

LUDOLITERACY: THE UNFINISHED BUSINESS OF MEDIA LITERACY

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About this book

This book is a compilation of articles and reflections about the characteristics and meanings of digital games, a field in which we have been working for the past 10 years. Thus, this work aims to publicly disseminate our ideas about digital gaming with the ultimate goal of defending the need for a media literacy that includes the digital game as an object of study. We advocate for the idea that understanding video games is valuable for its own sake as a necessary pedagogic prerequisite for all those interested in the educational use of digital games, serious game or game-based learning. In this manner, media literacy in digital games and digital gaming –that is, ludoliteracy–, aims to debate on the technological, cultural, sociological and economic contexts of video games as media.

Keeping that in mind, the introduction of this book aims to define how video games have become a communicative product which, like any other, has an important social dimension. Some debates in the collective imagination have created a kind of common sense that emphasises their status as a mere pastime and the potential dangers of their use, while their powerful potential as a vector for innovation in some communication practices related to the emergence of new audiences has only been partially studied. This chapter provides a framework for a discussion to begin to understand these practices, based on key issues such as the formal characteristics of video games, the many pleasures that they involve and the relationships established between games and players.

The second chapter examines the impact of the Internet on the definition of the media ecosystem among young people. One of the most notable effects of the globalisation of the Internet is that the media landscape that young people configure in their information and their entertainment uses has been affected by their changing conception of the value and importance of the media for everyday life. This chapter addresses the issue of young people's media practices by presenting and discussing data related to the uses and perceptions of the Internet as a medium for information, entertainment and sociability among young people in Spain. The chapter also presents a comparison between various media, establishing the hierarchical position occupied by each one in young people's media landscape.

In the third chapter we describe play , in all its forms, whether in the animal world or among humans, either digital or analogue, as a major cultural and social component of any civilization, human group or community. Today, digital games have clearly become one of the main sources of entertainment for much of the population in fully industrialized societies. Digital games have become one of the most important expressions of human creativity in contemporary culture and in the cultural industry.

In order to organize and to understand what *play* and *playing* means, on these for chapter we briefly summarize the main concepts, ideas and leading authors in the field. Our aim is simply to give the reader some ideas to help understand the complexity and social and cultural importance of both the activity and the object (playing and games). To conclude the chapter, we discuss the basic characteristics of digital games as the prime example of the experience of play nowadays.

In the fourth chapter we present the results of three investigations on the use of digital gaming in non-formal (leisure institutions) and informal (household context) education. These are:

- 1) an empirical enquiry on the uses and perceptions of Spanish teenagers in relation to digital technologies as tools for leisure and socialization,
- 2) an intervention in a public school in Barcelona, in which we analyzed the introduction of videogames in the context of leisure activities, and
- 3) a workshop for families to discuss the cultural and social significance of the use of videogames in the household.

The results of these experiences have allowed us to observe the youth in their environment and verify that their uses of technology and attitudes towards digital gaming have a great potential for nonformal and informal learning.

The last chapter defends the kind of media education that takes into account the role of digital games as a fundamental part of current and future media literacy policies, media literacy using digital games that intend to encourage through on the technological, cultural, sociological and economic context of videogames, and digital games as a means of communication and a cultural industry. The chapter is dedicated to explaining the concept of ludoliteracy, which understands media literacy in digital games as:

- 1) the skill to play and the equal opportunities of access;
- 2) the skill to understand their meaning in relation to culture, economics and politics; and
- 3) the skill to create, exchange and participate in the cultural context of videogames and digital culture in general.

1. Introduction: Video games as social spaces and as an opportunity for game education¹

Daniel Aranda, Jordi Sánchez-Navarro

Apart from the figures that reflect the enormous vitality of video games as the engine behind the communication industry for leisure, there is another sign of their growing importance. For the last year, video games have been considered a fully-fledged cultural industry in Spain, in a recognition that could undoubtedly be considered somewhat belated, since video games have become one of the most important expressions of creativity in contemporary culture over their three decades of history. Observing and understanding the many communication practices emerging from video games would therefore be an ambitious task that would justify all investments of resources in research, as everyone would agree that a study of one of the primary vectors in cultural innovation is absolutely essential.

It is therefore worth asking ourselves how we can begin to give video games thoughtful consideration. The terms of the debate on the cultural and social importance of video games can initially be defined by first attempting to discuss the two extreme positions that provide the starting point for two opposing visions of the phenomenon: on one hand, that video games are a major cultural form that will eventually replace reading, cinema and television; and, on the other hand, that video games are completely trivial – a pastime that is so inherently complex and monotonous that they are only able to appeal to those who are prior converts. This attempt is in fact made by Newman (2004; 2008), who believes that after ruling out these two extremes, there are three reasons why video games are worthy of our attention: the first is the volume of the industry that produces, distributes and markets them; the second is their popularity; and the third is that they are a particularly striking example of human-computer interaction. According to Newman, the keys to the study of video games as means of communication are the elements that make up the context that su-

¹ An initial version was published in Spanish in Sánchez-Navarro, J.; Aranda, D. (2010). "Un enfoque emergente en la investigación sobre comunicación: Los videojuegos como espacios para lo social". *Anàlisi: quaderns de comunicació i cultura.*, Núm. 40. Pàg. 129 - 141. ISSN: 0211-2175.

rounds them, the motivations that they provide for people who play them, and their very nature as artefacts for play.

Rutter and Bryce (2006) also argue that games should be considered a fully-fledged object of study. Although they appear to agree with Newman that there is still a glaring lack of studies in the discipline, Bryce and Rutter do not share his interpretation of the reason. Neither do they seem to agree that the turnover accounted for by video games should be a factor in determining their value as an object of study: compared to the food industry, for example, video games are indeed trivial. Furthermore, they also do not agree that the fundamental aspect requiring analysis in video games is their intensive use of technology. On the one hand, it is clear that technology is increasingly interwoven with the entertainment industry, and not only in digital interactive entertainment; on the other hand, nobody has been able to determine to what extent (digital) technology needs to be present in objects that would fall within a theory of digital games. Ultimately, Bryce and Rutter's reading leads to the conclusion that the territory of digital games is located at a point where borders converge, and that finding an indigenous theory is a task that is as impossible as finding the answers within a single discipline to all the questions posed by the multifaceted phenomenon of video games. It is therefore not surprising that most of the most outstanding contributions in the field have been guided by an inclusive and all-embracing impulse (Kline, Dyer-Witthford and De Peuter, 2003; Vorderer and Bryant, 2006).

