our contribution refers to a specific perspective concerning game studies that has focused on the cultural and social dimensions that are to be found in gaming practices (see, among others, Bartle, 1996; Ducheneaut, Moore, & Nickell 2004; Malaby, 2006a, 2006b; Yee, 2007) and in modding practices (Postigo, 2010; Sotamaa, 2004, 2010a).

Yee (2007), for instance, has underlined the following elements that can characterize gaming motivations: *achievement*, *social*, and *immersion*. More specifically, the *social* element is related to three categories, namely, *socializing*, *relationship*, and *teamwork* (p. 6).

Studying Operation Flashpoint modder community, Sotamaa (2004) set out a range of motivational factors for modding, which go further the goal of becoming game developers. The ''playing'' motivation expresses gamers engagement in the video game and a special need for a personalization of the gaming experience, gamers leaded by the ''hacking'' motivation shows a precise interest in experimenting with the inner mechanism of the game in order to develop them, modders involved in the ''researching'' motivation are more interested in adding details to the background of the game than in designing a new map or character, the ''artistic work'' motivation refers to a sort of aesthetic approach on modding expressed, for instance, in the effort to design detailed game objects. The ''cooperation'' motivation shows that modders are interested in being part of a community: the act of cooperation with others gamers and the continuous sharing of knowledge on games lay the foundation for a community of practices, deeply modeled by their participants' social skills.

In Postigo's analysis of the relationship between modders and the game industry (Postigo, 2010) emerges that one of the most preeminent motivation for modding is to create a link between the gamer and the modders community, even if the contribution of the new comer is not focused on his or her technical expertise.

## *Participatory Gaming: LBP in the Context of Convergence Culture*

LBP is a platform video game developed by Media Molecule and published by Sony Computer Entertainment. It was first released in 2008 and its sequel (LBP 2) was launched in 2011. LBP 1 contains a set of prebuilt levels (*Story mode*) and encourages users to create their own levels through a dedicated gaming editor. In the Story mode, the plot starts when the Planet's Creator Curator got missing: after having explored the worlds of LBP (eight chapters), where he can collect prize bubbles, the main character (Sackboy/Sackgirl) can challenge the last Creator Curator, the *Collector*, who is responsible for having kidnapped many characters throughout the game.

LBP offers a powerful playground for verifying some of the assumptions proposed by the above-mentioned theoretical perspectives, with special regard to the convergence culture and participatory culture frameworks (Jenkins, 2006a; Jenkins et al., 2009). When interacting with LBP, users are both interested in playing user-generated gaming levels and in creating their own content,[2] with the explicit goal of sharing them online.

Consistent with the convergence culture framework, which underlines the importance of cross-platform participatory activities, such practices are not confined into the borders of the single platform in which they were originally meant to take place (PlayStation 3 and PSN). On the contrary, they spread through references, comments, and quotations over different media platforms, adopting a cross-reference attitude toward the text that is perceived as a playground. On one hand, for instance, a wide variety of multimedia content related to LBP is found on the web (ranging from dedicated websites and forums to the large amount of videos on YouTube[3]); on the other hand, LBP appears to work as a typical example of convergence culture: a variety of symbolic material derived from different texts (movies, comics, and other video games) becomes part of the video gaming experiences designed by the user for other users.

Many of the user-generated gaming levels, but also some of the expansion packs designed by the official producers, for instance, are based on the characters or the scenarios offered by other video games (*Metal Gear Solid*, *Super Mario Bros*, *God of War*, *Grand Theft Auto*, etc.) or by other media (films such as *The Matrix*, *Watchmen*, *Godzilla*, *Back to the future*, etc.), which are sometimes referred to ironically. The complex quotation system that takes place in many of the user-generated gaming levels, besides constituting a tribute to different media content and having a deep meaning with regard to self-presentation practices, shows that the users have high levels of media literacy (especially with regard to genre competencies). This emerges not only in the multiple quotations of other video games but also at a level that could be defined as *metacognition,* with regard to specific gaming mechanisms (following Scacchi, 2010, this dimension can be referred to as *metagaming*: "playing games for playing with the games systems"). Even if LBP is explicitly designed to allow users to express their creativity, active gamers show a certain discrepancy between the affordances of the editing tools provided by the video game and the actual use they made of them: as Sotamaa (2010a) underlines in his analysis of LBP, players can challenge the proper use of the game by creating intentionally boring or nonsense game levels.

More specifically, many user-generated gaming levels deal, at a *meta* level, with the mechanisms that rule LBP and the entire PSN itself. As an example, some of the user-generated gaming levels have the specific goal of helping users rapidly earn a large amount of trophies (an important element for enriching each user's profile within the PSN). In such cases, gamers use a video gaming editor in order to explore and even question the rules of video games.

## Consumer Cocreation and Gaming Practices: Our Research Project

Existing literature has hitherto analyzed consumer cocreation and consumer participatory cultures related to gaming practices, mainly focusing on MUD/MMORPG "modding" strategies, which usually require medium or high technical and programming skills (see, among others, Banks & Pott, 2010; Postigo, 2007, 2008; Sotamaa, 2004; Scacchi, 2010). Among other topics, research on modding has focused on users' skills, practices, and motivations (Postigo, 2007, 2008) and on the relationships between modders and the gaming industry (Kow & Nardi, 2010; Nieborg & Van Der Graaf, 2008), also questioning the related issue of "free labor" (Banks, 2013; Kücklich, 2005; Postigo, 2007). When conducting their analysis, some authors have adopted a "convergence culture" perspective (Jenkins, 2006a), sometimes explicitly referring to the broad literature on fandom (Consalvo, 2003).