1.1. Playing in digital

Since the cultural context that surrounds us is increasingly if not entirely digital, it is normal and even necessary that digital play, i.e. video games, occupy an important position in the context of individual leisure in our society. It is now widely accepted that if it is to reproduce itself, any culture needs play.

However, despite play being an essential part of our lives, talking about it is usually not an easy task. In fact, it is perhaps easier to describe the activity of play itself, the constituent elements of play and the importance of play in shaping human cultural landscapes. However, there is of course no unanimous agreement regarding what exactly the act of playing consists of, what pleasures it provides and what its exact role in culture is. As soon as we attempt to set down the multiple ideas that arise from the study of such a basic human activity,

we are faced with contrast and ambiguity. Sutton-Smith (2001), one of the major figures in the social and cultural analysis of play, dissects what that ambiguity consists of, and how it is transferred to the study of play. Sutton-Smith discusses a number of activities that shape experiences of play, and suggests that the ambiguity of the concept is not limited to the diversity of forms that it includes, but also to the variety of players and the variety of pleasures that it involves. He also takes into account the diversity of phenomena discussed in theoretical reflections on play. To shed some light on the matter, Sutton-Smith proposes what he calls the “rhetorical solution”. This consists of classifying games according to rhetorics of play. For example, some games are subjected to the analysis if they fall within the *rhetoric of play as progress*. This is true of children's games, in which play is considered a tool for socialization. Other games could be understood from the perspective of *the rhetoric of play as identity*, such as those that can be explained as a means of configuring identities in the community of players. However, these rhetorics are in turn the result of more general approaches that contain their own degree of ambiguity. With this argument, which involves carefully scaling all these rhetorics, analysing them in detail and considering the ambiguities in each one, Sutton-Smith aims to ascertain the extent to which ambiguity is a result of the rhetorics used to discuss games or whether conversely, ambiguity is inherent in the nature of play itself.

This conceptual ambiguity aside, there are some broadly accepted starting points, and one of them is that (traditional) play is an exceptional tool for social and cultural learning, especially in periods related to childhood. However, many still see digital play as strange, or as a threat that fosters violence or social isolation. However, playing (and playing video games) is an activity that reinforces social ties and self-esteem. Video games and play in general improve the quality of our social relations by providing spaces for relaxation and pleasure. Playing is ultimately a way of minimising the consequences of our actions and therefore a way of learning in less hazardous situations (Goldstein, Buckingham and Brougère, 2004). In addition to fulfilling the need for recreational pleasure, video games are therefore emotional and social laboratories for experimentation, as evidenced by –among others– the studies by Williamson and Facer (2004), Sherry (2004), Feike and Nicholson (2001) and Jansz and Marten (2005).

Ermi and Mäyrä (2005) and Mäyrä (2007) propose a model for contextual analysis of the experience of play, in order to establish a broader framework of reference around individual experiences. There are many reasons why we need

a more comprehensive view of the player's experience as something that not only occurs while the game is being played, but instead as a broader phenomenon. The experience of play is pre-defined, modified and post-defined by the multiple dimensions that are part of the networks of meaning that are established around playing and games as a product. In order to focus research on what playing a video game entails, Mäyrä advocates a better understanding of both the historical depth ("vertical") and sociocultural width ("horizontal") of these structures of meaning, based on adapting Johnson's circuits of culture (1986). In short, a crucial question emerges. Can we investigate the gaming experience under laboratory conditions, divorced from the experiences and social networks that are the real testing ground for any game that is introduced into the culture of human society? The answer seems obvious: no. Squire (2008) has shown that apart from the study of the formal constituents of the artefact or a textualist reading, greater details of the relationship between games and players will ideally emerge from a phenomenological approach to video games.

1.2. Multiple players, multiple styles of play, multiple pleasures

The relationship between texts in popular culture and their multiple audiences is active and productive. No text contains its own unambiguous meaning or its political agenda. In other words, no text can guarantee what its effects will be. As Grossberg (1992) argues, people constantly struggle not only to find out what a text means, but also to make it mean something that has a connection with their own lives, experiences, needs and desires. The same text will represent different things to different people, depending on how it is interpreted. Furthermore, different people have different interpretative resources, in the same way as they have different needs. A text can only mean something in the context of the experience and situation of its specific readership.

Our relationship with the products of popular culture operates through the production of structures of pleasure, and video games are no exception to this. Analysing how these structures of pleasure are created is essential for understanding the cultural influence of a phenomenon such as video games. Later, we will consider some ideas about how video games implement structures of pleasure in their design, but first we will briefly look at some pleasures that go beyond the immediate use of the game. Authors such as Wirman (2009), Kücklick (2005) and Dovey and Kennedy (2006) have shown that the authority of cultural use of video games is shared between designers and players. First,

games are played in what amounts to a performance activity, and this differentiates them from other media that are based on reception. The player co-produces the game simply by playing it –by updating a text which would be purely potential if it were not played. Video games have also proven to be a particularly fertile ground for the participation of very varied audiences. Wirman (2009) identifies these various forms as: *configuration as productivity* (or how configuring a game in a certain way implies participation in the text), *instrumental productivity* (or how players express themselves while they accessories to the game, such as guides) and *expressive productivity* (or how players can use elements of the game for their own expression). The enormous potential of video games for the production of many and varied pleasures becomes apparent as these forms of participation are studied.

1.3. Attempts at definition and structural analysis

As Murray (1999) explains, a game is an abstract way of telling a story that looks at the world of everyday experience, but which modifies it to enhance its interest. All games, digital or otherwise, can be experienced as a symbolic drama. Murray points out that regardless of the content in a game or our role, we are always the protagonists of the symbolic action, which can be based on one of the following plots: “I find a confusing world and discover its keys”. “I find a world divided into pieces and use them to form a coherent whole”. “I take a risk and I am rewarded for my courage”. “I face a difficult antagonist and I defeat it”. “I face an interesting challenge related to a skill or strategy and I successfully resolve it”. “I start with a small amount of something precious and I end up with a lot (or I start with a lot of something useless thing and I get rid of it all)”. “A world of unpredictable emergencies constantly challenges me and I survive”. According to Murray, we are performing a significant drama even in games in which we are at the mercy of the dice. She argues that games of pure chance are fascinating because they exemplify our helplessness before the universe, our dependence on unpredictable factors, in addition to our sense of hope.

Games provide us with the opportunity to represent our basic relationship with the world: our desire to overcome adversity, to survive inevitable defeats, to shape our environment, to master complexity and make our lives fit together like the pieces of a puzzle. Every move in a game is like a plot twist in these simple but compelling stories. In short, according to Murray, games are entertaining because they are of no use for our immediate survival. However, playing skills

have always been exercises in adaptation: games allow us to safely practice areas of skill that are useful in real life –they are rehearsals for life.

Authors such as Crawford (1982), Aarseth (1997, 2001) and Frasca (2001) have offered tentative explanations for video games which, with varying degrees of success, have established a commonly accepted definition that sees video games as rules-based systems with objectives that can be overcome with the players' efforts and interaction and their emotional bonds, and which are put into practice using software, computers, consoles and other technological platforms. Using a definition like this, it is possible to synthetically illustrate the structural features of video games and thereby offer an explanation of the workings, the structure, the involvement of the players and their emotional relationship based on four basic concepts: rules, objectives and rewards and the sense of use by the players.

Juul (2005) argues that rules are the elements that structure and organize a game. Rules impose limits, force us to take specific paths in order to achieve specific objectives and help us understand the world of the video game while making it fair, egalitarian and exciting. According to Salen and Zimmerman (2003), rules are the formal structure of the game and have the following characteristics: they limit the player's action, they are explicit and unambiguous, they are shared by all the players, they are fixed, they are binding and they are repeatable. While in most traditional games the rules are clear or are agreed upon before starting (e.g. in chess or football), in video games they are usually discovered while we are investigating or trying out what we can do – what is allowed and what is not. Most of the rules in video games are not given as explicit starting points. On the contrary, discovering them is part of the game itself. Deducing the rules is part of the player's task and part of the pleasure the game provides.

Although rules act as a characteristic that introduces some degree of justice, breaking them (or cheating) is not an unusual phenomenon in video games. In fact, if we previously talked in terms of multiple styles of play, we now need to emphasize that some of these styles involve breaking rules or obtaining certain advantages by very different methods. Breaking the rules is not something that paralyses the game, but instead, on the contrary, can add dimensions of complexity, emotion and pleasure to it. So much so that most of today's video games incorporate features providing advantages in their design, which are either hidden and available to the player or involve exploring "short cuts" in the sys-

tem. For example, some of these features are “Easter eggs” or secrets in the form of images, messages or hidden areas that the players have to find. These features bring the idea of breaking the rules into play, offering the players new possibilities, e.g. hidden levels, new characters, secret skills. Others are cheat codes, which give the player advantages over the game's default strategy. Sometimes they are a combination of keys or buttons on the remote control which are pressed in a certain sequence. These codes are distributed on websites and in magazines, and are part of the gaming experience. Knowledge and use of them increases the player's skill and enhances their prestige among their community of players or group of friends.

Another interesting case is game guides, which are long documents containing comprehensive information on gameplay, as well as the characters, story, maps and levels and structure. These products help the player to follow step-by-step instructions to overcome different levels, obtain additional information or understand specific aspects of the plot. The most interesting feature is that some of these guides are official products, which are fully endorsed by the game's distributor or developer, while the majority are produced by the players themselves, or rather by an elite group of players. They are therefore one of the major exponents of the applied productivity that Wirman discusses. Consalvo (2007) explains the phenomenon of “cheating” and why it “can be good” in detail. Consalvo takes the concept of cultural capital coined by Bourdieu to the sphere of video games. As a result, secrets, tricks, game guides, Easter eggs and codes are an important part of the gaming experience, and are part of the “gaming capital” that defines competent players.

As for objectives and rewards, it seems appropriate to note that common sense tells us that games have a goal –a clear and well-defined purpose. Players are obviously initially motivated by the ultimate goal of completing the game. Assuming that this is the case, we should not forget that in almost all cases, the rewards do not involve merely finishing the game. In a participant observation of a group of young players playing *Lego Star Wars*, we found that achieving predetermined objectives (for example, in *Episode IV*, saving Leia, delivering the plans and destroying the Death Star) was not always what motivated the player most. Simply wandering around the different locations in the game, enjoying the freedom of movement that comes with piloting a ship, or merely having fun by solving different puzzles, created sufficient motivation and pleasure to move forward in the story without the proposed objective of the game being the most important thing. In another observation –in this case a group of young players

playing *Motor Storm*, an individual racing game for cars, motorcycles and trucks across a desert landscape– we found that players, boys and girls aged eleven and twelve, discovered that reversing the goal of the game could bring other rewards: in their alternative game, what motivated them was not finishing races, but instead staging the most spectacular crashes in front of their peers (see Aranda and Sánchez-Navarro 2007a; 2007b; 2008a; 2008b).

The objective in many games, such as Pac-Man and Tetris, is not to complete the game, as the game always ends in defeat (very few people have beaten these games). The objective in this case is to improve the high score. Other games such as The Sims have no fixed objectives, but instead the player decides on how to play and when the objectives have been fulfilled. As Frasca (2001) argues, it is therefore the player and not the designer who ultimately decides how a video game is used. The designer may suggest a set of rules, but it is the player, based on their sense of use, who has the last word.

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2. The media ecosystem of young people: Uses, consumption and perceptions of the media for information, entertainment and sociability

Silvia Martínez-Martínez, Jordi Sánchez-Navarro, Daniel Aranda

2.1. Introduction

The universalization of the Internet has had a major impact on the media ecosystem. Audiences' consumption of media adapts and evolves in parallel to technological developments and the emergence of new devices. These changes range from the emergence of new behaviours to the convergence of media uses (Bernal and Lobera, 2014). The digitisation of the message has contributed to media convergence, defined by Jenkins (2008) as “the flow of content across multiple media platforms, the cooperation between multiple media industries, and the migratory behaviour of media audiences”.

We are witnessing increased ease of access to technology as a result of lower costs and portability (Seni, 2011), the proliferation of channels providing entertainment and communication products (Fernández-Cavia, 2005:30) and the possibility of consumption of content on demand. The opening of public communication to the user (Pastor and Martínez-Martínez, 2013) has also facilitated participation in the production process and made the user a creator of content.

Not only have information channels multiplied, but the social uses of the Internet also affect forms of sociability and inter-relationships (Ito *et al.*, 2009; Valkenburg, Peter, 2011; Cáceres, Ruiz and Brändle, 2009, 2013). In this environment, the power of “weak ties” (Granovetter, 1973) [1] becomes increasingly important, as they also expand the circle of exchange and networking to previously unimaginable magnitudes. So, according to Manovich (2007), these new media contribute to creating the representation of the reality in which users are also participants.