LBP user cocreation activity can only partially be considered as a part of this preexisting phenomenon, as the technical skills required to create a gaming level are quite low and are shared by the majority of video gamers (while most of the modders described in existing literature can be defined as highly "skilled" users—see for instance Postigo, 2008), as the modification tools integrated into the video game are extremely user friendly. This is consistent with the broader trends of participatory cultures that constantly lower the technical barriers to user content creation. Among other differences between LBP user cocreation and more *traditional* modding activities, we can mention that modders described in existing literature usually show higher levels of engagement with a specific (typically small and densely knit) "mod team" and devote very high amounts of qualified work to the modding activity (as described in Postigo, 2007). Modding practices, moreover, have traditionally taken place in PC environments, while gaming consoles did not usually allow any modifications (Sotamaa, 2010b).

When comparing LBP cocreating practices with more "traditional" modding activities, we can observe a shift that is similar to the one we have witnessed with regard to broader fan practices: users appear to be less oriented toward a strong engagement with small communities, and their activity is no longer situated within such communities; moreover, even the common user can be involved in such cocreating practices.

LBP is not the first video game that embeds editing tools: Personalization and customization of game options, especially with regard to PC video games, can be considered structural characteristics of video games (Richard, Wood, Griffiths, & Mark, 2004). The key point here, as Sotamaa suggests (2010b), is that LBP's developers succeed in integrating the editor mode in the gameplay mechanisms (using original levels as tutorial for the editing tools). In order to emphasize the collaborative dimension of modding, starting from 2009, LBP offers a multiplayer experience in which up to four players can edit together their own game levels.

### Key Purposes and Research Questions

The key purpose of this contribution is to explore the participatory practices related to LBP 1, also focusing on the characteristics of the users who appear to be most actively engaged.

After describing the characteristics of the respondents who declared to be LBP users, our article addresses the following questions:

**Research Question 1:** What are the sociodemographic characteristics of the most actively engaged LBP users?

**Research Question 2:** Are users' cultural consumptions related to their active engagement in LBP?

**Research Question 3:** Is familiarity with digital technology related to user's active engagement in LBP?

**Research Question 4:** Is a social-oriented attitude to digital technology related to user's active engagement in LBP?[4]

Our hypotheses concerning Research Question 2 to Research Question 4 are the following:

**Hypothesis 1:** Higher levels of users' cultural consumptions are related to higher levels of active engagement in LBP.

**Hypothesis 2:** Higher levels of familiarity with digital technology are related to higher levels of active engagement in LBP.

**Hypothesis 3:** Higher levels of a social-oriented attitude toward digital technology are related to higher levels of active engagement in LBP.

As we will show in the following paragraphs, in order to operationalize the broad concept of "active LBP engagement," we have considered a variety of activities, consistently with the participatory culture literature. Nevertheless, our work also focuses on the specific activity of creating and sharing gaming levels ("active gaming level creators"), addressing the following questions:

**Research Question 5:** To what extent are LBP users likely to create and share their own gaming level.

**Research Question 6:** What are the sociodemographic characteristics of the most active gaming level creators?

## Method

Our contribution refers to the empirical findings of a broader research project, conducted by Sapienza University of Rome in partnership with Sony Computer Entertainment Italy, which aims at studying the relations between gaming and SNSs.[5] Quantitative and qualitative methods were used, an invitation to respond to a

39-question survey was sent to all Italian PSN users; in addition, four focus groups, both in person and online,[6] were organized. The questionnaire was focused on the following areas: media and cultural consumption of PSN's users, with a focus on outdoor cultural activities such as theatre, museums, concerts, and so on; PC and Internet usage; video gaming activities such as online and off-line gaming, including time spent in game activities with other gamers; PlayStation 3 (PS3) usage as a multimedia platform (activities not related to video gaming such as watching DVDs, listening to music, etc.); PSN usage with a particular attention to the purchasing and/or downloading of free content; PlayStation Home usage; friendship on PSN, in terms of number of friends, friendship strategies, and the relationship between online and off-line friends; Internet and PSN usage for fund-raising activities; Internet and PSN usage for finding a job (recruiting); and LBP usage.

On the qualitative side, we realized four focus groups, involving 22 users who had already answered the survey, aiming at a deeper understanding of users' motivations and of the symbolic processes underlying their practices. The two online focus groups have been carried out using PlayStation Home, a 3D virtual world developed by Sony, which supports both written and audiovisual messaging. The focus group was not exclusively dedicated to LBP and only one of the four proposed direct questions on that topic. Nevertheless, during all four focus groups, users spontaneously mentioned various and interesting aspects related to the game.

## *Our Respondents and the PSN*

Of the 12,199 respondents who answered the questionnaire, a total of 8,829 people completed it (only completed questionnaires have been taken into account for the present analysis).

Our respondents are disproportionately male (97%), ranging from 20 to 34 years of age. More specifically, 23% of respondents are aged 20–24 years, and 19% range from 25 to 29 years.[7] With regard to location, 49% of the respondents live in northern Italy, 24% in central Italy, and 26% in southern Italy. Compared to the Italian population as a whole, our respondents show a medium to high degree of education, that is, 53.5% have a high school degree, while 15.6% have a bachelor's or graduate school degree.

The media and cultural consumptions of these participants are rich. Video gaming is obviously a widespread and frequent activity for the majority of our respondents (44.2% play video games every day or almost every day, and 42.5% play once or several times a week). They are also stronger computer and Internet users than the rest of the Italian population on average: 94.4% of our respondents use a computer and an Internet connection every day or almost every day while, according to the National Statistical Institute (ISTAT), in the same period, only 17.7% of the Italian population used the Internet every day. Their strong engagement with digital technology, however, does not mean that our respondents are far from using more traditional media: when compared with the Italian population on average, they show

higher consumption rates even with regard to more *traditional* media, such as newspapers and books.[8]

As already mentioned, we can at least partially consider the PSN as an interest-driven SNS, wherein user's actions are not surprisingly focused on gaming-related activities. For instance, when using the PSN, even user's friend lists are built in a way that could be defined as "game driven": when asked about the main elements they consider for accepting/requesting a friendship, 65% of our respondents mention as an important element "sharing the same tastes concerning video games," 62% "having played together," while only 15% mention their avatar or nickname as important elements; even "knowing a person off-line" (the main element in most SNS) has a weaker role: 46% of users mention it as an important element. On the PSN, people generally appear to be much less interested in friending: 93% of our 8,829 respondents have from 0 (29%) to 40 friends, while the average number of friends in other more social-oriented platforms is much higher.