In this context, young people are a singular group due to their ability to appropriate, adaptability and innovativeness in terms of their use of developments in information and communication technology (Livingstone, 2007b, 2008). At the same time, they are also a group that is highly vulnerable and potentially susceptible to risks. This makes them an object of interest for the study of the so-

cial and cultural impact of the Internet, given its key role in various aspects of everyday life (Sánchez-Navarro and Aranda, 2011:33).

2.2. Young people and the media ecosystem

The collective imagination uses expressions such as “digital natives” (Prensky, 2001) and the “Einstein generation” (Boschman, 2008) to describe the section of the population born within the information society and which therefore has assimilated the development of ICTs more naturally. Indeed, young people today use the Internet for everything (Aranda, Sánchez-Navarro, Tabernero, 2009; Rubio-Gil, 2009, 2010; Benete, 2010) and despite the ubiquity of television it has lost ground in recent years due to a decline in its consumption, according to figures from Kantar Media (Marta-Lazo, Martínez and Sánchez, 2013). Nevertheless, the relationship between young people and television is a focus of a great deal of research and the opportunity to “rethink this approach” (Sánchez-Navarro, Aranda and Martínez-Martínez, 2014:219) has therefore arisen.

Recent research has broadened the objectives of study to include consumption of other media according to young people's needs or interests. The analysis of how young people and adolescents use the media based on the time they spend consuming them has shown that, although most are moderate users, individuals in this age range are not a homogeneous group and there are “significant differences in Internet usage by age” (Callejo, 2013:2). Although the growing presence of YouTube as the primary means of audiovisual consumption is beginning to become apparent, the importance of television consumption is constant, and, despite the digitisation and multiplatform distribution of content, it is observed among the adolescents the willingness to maintain the consumption habits connected to the television in contrast to the use of other media (Fedele, García-Muñoz and Prado, 2014). In fact, when they analyse the practice known as social television, based on the case study of the Antena 3 Television series *El Barco*, Deltell, Claes and Osteso (2013:356-362) conclude that it is impossible to talk in terms of a *transmedia* audience and argue that “despite being mostly digital native, it does not behave as a creative audience on Twitter,” because it merely distributes content created by institutional profiles. An understanding of these results is completed with the findings of the qualitative study conducted in 2012 by Aranda, Sánchez-Navarro and Roca (2013), which show that television consumption is perceived as an activity associated with the common areas of

the home, determined to an overly large extent by parents' interests, and based on closed programming defined only by the interests of the channel. The opposite is true of opinions on browsing the Internet for the purposes of information or entertainment, which is a less regulated activity that meets their needs and is used in a way that is more closely related to private areas such as the bedroom. This confirms the development of what is known as *bedroom culture* (Bovill and Livingstone, 2001; Livingstone, 2007a), in which young people spend more time in what they consider their own territory, where they can access specific content and manage remote personal relationships.

Following the pioneering work of Boyd (2007) and Ito *et al.* (2009), studying the role of the Internet in the configuration and management of identity and social and interpersonal relationships has also become important. For some time, studies of Internet use among university students have shown that despite “not giving up relations of belonging, they tend to increase temporary, reticular relationships that are limited in scope, which enable experimentation without any consequences” (Cáceres, Ruiz and Brändle, 2009:229). The qualitative analysis by Núñez-Gómez, García-Guardia and Hermida-Ayala (2012) shows that for young people between 14 and 24 years old, social relations mediated by ICTs are “essential”. In the same vein, other studies have found changes in the mode of sociability (Cáceres, Brändle and Ruiz, 2013) and the importance that they acquire for accessing information content in a context of fragmentation of sources and interest in free content (Casero-Ripollés, 2012).

2.3. Methodology

The aim of this chapter is to study young people's understanding of the Internet and its impact on the definition and hierarchy established by the media ecosystem, based on an analysis of their media practices. The study of uses and perceptions and how this contributes to redefining young people's ecology is of particular interest.

The data presented and discussed below were obtained from a survey carried out in Spain in December 2013 as part of an international research project, the World Internet Project (WIP) [2]. This project is the result of an interest in studying the impact of the Internet and its potential to become the most important cultural influence in recent years, even surpassing television.

A universe consisting of the general population over 16 years old, resident in Spanish households with landline telephones, was used for collecting the data, and the resulting sample is proportional to the real distribution of the Spanish population in terms of autonomous regions. The primary and secondary units were selected randomly while the final individual units were chosen according to cross bedding of gender, age and size of the municipality.

The margin of error in the survey was $\pm 2.45\%$, for $P=Q=50\%$ and assuming maximum indeterminacy. A total of 1,600 people participated, although in this chapter we focus on the answers given by the group of the population in the age group between 16 and 24 years old [3].

The questionnaire, agreed upon and partially shared by the network of member countries of the project, consists of more than thirty questions, including those related to socio-demographic aspects. Some of the questions were multivariable and included cases where an open or closed response and one or more responses were possible as well as dichotomous questions and questions applying the Likert scale.

The snapshot of Internet use obtained shows that penetration and access among young people aged between 16 and 24 years old is virtually universal. In addition to the responses obtained in the WIP, and in order to obtain a more accurate perspective, the data have been supplemented with information gathered in the sixteenth survey of Internet users, *Navegantes en la Red* [Net Surfers] (2014), organised by the AIMC, media research association, for which the fieldwork was carried out between October and December 2013 and which was aimed exclusively at users visiting Spanish websites. The file of data collected in this survey with the coding of the answers provided by each of the participants of the study is openly available. This enabled us to select the answers given by the group of interviewees in the age range mentioned above.

In this study, we expect to find the Internet in a prominent position in young people's media ecosystem due to its potential for information and entertainment, and its potential for socialisation. We also expect to observe a perception and differential use by young people of the communicative infrastructure that is available to them, and which they appropriate to meet their needs.

2.4. Results

Internet penetration among young people is almost complete, as 99.6% of those surveyed say they use it and 63.7% say they use the Internet on a daily basis. The home is the primary place for going online (96.2%), although doing so while on the move is common among the habits of Spanish young people (76.9%) in comparison to other places such as places of study, libraries, call centres, friends' homes and workplaces. This means that, while the computer is the most commonly used device, 3.6% of the young users surveyed do not use it to connect to the Internet and 91.9% say that they use a mobile telephone to use the Internet. Likewise, among those who use more than one device, the majority (63%) prioritise consumption by means of mobiles rather than a computer or a *tablet* or *e-reader* (Table 1).

Table 1: Use of devices among young people who use the Internet (%)

	Devices used N ₁ = 234	Hierarchy of devices* N ₂ = 211
Computer	97.4	35.1
Mobile	91.9	63
Tablet or e-reader	33.3	1.9

Source: Compiled by the authors based on data from the 2013 WIP surveys.

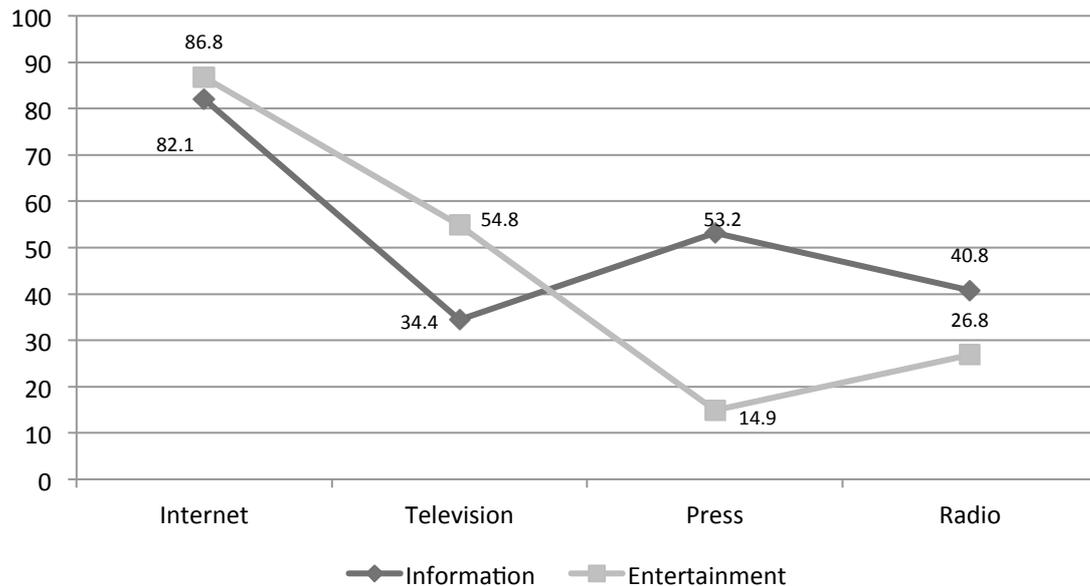
Young people appropriate mobile devices to meet their connectivity needs. In addition, when young users were asked about their activities over the last 30 days on each device (AIMC, 2014), young people primarily used mobile telephones to connect to social networks (82.3%), instant messaging (82.1) and e-mail (80%) while tablets were mainly used for browsing (70.8%) and watching videos (64.7%).

Due to the universality of the Internet among young people, it is part of a media ecosystem in which it plays a key role. In this context, it is especially important to note the importance conferred by young people on each medium either as a source of entertainment or information and to establish a comparison between them based on the assessment offered (Figure 1).

Internet is a primary medium for young people, as it obtains the highest scores as a medium for information and entertainment. The press is in second place as an information source, and television is second for entertainment. The degree of regularity and frequency in performing activities related to entertainment and information on the Internet is consistent with the perception recorded. 56% of

young users therefore read the national or international news every day. As for activities related to leisure, 24.8% watch amusing or entertaining content every day, 37.6% download or listen to music and 26.9% do the same with videos.

Graph 1: Perception of media as a source of information or entertainment. Percentage of those surveyed who say it is an important or very important source (%)



Source: Compiled by the authors based on data from the 2013 WIP surveys (N=235).

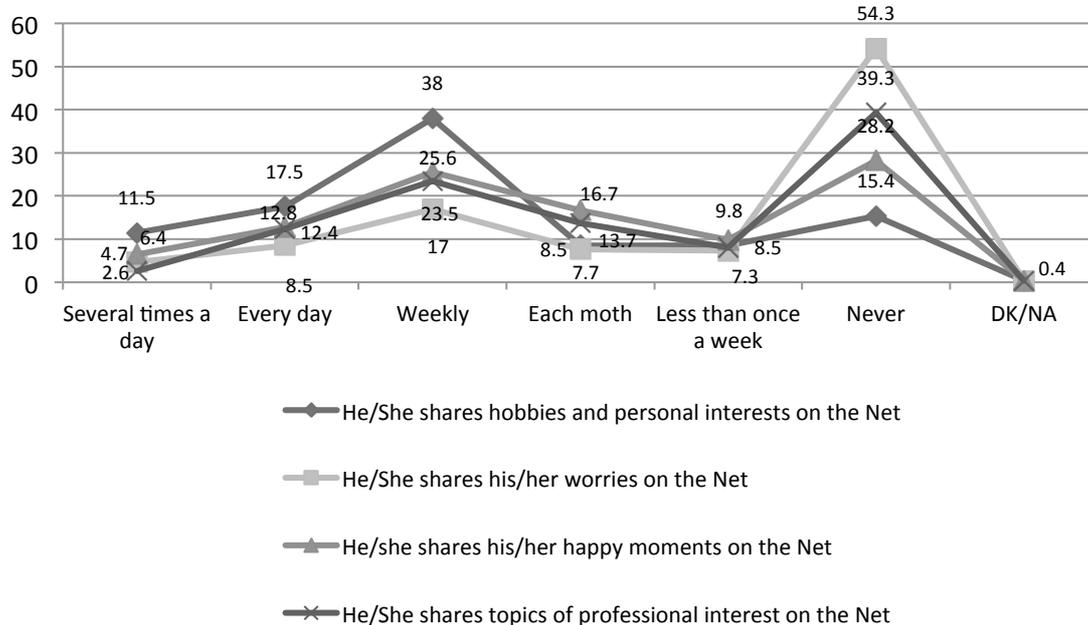
In terms of consumption, as noted above, the medium most affected by competition from the Internet is television. According to the results of the AIMC survey, the majority of young users spend between 2 and 4 hours every day (29.7%) or between 4 and 8 hours every day (30.4%) on the Internet, in terms of total time on any connected device. This figure contrasts with recent measurements of television audiences, in which young people aged 13-24 are the population segment that consumes the least television, with an average of 134 minutes per day (Barlovento Comunicación, 2015). In fact, when young people are specifically asked what are other activities that they have reduced due to their consumption of the Internet, 61.7% of the respondents stated that the activity that they have reduced to the greatest extent is “watching TV” (AIMC, 2014). These figures show a situation in which the Internet has replaced television as the main medium among young people, regardless of the time spent consuming other media.