Nevertheless, the platform presents itself as a "network," an environment in which one can keep in touch with friends and family. Even if the majority of activities carried out on the platform are game oriented, as we will see, there are many opportunities for more social-oriented actions (consistent with the considerations regarding *socializers* of Bartle, 1996 and Yee, 2007, and also with the motivations for modding described by Sotamaa, 2004 in terms of "cooperation," and by Postigo, 2010 in terms of creating links between the gamer and the modders community), or, more generally, for actions that are *not only* game driven.

## Findings on LBP and Discussion

Of the 8,829 respondents to the broader survey, 3,054 are LBP users (34.6%). In the following pages, we present a descriptive analysis of our data; we also use Pearson's correlation in order to examine the correlation between users' "active LBP engagement" and specific individual variables.

As shown in Table 1, LBP is more popular among younger users, and teenagers appear to be the strongest users. Namely, 43.9% of users aged up to 14 years and 42.2% of users ranging from 15 to 19 years have used LBP; on the other hand, only 21.3% of users ranging from 40 to 44 years and 19.7% of users aged 45 years and over have used LBP.

The use of LBP is almost equally distributed among people coming from different areas of the country or having different educational backgrounds (with the only exception of people holding a graduate title, among whom the age has a major influence).

For our research purposes, specific indexes have been created in order to operationalize the following concepts: active LBP engagement, user's "familiarity with digital technology," user's "cultural consumption levels," and user's "social-oriented attitude to digital technology."[9] When considering the active LBP engagement dimension, we refer not only to the creation of new gaming levels but also to a

**Table 1.** LBP Usage Among Age Classes (Percentages Within Age Classes).

| | | Age (classes) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Up to 14 (%) | 15–19 (%) | 20–24 (%) | 25–29 (%) | 30–34 (%) | 35–39 (%) | 40–44 (%) | 45 and Over (%) | Total (%) |
| Have you ever used LBP | Yes | 43.9 | 42.2 | 38.5 | 36.7 | 33.2 | 28.4 | 21.3 | 19.7 | 34.6 |
| | No | 56.1 | 57.8 | 61.5 | 63.3 | 66.8 | 71.6 | 78.7 | 80.3 | 65.4 |
| Total | | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Note.* LBP = Little Big Planet. Have You Ever Used LBP × Age (Classes).

variety of practices related to user-generated gaming levels that can be related to the main characteristics of participatory cultures, as defined by Jenkins et al., that list "expressions," "collaborative problem solving," and "circulations" (2009, p. xii) as forms of participatory cultures. Following this perspective, looking for multimedia (and cross-platform) content, sharing, commenting, voting, or tagging user-generated gaming levels can all be considered as a part of a broader participatory approach to the game.[10]

Among LBP users, younger people show higher levels on the active LBP use index. Namely, 71.7% of users aged up to 14 years and 67.8% of users, ranging from 15 to 19 years show a medium to high or high level on the active LBP use index; on the other hand, 26% of users ranging from 40 to 44 years and 27% of users aged 45 years and over show the same values (Table 2).

Nevertheless, no statistically significant correlation can be found between age and the active LBP use index. Even if active LBP users show an average cultural activism that is slightly higher than that of the whole sample, the level of cultural consumption[11] does not show any clear correlation to the level of active LBP engagement (Pearson's correlation: $r = .121$, $p = .01$).[12] Familiarity with digital technology[13] and a socially oriented[14] attitude to digital technology appear to be more clearly related to active LBP engagement.

Namely, as shown in Table 3, 76.3% of respondents ranking "minimum or low" on the technology familiarity index show an active LBP engagement that is "absent or low" or "medium low." On the other hand, 76.6% of respondents ranking "high or maximum" on the technology familiarity index show an active LBP engagement that is "medium high" or "high or maximum."

The correlation between the "active LBP index" and the "technology familiarity index" appears significant (Pearson's correlation: $r = .525$, $p = .01$, with a $R^2 = .28$).

Furthermore, as shown in Table 4, 80.5% of respondents ranking "minimum or low" on the "social-oriented attitude to technology" index show an active LBP engagement that is "absent or low" or "medium low." On the other hand, 72.8% of respondents ranking "high or maximum" on the "social-oriented attitude to

**Table 2.** Active LBP Use Among Age Classes (Percentages Within Age Classes).

| | | Percentage within age classes | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Age | | | | | | | | |
| | | Up to 14 (%) | 15–19 (%) | 20–24 (%) | 25–29 (%) | 30–34 (%) | 35–39 (%) | 40–44 (%) | 45 and over (%) | Total (%) |
| Active LBP use (classes) | None or low | 13.1 | 14.8 | 24.6 | 29.1 | 32.9 | 44.7 | 43.5 | 58.4 | 28.5 |
| | Medium–low | 15.2 | 17.4 | 19.5 | 22.2 | 31.4 | 25.9 | 30.5 | 14.6 | 22.4 |
| | Medium–high | 28.3 | 30.7 | 28.1 | 28.6 | 21.9 | 20.8 | 16.8 | 14.6 | 26.1 |
| | High or maximum | 43.4 | 37.1 | 27.8 | 20.1 | 13.8 | 8.6 | 9.2 | 12.4 | 23.0 |
| Total | | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Note*. LBP = Little Big Planet. Active LBP Use (Classes) × Age (Classes).