Besides being the main source of information and entertainment, the Internet offers young people new forms of sociability. The importance of social networks can be empirically observed in the widespread nature of its use, as, according

to responses to the WIP survey, 50% of young users post messages or comments on them daily. As for the use of social networks and the relationship between sociability and the consumption of information, the AIMC data (2014) show that among young people who use social networks, 67.6% follow a media outlet and 41% follow a journalist. Among the activities carried out in the last 30 days, 54.3% say they have shared news items from the media on social networks; 67.1% say they have received them; and 43.6% say they have commented on them. Despite this connection to the media, what is known as social television still has low penetration rates, as 48.2% of young people who use the Internet while watching television say they have never read or commented on the programme they are watching.

By means of social networks, the Internet offers young people a relational and communication infrastructure and, indeed, young people often share messages and content that are linked to and which form their self-expression. The progression is clear: what they share most are their hobbies or personal interests, followed by things that make them happy, subjects of professional interest and, finally, their concerns.

Graph 2: Frequency with which young users share concerns and interests on the Internet (%)



Source: Compiled by the authors based on data from the 2013 WIP surveys (N=234).

If we consider the frequency with which young people never share messages or content, it is even more apparent that young people are cautious especially

when sharing their concerns with others. This is in contrast to the limited negative experiences they have had *online*, and specifically those linked to intrusion of privacy, as 87.2% admit that nobody has violated their privacy online and 8.1% of those who have been affected state that it was a minor problem.

The perception of the Internet as a source of problems is also limited. The difficulty involved in deleting personal information from the Internet and consequently enforcing the right to be forgotten is perceived as a fact by 63.7% of young people, although only 48.3% say they agree or strongly agree with the statement that “people can find personal information about me online”. Working with the Internet can be frustrating for only 9% (Table 2).

Table 2: Perception of the Internet in terms of fun, instrumental efficiency, as a source of problems and as a social enabler. Percentage of interviewees expressing agreement or strong agreement (%)

Factor	Statement	Acceptance
Escapism/fun	Browsing the Internet helps me escape the things I'd rather not do	33.8
	Browsing the Internet helps me pass the time when I'm bored or have nothing to do	81.2
	When I'm online I'm don't feel lonely	12
	I have a good time online seeing what happens	39.3
Instrumental efficiency	The Internet is an efficient tool for finding information	85
	The Internet makes life easier	65.4
	The Internet helps me save time	66.7
Source of problems	It is difficult to delete personal information on the Internet	63.7
	Working with the Internet is frustrating	9
	There is a lot of immoral material online	58.5
	Working/dealing with e-mail takes up a lot of time/effort	6.4
Social enabler	People can find personal information about me online	48.3
	Being online allows me to be in touch with people	82.9
	For me it's easier to meet people online than in person	20.1

Source: Compiled by the authors based on data from the 2013 WIP surveys (N=234).

The assessment of instrumental efficiency shows a large percentage of acceptance. In fact, it is a useful tool for finding information for 85% of the young users surveyed. There is a high degree of consensus on the potential offered by the Internet for contacting people (82.9%). Despite these figures, only 20.1% say it is easier to meet people online than in person and 12% say that they do

not feel lonely when they are online. In any event, Internet appears to be a factor or means of distraction to pass the time when they are bored or have nothing to do (81.2%).

2.5. Conclusions

The importance of the Internet for young people lies in and is explained not so much by the amount of time spent on its consumption, but instead how the Internet is used and what it is used for. In this respect, the Internet is the preferred medium of Spanish young people not only as a source of information and entertainment but also because of the opportunities for sociability it offers. The media ecosystem is determined by a clear hierarchy in which the television ranks second for entertainment and the press does so for information. This highlights the need to refine the traditional focus of many studies on youth and communication, which focus their attention on young people's relationship with television. Despite the ubiquity and influence of television in everyday life, young people believe that watching television is a habit "of the past" and that the computer is a device that is much more suited to their audiovisual entertainment and consumption needs. The data show that young people consider television consumption to be an activity linked to common spaces in the home with a range of content, variety and schedules that are determined by interests that differ from theirs. Moreover, they perceive media consumption and content via the Internet as a "freer" activity, i.e. one that is less strictly regulated by parents and more suited to their social, cultural and psychological needs. In addition, young people appropriate the communication infrastructure that is available to them. Among those who use multiple devices intensively, the mobile is therefore the most frequently used medium, as it meets young people's needs for connection and communication, as can be seen in the primary uses they make of it.

Internet also provides a response to young people's psychosocial needs thanks to its opportunities for sociability. Social networks provide young people with a relational infrastructure that enables them to expand their network of contacts. Young people use them to share messages and content that are linked to and which form their self-expression. The tendency to use the media for entertainment – in this case the Internet – is clearly linked to users' self-expression, and that self-expression is in turn linked to use of the Internet that is focused on entertainment. This convergence of entertainment, self-expression and entertainment leads to a characteristic use of media by young people, which is the seed

for a new model and therefore requires a refocusing of certain aspects that have been taken for granted in media education.

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Notes

[1] The strength of the tie established is defined by Granovetter (1973, p. 1361) as follows: “the strength of a tie is a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie.”

[2] The World Internet Project (WIP) is an international project carried out collaboratively by over thirty teams of researchers, which studies the social, political and economic impact of the Internet and other new technologies.

[3] There is no unanimity when defining the age range used to discuss youth (Naval, Sádaba, 2005, p. 9). In this study, we use the United Nations definition (which places the upper limit of youth at 24 years of age) and the minimum age for participation in statistical surveys such as the Spanish National Institute of Statistics (INE) Survey on Household Information and Communication Technology Equipment and Use.

3. *Play and playing*

Daniel Aranda²

3.1. Play as discovery and self-improvement

The obligatory first stop if we want to understand the complexity involved in defining *play* is the book *Homo Ludens* (1944), by the Dutch historian and philosopher Johan Huizinga.

According to Huizinga, a definition of humanity that is only based on knowledge, as *Homo sapiens*, and/or based on his ability as a maker, as *Homo faber*, does not take into account the importance of play and pleasure as a determining cultural factor of the human species. Huizinga advocates and demonstrates the need for play as a raw material in the development of human civilization. He argues that our evolution does not depend so much on thinking and doing, but rather on playing while thinking and playing while doing. According to the author of *Homo Ludens*, the experience of play is a crucial part of our desire for discovery and for improvement as a civilization.

Huizinga thus believes that in addition to thinking and doing, the characteristics of the human species that are intrinsically linked to our social and cultural evolution should be expanded to include play and our ability to play: *Homo ludens*. In this study, play is defined as a distinct and vital factor in the social and cultural world of humans: "For many years the conviction has grown upon me that civilization arises and unfolds in and as play" (Huizinga, 1994: vi). Huizinga thus believes that play is more than a mere physiological phenomenon or a psychological reflection; play is more than simply a physical or biological activity.