**Table 3.** Active LBP Use Among Technology Familiarity Index Classes (Percentages Within Technology Familiarity Index).

| | | Percentage within technology familiarity index | | | | |
|---|---|---|---|---|---|---|
| | | Technology familiarity index | | | | |
| | | Minimum or low (%) | Medium low (%) | Medium high (%) | High or maximum (%) | Total (%) |
| Active LBP use (classes) | None or low | 49.4 | 36.0 | 20.4 | 7.9 | 24.6 |
| | Medium–low | 26.9 | 25.5 | 24.3 | 15.4 | 22.0 |
| | Medium–high | 18.9 | 27.1 | 32.5 | 28.6 | 27.7 |
| | High or maximum | 4.8 | 11.4 | 22.8 | 48.0 | 25.7 |
| Total | | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Note*. LBP = Little Big Planet. Active LBP Use (Classes) × Technology Familiarity Index.

technology" index show an active LBP engagement that is "medium high" or "high or maximum."

The correlation between the active LBP engagement index and the "social-oriented attitude to technology" index appears significant (Pearson's correlation: $r = .488$, $p = .01$, with a $R^2 = .24$).

Finally, 651 (21.2%) of the 3,054 LBP users have created and shared at least a game level. Compared to the total number of respondents (both LBP users and nonusers), 7.4% of PSN users are active LBP content creators. More specifically, younger people are more likely to be active gaming level creators, that is, among LBP users, 48% of respondents aged up to 14 years and 37.0% ranging from 15 to 19 years have

**Table 4.** Active LBP Use Among Social-Oriented Attitude to Technology (Classes; Percentages Within Social-Oriented Attitude to Technology—Classes).

| Percentage within social-oriented attitude to technology (classes) | | | | | | |
|---|---|---|---|---|---|---|
| | | Socially oriented attitude to technology (classes) | | | | |
| | | Minimum or low (%) | Medium low (%) | Medium high (%) | High or maximum (%) | Total (%) |
| Active LBP use (classes) | None or low | 57.6 | 36.2 | 25.4 | 10.5 | 27.3 |
| | Medium–low | 22.8 | 29.5 | 23.2 | 16.7 | 22.2 |
| | Medium–high | 15.5 | 22.6 | 31.0 | 30.1 | 26.5 |
| | High or maximum | 4.0 | 11.8 | 20.4 | 42.7 | 24.0 |
| Total | | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Note.* LBP = Little Big Planet. Active LBP Use (classes) × Social-Oriented Attitude to Technology (Classes).

created at least one gaming level; on the other side, 17.6% of respondents ranging from 40 to 44 years and 15.9% of respondents aged 45 years or more have created a gaming level.

## Discussion

Our first hypothesis (Hypothesis 1), assuming that higher levels of cultural consumption may be related to higher levels of active LBP engagement, has not been confirmed. This may also depend on the peculiar characteristics of the sample, showing a degree of cultural consumption that, as mentioned before, is much higher than the average degree of the Italian population.

Our second and third hypotheses, assuming that higher levels of digital technology familiarity (Hypothesis 2) and a social-oriented attitude toward digital technology (Hypothesis 3) may be related to higher levels of active LBP engagement have been confirmed.

More specifically, a digital technology familiarity index that is built only considering traditional indicators (as the ones considered by the Italian national statistics service), only including PC and Internet use, does not appear to be adequate in order to understand our users' familiarity with the digital world. As already mentioned, our users show levels of computer and Internet usage that are far higher than the average levels of the Italian population. They appear to be an extremely technology-oriented group, that is, Traditional PC and Internet use appear to be widespread among the whole sample and represent a basic-level technology use among them. Measures that blend traditional PC and Internet usage with more platform-specific indicators are more useful for really differentiating our users' attitudes toward digital technology.

We surely cannot generalize our index to the universe of participatory platforms, but, analyzing a context where major inequalities in digital technology usage still exist, we need to recognize that there are users, who may be termed as "elites," who cannot be understood only by using traditional PC and Internet-related indicators. Even if we have not built a proper "multimedia literacy index," our findings can be referred to the wide literature on this topic. Namely, the relation between technology familiarity and active LBP use is consistent with the most recent research on new media literacy, as mentioned previously.

It comes as no surprise that technology familiarity and a social-oriented attitude toward digital technology appear to be strongly related. As digital technology becomes increasingly social oriented, "computer-mediated communication skills" (Warschauer, 2003) and "networking skills" (Comunello, 2010) gain a growing importance among the skills that are needed for an effective use of digital technology. Moreover, the feeling of a "high degree of social connection" is one of the main characteristics of participatory cultures (as defined previously by Jenkins et al., 2009).

In a context that is characterized by a social orientation of digital technology use (as proposed by "Web 2.0" theorists), higher levels of familiarity with digital technology and higher levels of social orientation toward technology appear therefore to be related to a participatory attitude toward technology.

As already mentioned, 21.2% of LBP users and 7.4% of the whole sample (PSN users) have created at least one gaming level, that is, a percentage that appears to be higher than what is generally reported in recent literature regarding UGC. Despite the rhetoric on collaborative media and wikis environments, the nature and the true extent of the phenomenon are controversial. Quoting an empirical research that applies the Gini coefficient to measure the real equality of collaboration processes in Wikipedia, Matei and Bruno (2011) underline the nonequal contribution on the famous web-based encyclopedia. An asymmetric nature of collaborative processes also emerges in other environments such as Flickr or YouTube.

One of the most interesting features in LBP is that users without programming skills can create gaming content. The presence of an easy-to-use tool within the video game attests an increasing interest in UGC. Scacchi (2010) underlines a controversial attitude of video game firms toward users' creativity: On one hand, they are concerned due to copyright infringements, while on the other hand, they consider UGC to be a potential means toward fostering the video game market. The author summarizes the following three main firm strategies: a high-focused control that limits modding activities, a sort of supported mediation, and a high freedom of action given to modders. However, all the strategies mentioned previously protect the inner game engine as a key resource connected to the intellectual property of the video game. According to this, LBP allows nonexpert users to deal with the experience of modding video game using a mediation strategy in order to promote the sense of participation enabled by user-generated gaming activities.