Juan Delval compiles these theories on play rooted in the psychological or biological context that emerged in the eighteenth and nineteenth centuries, and which Huizinga rejects: the surplus energy theory, the relaxation theory, the recapitulation theory and the pre-exercise theory.

² A previous version in Spanish was published in Aranda, D.; Gómez, S.; Navarro, V.; Planells, A. J. *Game & Play. Diseño y análisis del juego, el jugador y el sistema lúdico*. Barcelona: UOCPress, 2015.

- The first is the **surplus energy theory** (Friedrich Schiller, 1759-1805; Herbert Spencer, 1855), which maintains that "play is an activity that uses up the surplus energy of a young organism that does not need to work to survive because its needs are met by others" (Delval, 1999: 285).
- There is also the **relaxation theory**, which defines play as a space or element which replenishes energy after work.
- The **recapitulation theory** (Stanley Hall, 1904) argues that "the development of the individual reproduces the development of species. Hence children during childhood reproduce the history of the human species and during play engage in the activities which our ancestors engaged in many years ago" (Delval, 1999: 286). Running, jumping and hiding are activities that our ancestors would have performed while hunting, and that children replicate from a playful perspective.
- Meanwhile, the **pre-exercise theory** (Karl Groos, 1899) sees play as training for life, associated with growth, which provides an opportunity for testing and developing physical and social needs, such as motor play and symbolic play.

As mentioned above, Huizinga defines play by avoiding the boundaries imposed by biological and psychological theories, and investigating what he calls the higher forms of play. Huizinga argues against interpretations of play related to the animal world or infancy, and establishes a definition that makes play a determining cultural factor.

Huizinga thereby argues that the higher forms of play (which are neither animal nor infantile) are "a free activity standing quite consciously outside 'ordinary' life as being 'not serious' but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings which tend to surround themselves with secrecy and stress their difference from the common world by disguise or other means" (Huizinga, 1994: 13).

According to the author of *Homo Ludens*, the activity of playing is a social experience. According to Huizinga, "Solitary play is productive of culture only in a limited degree" (Huizinga, 1994: 68), because, as mentioned above, play tends to become an essential part of our cultural and social activity:

Poetry was born in play and nourished on play; music and dancing were pure play. Wisdom and philosophy found expression in words and forms derived from religious contests. Law arises from the customs of social play. The rules of warfare, the conventions of noble living, were built up on play patterns. We have to conclude, therefore, that civilization is, in its earliest phases, "played"... culture arises in and as play. (Huizinga, 1994: 220)

Many authors have highlighted the shortcomings and inaccuracies in Huizinga's definition, but the importance of this approach lies not so much in the accuracy of its definition, but rather in its positioning of the activity of play and games at the centre of culture and social activity. *Homo Ludens* argues that the great achievements of the culture of humanity depend less on rational thought than on the intrinsic experience of play, and a desire for the game of discovery and improvement.

3.2. Fundamental characteristics of play

The French philosopher Roger Caillois, working in the 1960s, developed *Homo Ludens* by stressing the importance of analysing the fundamental characteristics of play and its importance in the development of civilization as argued by Huizinga. In *Man, Play and Games* (1958), Caillois describes play based on six fundamental characteristics: it must be free, separate from reality, uncertain, unproductive, governed by rules and accompanied by make-believe. This means that:

- Play must be a **free and voluntary activity** and a source of joy and amusement. According to Caillois, an obligation or order would contradict the player's need to devote himself spontaneously to the game for pleasure and to freely leave it whenever he chooses.
- Play is an activity **that is separate from ordinary life** and limited to a time and space established beforehand. There is a space for football, a space for chess, and a space and time for all games, and everything that happens outside that space and time is irrelevant to how the game develops.
- According to Caillois, play must be an **uncertain activity**. The uncertainty must remain until the end, and we must not know the outcome until the game ends. Caillois points out that if the player knows the reward in advance, with no possibility of error or surprise, this is incompatible with the very nature of play. The uncertainty of a

game such as tennis or chess is reinforced and modified with every shot or every move.

- **Unproductiveness** is another characteristic that Caillois mentions in his essay. According to Caillois, a game should create neither goods nor wealth "except for the exchange of property among the players, ending in a situation identical to that prevailing at the beginning of the game" (Caillois, 1958: 10). "Nothing has been harvested or manufactured, no masterpiece has been created, no capital has accrued. Play is an occasion of pure waste: waste of time and energy" (Caillois, 1958: 8).
- Play provides a freedom that is **governed by its rules**. The extent of the freedom – large or small – offered by the rules of the game explains and justifies the pleasure it brings to the player.
- Finally, "**make-believe**," or, in other words, the fiction that drives the actions of the players, such as in a game of cops and robbers, replaces and acts in the same way as rules do in a game like chess. According to Caillois, in games that mimic reality, the player moves between ignorance of the explicit rules which need to be followed and knowledge of the behaviour that the game mimics or simulates. In games that do not imitate reality, such as poker, the rules are what creates the fiction of the game and encourage it to be played as if it was real. According to the author, a game is not based on rules and "make-believe" but is instead based on rules, or on "make-believe".

Caillois goes a step further in defining play, and places the vast number and variety of existing games in four categories:

- **Agôn (competition)**
Based on competing against others or against oneself. Players seek the satisfaction obtained from overcoming physical and mental challenges (fighting, racing, puzzles, riddles, etc.) to gain recognition for a specific skill or knowledge. The emotions experienced when playing this type of game are related to self-improvement, knowledge of our limitations and our potential, self-esteem, learning to accept failure and learning from our mistakes, and learning to enjoy success.
- **Alea (chance)**
Games based on luck and chance. The aim is not to defeat one's opponent but instead to overcome fate. As with competitive games, they help us build up our resistance to frustration, enjoy the last-

minute surprise when the final card is revealed, or when we raise the cup containing the dice.

- **Mimicry games (simulation)**

These are the games of the "make-believe" world. A paradigmatic example in video games is *The Sims*, a virtual representation of a social environment in which the characters, which we create and guide, live, work, interact, fall in love, get angry, have fun, etc.

- **Ilinx games (vertigo)**

These games allow the players to experience extreme situations, put themselves to the test by detaching themselves from reality, and break rules to the point of transgression. There is also moral vertigo, and transgression emerges at this point. Examples among video games include first-person shooter games (such as the classic *Doom* or the currently popular *Call of Duty*). This personal or semi-real element is what makes the sensation of vertigo, and above all transgression, very exciting.