On the qualitative side, even if the four focus groups were not specifically dedicated to LBP, our users spontaneously mentioned the game, showing high levels of LBP-related awareness and competence. More specifically, users showed a great deal of attention toward the wide variety of add-ons related to LBP and toward the opportunity to personalize the game. This contextualizes LBP into the more general need for customization related to *modding activities.* Moreover, users seem to appreciate the cross-media declinations of the game, spontaneously recalling the expansion packs that are based on the characters or the scenarios offered by other video games, such as, among others, *Metal Gear Solid*. Users also underline the relational value of LBP, focusing on its role as a *trigger* for friending practices, consistently to the relation between an active use of LBP and a social-oriented attitude toward technology that emerged from our survey. In more general terms, users appear to be aware of the cocreating and sharing practices enabled by the game.

## *Limitations of the Study and Further Research Directions*

Data discussed in the present work are derived from a questionnaire sent to all Italian PSN users. The sample cannot be considered as statistically representative of the universe of the Italian PSN users because the users auto-selected their presence. Due to missing data about the sociodemographic characteristics of the entire universe, it was impossible to create a weighted sample. The sample also overrepresents male and adult users, the latter due to specific legal limit age to sign into the PSN. Moreover, our data only refer to Italian PSN users: In this study, we didn't have the chance to do any cross-national comparison nor to clearly isolate the characteristics that could depend on our users' nationality.

The empirical findings presented in the article refer to a broader research project aimed at studying the relations between gaming and SNSs, which was not specifically focused only on LBP. Due to this reason, our survey only included a limited amount of questions explicitly dedicated to LBP, while some of the indexes (familiarity with digital technology, cultural consumption, and socially oriented attitude to digital technology) have been built by using dimensions that were not originally designed to study participatory cultures. For this reason, we were not able to build a proper "multimedia literacy index" following existing literature, but we had to limit to a technology familiarity index.

Further research on this topic should aim at elaborating a statistically representative sample of Italian Internet/video game users in order to promote cross-country comparisons on users' attitudes toward user-generated gaming. Furthermore, such a research framework should also be applied to other participatory platforms, with special regard to gaming platforms (starting from the second edition of LBP that has been released in 2011), in order to get comparative data. The article analyzed users' attitudes toward the creation and sharing of game content: A detailed mapping of the spreadability of UGC in a cross-platform perspective is also needed to evaluate the theoretical framework of convergence culture.

New hypotheses and data collection on users' motivations for the creation and sharing of video game content is needed in order to better understand the following: motivations, the presence of a broader "user-generated activism" (not only game related), users' activities among different environments (Wikis, YouTube, SNSs, etc.), and searching for and producing UGC that is not only game related.

Using a qualitative approach, it would be interesting to understand how much the activities related to the production of user-generated video games are central in users' self-presentation and sense of identity, and how they are also related to their presence on SNSs.

Future research may investigate why LBP's users show a higher degree of user-generated activism when compared to other Web 2.0 environments such as YouTube or Wikipedia. According to the theoretical framework of digital literacy, future research may also investigate whether or not skills developed in LBP (programming skills, social oriented skills, etc.) are likely to be conveyed in other contexts. Focusing on younger LBP users, it might be interesting to evaluate the relationship between users' activism in the production of video game content and learning processes.

## Conclusion

After concluding our analysis, we believe that LBP-related practices can be understood as examples of convergence and participatory cultures. As we have discussed, higher levels of LBP active engagement are more likely to be found among people who show a high familiarity to digital technology and to the specific environment (PSN) they use for gaming, as well as a high propensity toward a social-oriented use of technology. We are not dealing with programming skills but, instead, with practices and skills that are core elements of participatory cultures themselves (mainly addressing the skills and the attitudes needed for proper participation in convergence cultures).

The practices of user-level creation with regard to LBP show relevant differences toward traditional *modding practices*: Users no longer need heavy technical and programming skills, thanks to the easy-to-use content creation tools provided by the game itself. We can propose the idea of a "normalization" of cocreation practices with regard to computer games that follow a broader trend in Internet-related practices. As Wellman (2004) points out, in the second age of Internet studies, we have moved "from a world of Internet wizards to a world of ordinary people routinely using the Internet" (p. 125). Similarly, we have recently moved from a world of programming wizards modifying their games, who used to constitute a small elite (showing attitudes and practices that were similar to the hacker worlds), to a world of ordinary people contributing, cocreating, commenting, and spreading user-generated gaming levels. Surely, such considerations cannot be generalized to the whole Internet population but a growing part of it appears to contribute to participatory practices.

The practices that we have observed surrounding LBP are typical elements of participatory cultures: both on the PSN and on other online environments (YouTube, online forums, etc.), users are engaged in activities such as commenting, voting, sharing, and quoting user-generated gaming levels. When producing their own gaming levels, for instance, users strongly employ (and appropriate) symbolic material coming from other media (other video games, movies, etc.), in a context where different media consumption practices recalls experiences that have been carried out on other platforms. When the technical (operational) skills become less important, strategic and social skills (as defined by Warschauer, 2003) gain more relevance: for a user-generated level to gain visibility among the users community, for instance, it is important that its author is capable of making people vote and comment on this level in order to gain value on the PSN and to spread it into different online platforms.

Furthermore, we believe that LBP can be understood as a specific and peculiar example of UGC: it is a video game that appears to be *conscious of the sense-generating processes that surround video games.* Apparently, this *platform* video game has a simple structure, but it incorporates the hypothesis that the one to create content should be the user, consistent with the widespread cocreating and sharing practices we observe in the social media environment. Gamers appear to be fully aware of this peculiarity of the game, recalling it in the first place when asked to describe LBP. In Augusto's words (one of our focus group participants), "More than playing with it, the main goal is creating the game."

We can conclude by underlining that LBP is surely important as a single case study, and we can furthermore propose the hypothesis that LBP helps us understand broader processes regarding the normalization of participatory practices as well as some of the evolutionary processes that characterize participatory cultures.

## Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

## Notes

1. The official European websites describe the PlayStation Network as "where you go to play online, chat with friends and download games" (see, for instance, http://uk.playstation.com/psn/).
2. Evidently, an adequate level of multimedia literacy is the prerequisite for users to create and share their own gaming levels. On multimedia literacy, see, among others, Livingstone (2003); Jenkins et al. (2009); van Dijk and Van Deursen (2010).

3. It is a widespread practice to upload on YouTube videos showing user-generated LBP gaming levels, some of them meeting incredibly large audiences (some reaching more than a million views).
4. The concepts of "actively engaged LBP user," "cultural consumptions," "digital technology familiarity," and "social-oriented attitude" to technology will be operationalized in the "Findings on LBP and Discussion" section.
5. Mario Morcellini has been the research's scientific director, Francesca Comunello and Paola Panarese have coordinated the research project. Giuseppe Anzera, Federica Cardia, Veronica Mobilio, Simone Mulargia, and Anna Totaro took part in the research group. The whole research report has been published, in Italian, in Comunello & Panarese, 2010.
6. Due to privacy concerns, the invitation to respond to the survey has been sent only to those PSN users who had previously accepted to receive third-part messages: Under such conditions, we were able to send 137,136 invitations.
7. Only 3% is younger than 14, while 15% ranges from 14 to 19 years. This underrepresentation of younger users is partly due to PSN user terms and conditions that require a minimum age of 18 in order to register to the platform. For instance, many underage users register to the PSN using their parents' data.
8. As an example, 64% of our respondents are frequent newspaper readers (according to National Statistical Institute [ISTAT], in the same years 40.5% of the Italian population are frequent newspaper readers).
9. The indexes have been built considering respondents' answers to questions concerning the frequency of several actions. The frequency (expressed as follows: *never*, *a few times a month*, *a few times a week*, *almost every day*, *every day*) is not associated with a proper measurement unit but can nevertheless be considered as *continuous.* Consequently, we have treated it as a *quasi-cardinal* variable (for a broader explanation on the conceptual premises and the operative consequences of adopting such procedure, see Marradi, 1995, pp. 11–21 and 104–112).
10. For instance, the *active LBP use* index has been built by including the frequency of several actions, that is, playing a gaming level that has been generated by another user, watching YouTube videos that represent user-generated levels, looking for information or commenting user-generated gaming levels on online forums, voting levels generated by other users, and tagging levels generated by other users. Another question asked whether the respondents have ever created their own levels.
11. According to international and national statistics classifications (see for instance Classification of Individual Consumption according to Purpose, as well as ISTAT), *cultural consumptions* include activities related to media consumption as well as recreational and cultural services. Our *cultural consumption* index includes the frequency of several activities (within the last 3 months), that is, reading newspapers, going to the cinema, reading books, practicing sports, visiting museums or exhibitions, and listening to live music concerts.
12. In order to realize a descriptive analysis of our data and to create cross tabulations, we aggregated our indexes into quartiles. The quartiles deriving from the "active LBP use" index have been labeled as follows: (1) *absent or low*, (2) *medium to low*; (3) *medium to*

*high*; and (4) *high or maximum*. The Pearson correlation coefficient has been calculated using the variable values prior to their aggregation into classes.

13. The *technology familiarity* index includes daily Internet usage hours and the frequency of activities such as using the computer for playing, downloading multimedia content, studying/research, chatting, web surfing, using social network sites (SNSs), reading and sending e-mails, watching DVDs, and doing shopping or using various online services. It also includes the frequency of a variety of PlayStation 3 (PS3) usage practices such as listening to music, watching DVDs or Blu-Rays, surfing the web, purchasing, and/or downloading of content (including music, video, game levels, and other content such as maps, templates, etc.) and user activism on PlayStation Home. For a broader account on *digital multimedia literacy*, see the ''Discussion'' section of this article.
14. By *social-oriented technology usage*, we refer to a variety of practices that emphasize the relational aspects of technology usage, with regard both to the average digital communication tools and to specific practices that can take place in game-related environments (such as online gaming and interpersonal communication through the PSN). Our *social-oriented technology usage* index includes the frequency of a variety of practices including the use of SNSs, chat, PC for online gaming, consoles for online gaming, PS3 to communicate with friends, and user activism on PlayStation Home.

## References

Acquisti, A., & Gross, R. (2006). Imagined communities: Awareness, information sharing, and privacy on the Facebook. *Proceedings of the 6th Workshop on Privacy Enhancing Technologies*, Cambridge, England. Retrieved October 22, 2013, from, http://privacy.cs.cmu.edu/dataprivacy/projects/facebook/facebook2.pdf

Andon, S. (2007). Evaluating computer-mediated communication on the university campus: The impact of Facebook.com on the development of romantic relationships. Internet Research 8.0. Retrieved October 22, 2013, from http://aoir.org/conferences/past/ir-8-2007

Baldwin, C., Hienerth, C., & von Hippel, E. (2006). How user innovations become commercial products: A theoretical investigation and case study. *Research Policy*, *35*, 1291–1313.

Banks, J. (2013). *Co-creating videogames*. London, England: Bloomsbury Academic.

Banks, J., & Potts, J. (2010). Co-creating games: A co-evolutionary analysis. *New Media and Society*, *12*, 253–270.

Barnes, S. (2006). A privacy paradox: Social networking in the United States. *First Monday*, 11. Retrieved from http://firstmonday.org/article/view/1394/1312

Bartle, R. (1996). Hearts, clubs, diamonds, spades: players who suit muds. Retrieved July 22, 2013, from http://www.mud.co.uk/richard/hcds.htm

Baym, N. (2010). *Personal connections in the digital age*. Cambridge, England: Polity Press.

Baym, N. K., & Ledbetter, A. (2009). Tunes that bind? Predicting friendship strength in a music-based social network. *Information, Communication & Society*, *12*, 408–427.

Boase, J., Horrigan, J. B., Wellman, B., & Rainie, L. (2006). The strength of Internet ties. Pew Internet & American Life. Retrieved October 22, 2013, from http://www.pewinternet.org/media//Files/Reports/2006/PIP_Internet_ties.pdf.pdf

Boase, J., & Wellman, B. (2006). Personal relationships: On and off the Internet. In A. L. Vangelisti & D. Perlman (Eds.), *The Cambridge handbook of personal relationships* (pp. 709–723). Cambridge, England: Cambridge University Press.

Bostan, B., & Kaplancali, U. (2010). *Explorations in player motivations: Game mods'*. GAMEON-ASIA 2010 Conference (ASTEC'2010), Shanghai, China. Retrieved October 22, 2013, from http://www.silentblade.com/Academic.html

boyd, d. (2004). *Friendster and publicly articulated social networks*. Conference on Human Factors and Computing Systems (CHI 2004), ACM, Vienna, April 24–29.

boyd, d., & Ellison, N. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, *13*, 210–230.

boyd, d., & Heer, J. (2006). Profiles as conversation: Networked identity performance on Friendster. *Proceedings of the Hawai'i International Conference on Social Systems–HICSS-39,* IEEE Computer Society, Kauai, January 4–7.

Burgess, J., & Green, J. (2009). *YouTube*. Cambridge, England: Polity Press.

Castells, M., Fernández-Ardèvol, M., Linchuan Qiu, J., & Sey, A. (2007). *Mobile communication and society. A global perspective*. Cambridge: MIT Press.

Comunello, F. (2010). From the digital divide to multiple divides. Technology, society and new media skills. In E. Ferro, Y. K. Dwivedi, R. Gil-Garcia & M. D. Williams (Eds.), *Overcoming digital divides: Constructing an equitable and competitive information society*. Hershey, PA: IGI Global.

Comunello, F. (Ed.). (2011). *Networked sociability and individualism. Technology for personal and professional relationships*. Hershey, PA: IGI Global.

Comunello, F., & Panarese, P. (Eds.). (2010). *Business e gaming. Gioco e social network nella rete d'impresa*, Nuova Cultura, Roma.

Consalvo, M. (2003). Zelda 64 and video game fans. *Television & New Media*, *4*, 321–334.

Djaouti, D., Alvarez, J., & Jessel, J.-P. (2010). Can "Gaming 2.0" help design "Serious Games"? A comparative study. In *Proceedings of the 5th ACM SIGGRAPH Symposium on Video Games*, Los Angeles, CA. Retrieved July 16, 2011, from http://dl.acm.org/citation.cfm?id=1836135&picked=prox

Donath, J. (2007). Signals in social supernets. *Journal of Computer-Mediated Communication*, *13*, 231–251.

Ducheneaut, N., Moore, R. J., & Nickell, E. (2004). Designing for sociability in massively multiplayer games: An examination of the "third places" of SWG. In J. H. Smith & M. Sicart (Eds.), *Proceedings of the other players conference,* Copenhagen, Denmark: University of Copenhagen (ISBN: 87-7949-077-8-DS10).

Ellison, N., & boyd, D. (2013). Sociality through social network sites. In W. H. Dutton (Ed.), *The Oxford handbook of Internet studies* (pp. 151–172). Oxford, England: Oxford University Press.

Ellison, N., Heino, R., & Gibbs, J. (2006). Managing impressions online: Self-presentation processes in the online dating environment. *Journal of Computer-Mediated Communication*, *11*, 415–441.

Ellison, N., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends": Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication*, *12*, 1143–1168.

Fono, D., & Raynes-Goldie, K. (2006). Hyperfriends and beyond: Friendship and social norms on LiveJournal. In M. Consalvo & C. Haythornthwaite (Eds.), *Internet research annual volume 4: Selected papers from the association of Internet researchers conference* (pp. 91–103). New York, NY: Peter Lang.

Golbeck, J. (2011). The more people I meet, the more I like my dog: A study of pet-oriented social networks on the web. *First Monday*, *16*. Retrieved from http://firstmonday.org/ojs/index.php/fm/article/view/2859/2765

Gross, R., & Acquisti, A. (2005). *Information revelation and privacy in online social networks*. ACM Workshop on Privacy in the Electronic Society (WPES). Alexandria, VA.

Hills, M. (2002). *Fan cultures*. New York, NY: Routledge.

Hsieh, Y. (2012). Online social networking skills: The social affordances approach to digital inequalities, *First Monday*, *17*. Retrieved from http://firstmonday.org/article/view/3893/3192

Hunsinger, J., & Senft, T. (Eds.). (2013). *Routledge Handbook of Social Media*. New York: Routledge.

Ito, M., Baumer, S., Bittanti, M., boyd, d., Cody, R., Herr-Stephenson, B., Horst, H. A., Lange, P. G., Mahendran, D., Martinez, K. Z., Pascoe, C. J., Perkel, D., Robinson, L., Sims, C., … Tripp, L. (2010). *Hanging out, messing around, and geeking out. Kids living and learning with new media*. The MIT Press, Cambridge MA.

Jenkins, H. (2006a). *Convergence culture*. New York: New York University Press.

Jenkins, H. (2006b). *Fans, bloggers and gamers. Exploring participatory culture*. New York: New York University Press.

Jenkins, H., Purushotma, R., Clinton, K., Wiegel, M., & Robison, A. J. (2009). *Confronting the challenges of participatory culture: Media education for the 21st century*. Chicago, IL: MacArthur Foundation.

Kow, Y., & Nardi, B. (2010). Who owns the mod? *First Monday*, *15*. Retrieved from http://firstmonday.org/ojs/index.php/fm/article/view/3035/2566

Kücklich, J. (2005). Precarious playbour: Modders and the digital games industry. *The Fibreculture Journal*. Retrieved October 28, 2013 from http://five.fibreculturejournal.org/fcj-025-precarious-playbour-modders-and-the-digital-games-industry/

Liu, H. (2007). Social network profiles as taste performances. *Journal of Computer-Mediated Communication*, *13*, 252–275.

Livingstone, S. (2003). *The changing nature and uses of media literacy* (Media@lse Electronic Working Papers, 4). London, England: London School of Economics.

Livingstone, S. (2008). Taking risky opportunities in youthful content creation: Teenagers' use of social networking sites for intimacy, privacy and self-expression. *New Media and Society*, *10*, 393–411.

Malaby, T. (2006a). Parlaying value. Capital in and Beyond virtual worlds. *Games and Culture*, 1. Retrieved from http://ssrn.com/abstract=871851

Malaby, T. (2006b). Coding control: Governance and contingency in the production of online worlds. *First Monday*. Retrieved from http://firstmonday.org/ojs/index.php/fm/article/view/1613/1528

Mallan, K., & Giardina, N. (2009). Wikidentities: Young people collaborating on virtual identities in social network sites. *First Monday*, *14*. Retrieved from http://firstmonday.org/ojs/index.php/fm/article/view/2445/2213

Marradi, A. (1995). *Concetti e metodi per la ricerca sociale*. Firenze: La Giuntina.

Matei, S., & Bruno, R. (2011). Individualist motivators and community functional constraints in social media: The case of Wikis and Wikipedia. In F. Comunello (Ed.), *Networked sociability and individualism* (pp. 1–23). Hershey, PA: IGI Global.

Nieborg, D., & Van Der Graaf, S. (2008). The mod industries? The industrial logic of non-market game production. *European Journal of Cultural Studies*, *11*, 177–195.

Papacharissi, Z. (2011). *A networked self. Identity, community, and culture on social network sites*, New York, NY: Routledge.

Postigo, H. (2007). Of mods and modders. Chasing down the values of fan-based digital games modification. *Games and Culture*, *2*, 300–313.

Postigo, H. (2008). Video game appropriation through modifications. *Convergence*, *14*, 59–74.

Postigo, H. (2010). Modding to the big leagues: Exploring the space between modders and the game industry. *First Monday*, 15. Retrieved from http://firstmonday.org/ojs/index.php/fm/article/view/2972/2530

Rainie, L., & Wellman, B. (2012). *Networked. The new social operating system*. Cambridge: MIT Press.

Richard, T. A., Wood, M. D., Griffiths, D. C., & Mark, N. O. D. (2004). The structural characteristics of video games: A psycho-structural analysis. *CyberPsychology & Behavior*, *7*, 1–10.

Rybas, N., & Gajjala, R. (2007). Developing cyberethnographic research methods for understanding digitally mediated identities. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, 8. Retrieved from http://www.qualitative-research.net/index.php/fqs/article/view/282/619

Scacchi, W. S. (2010). Computer game mods, modders, modding, and the mod scene. *First Monday*, *15*. Retrieved from http://firstmonday.org/article/view/2965/2526

Shirky, C. (2008). *Here comes everybody*. New York, NY: Allen Lane.

Sotamaa, O. (2004). *Playing it my way? Mapping the modder agency*. Paper presented at the Internet Research Conference 5.0, Sussex, England.

Sotamaa, O. (2010a). When the game is not enough: Motivations and practices among computer game modding culture. *Games and Culture*, *5*, 239–255.

Sotamaa, O. (2010b). Play, create, share? Console gaming, player production and agency. *The Fibreculture Journal*, *16*. Retrieved from http://sixteen.fibreculturejournal.org/play-create-share-console-gaming-player-production-and-agency/

Tong, S. T., Van Der Heide, B., Langwell, L., & Walther, J. B. (2008). Too much of a good thing? The relationship between number of friends and interpersonal impressions on Facebook. *Journal of Computer-Mediated Communication*, *13*, 531–549.

van Dijk, J., & Van Deursen, A. (2010). Inequalities of digital skills and how to overcome them. In E. Ferro, Y. K. Dwivedi, R. Gil-Garcia & M. D. Williams (Eds.), *Overcoming digital divides: Constructing an equitable and competitive information society* (pp. 278–291). Hershey, PA: IGI Global.

Walther, J. B., Van Der Heide, B., Kim, S.-Y., Westerman, D., & Tong, S. T. (2008). The role of friends' appearance and behavior on evaluations of individuals on facebook: Are we known by the company we keep? *Human Communication Research*, *34*, 28–49.

Warschauer, M. (2003). *Technology and social inclusion. Rethinking the digital divide*. Cambridge: MIT Press.

Wellman, B. (2001). Physical place and cyberplace: The rise of personalized networking. *International Journal of Urban and Regional Research*, *25*, 227–252.

Wellman, B. (2004). The three ages of Internet studies. *New Media and Society*, *6*, 55–64.

Wellman, B., & Haythorntwhaite, C. (Eds.). (2002). *The Internet in everyday life*. Hoboken, NJ: Blackwell.

Yee, N. (2007). Motivations of play in online games. *Journal of CyberPsychology and Behavior*, *9*, 772–775.

Zhao, S., Grasmuck, S., & Martin, J. (2008). Identity construction on Facebook: Digital empowerment in anchored relationships. *Computers in Human Behavior*, *24*, 1816–1836.

## Author Biographies

**Francesca Comunello** (PhD, Sapienza University of Rome, Italy) is an assistant professor of sociology of culture and communication at the Department of Communication and Social Research, Sapienza University of Rome (Italy), where she teaches Internet studies. Her research focuses on the intersections between digital technology and society, namely, network theories, digitally mediated social relations, social media and social network sites, digital interactive television, and the digital divide. Her work has been presented at national and international conferences. She has edited or coedited four books (both in English and in Italian); she has authored two books (in Italian) and several book chapters (both in English and in Italian). Her publications include F. Comunello & G. Anzera, *Will the revolution be tweeted? A conceptual framework for* understanding the social media and the Arab Spring. Islam and Christian-Muslim Relations, vol. 23 pp. 453–470; F. Comunello (editor), Networked sociability and individualism. Technology for personal and professional relationships, IGI Global, Hershey.

**Simone Mulargia** (PhD, Sapienza University of Rome, Italy) is a research fellow at the Department of Communication and Social Research, Sapienza University of Rome (Italy) and an adjunct professor at the University of Siena. His current research interests include game studies, digital culture, new technologies and civic engagement, media literacy, and media education. His work has been presented at national and international conferences. He is the author of several scientific papers related to video game culture.