Caillois combines these categories, defined in *Man, Play and Games* (1958), with the concepts of *paidia* and *ludus*. He defines *paidia* as spontaneous play, free improvisation and the instinct for play. *Paidia* basically refers to our childish and instinctive essence for play that appears at various times in our adult life.

On the contrary, *ludus* are manifestations of play regulated by rules in which the game imposes restrictions from the beginning. It refers to the necessary rules, limits and instructions imposed by the game on the players.

Table 1. Classification of games according to CAILLOIS (1958)

	AGÓN Competition Equal probability of success	MIMICRY Imitation Players pretending to be someone else	ALEA Randomness Players have no control over the outcome	ILINX Vertigo Destabilization of perception, shock
PAIDIA (free form improvisation)	Races Athletics	Children's symbolic play	Heads or tails	Acrobatics Roundabout
LUDUS (conventions governed by rules)	Football Chess Sports Tournaments	Theatre	Lottery Roulette	Climbing Balancing

Paidia and *ludus* are the two opposite poles in a spectrum on which any manifestation of play can be situated. The categories of Agôn, Alea, Mimicry and

Llinx are complicated not by two types of play, but instead by two ways of playing. These types of play, together with the types of game, *paidia* and *ludus*, allow Caillois to create a diagram (Table 1) containing all the terms that the author considers to be play and for the first time in the academic literature, to establish a map, which according to his predecessors is too general and ambiguous, which is capable of defining any type of play.

3.3. The ambiguity of the concept

Any attempt to define the activity of playing and play itself shares a common problem: the ambiguity of the concept given the complex and varied types of games and customs, as shown in the table of categories proposed by Caillois.

In his book *The Ambiguity of Play* (1997), Sutton-Smith, one of the major figures in the social and cultural analysis of play, considers what this ambiguity consists of and how it is transferred to the field of study of games.

As an aside, it may be useful to clarify at this point that if this ambiguity arises when considering the subject in a language (English) that makes a clear distinction between the terms *play* (the act of playing in general) and *game* (the structured system that is played), this ambiguity does not arise in languages that do not have two specific terms for those distinctions. Speakers of Spanish, for example, are forced to use *juego* to refer both to the act of playing and the game itself, and the same applies to other related languages with Latin roots. The English phrase *play the game* thus becomes *jugar el juego* in Spanish. Another issue would be to analyse the other ambiguities in the English language, such as those derived from the term *play*, which refers to both leisure activities – as in *playing cards* – and performance activities – as in *playing the piano*.

Apart from the ambiguity created by language, in *The Ambiguity of Play* (1997), Sutton-Smith argues that the ambiguity of play lies in the diversity of forms of play, in the diversity of players, in the many types of equipment that play requires, the differing nature of play scenarios and the various pleasures that it invokes:

The ambiguity of play, as well as lying in this great diversity of play forms, owes some of its force to the parallel diversity of the players. There are infant, preschool, childhood, adolescent, and adult players, all of whom play somewhat differently. There are male and female players. There are gamblers, gamesters, sports, and sports players, and there are playboys and playgirls, playfe-

llows, playful people, playgoers, playwrights, playmakers, and playmates. There are performers who play music and act in plays and perhaps play when they paint, sing, or sculpt.

.../...

The scenarios of play vary widely also, from playpens, playrooms, playhouses, and playgrounds to sports fields, circuses, parade grounds, and casinos. (Sales and Zimmerman, 2003: 301)

To shed some light on the matter, Sutton-Smith proposes what he calls the "rhetorical solution" (speech, arguments and theories that have an ideological and persuasive purpose). This solution consists of classifying games according to the seven rhetorics of play (Sutton-Smith, 1997: 304-306), which define play in terms of different beliefs, arguments, ideas or theories which are often antagonistic, and at other times complementary, but are always partial, incomplete or fragmented.

- The rhetoric of play as progress
- The rhetoric of play as fate
- The rhetoric of play as power
- The rhetoric of play as identity
- The rhetoric of play as the imaginary
- The rhetoric of the self
- The rhetoric of play as frivolous

The **rhetoric of play as progress**, which mainly comprises children's games, considers play as a tool for socialisation. The discourses that explain children's play in terms of this rhetoric consider that play situations help the child to incorporate and practice skills, competences and values that are demanded by his/her social context: "The contents of the social world that surrounds a child, its moral norms and rules, are reflected in play. Accepting a role, a child complies with the rules and tries to act according to them ... This improves his absorption of commonly accepted social standards" (Sutton-Smith, 1997: 36). This rhetoric seamlessly reinforces the belief that play has a positive effect on learning and development. However, as Sutton-Smith subsequently points out, criticism and scepticism have increased in recent years because it is difficult to determine how many and which results of play are due to the abilities that the child already has, or conversely, which abilities are the results of their contact with play.

Meanwhile, if play is a learning tool for development during childhood, Sutton-Smith ironically wonders whether adult play is a learning tool in preparation for death. Or to put it another way, a theory that only considers play in terms of progress, as preparation and learning for life, and that only considers some of the population cannot be considered exhaustive unless we believe that adults do not play.

In complete contrast to the rhetoric of progress, Sutton-Smith proposes the **rhetoric of play as fate** or luck, which mainly refers to games of chance and gambling. This rhetoric sees life and play as governed by the forces of fate, the gods or by luck, rather than by the need for learning or socialisation, as in the previous rhetoric.

The main criticism of the rhetoric of play as fate lies in its emphasis on luck rather than talent. It is this belief in luck that has created many negative discourses in Western societies. They are often related to addiction but are also, as Sutton-Smith points out, refuted by theories explaining the origins of this type of play in religion rather than in economics: gambling becomes the secular religion of the working classes which gives them an existential optimism.

Meanwhile, the **rhetoric of play as power** refers to sports and contests that strengthen the sense of community over individuality. This rhetoric explains play as the "representation of conflict and as a way to fortify the status of those who control the play or are its heroes" (Sutton-Smith, 1997: 10). On the social play level, the general idea of the power rhetoric is that play or games or sports or athletics ... have to do with some kind of ... struggle for superiority between two groups (two communities, two social classes, two nations, etc.). These games exist because they give some kind of representation or expression to the existing real conflict between these groups... and where this kind of contest may thus unite rather than divide them (Sutton-Smith, 1997: 75). However, this interpretation of play as power has little or nothing to do with the perception of meaning that play acquires for the players themselves. For them, competitive games are more closely related to strategy, effort, continued practice, knowledge of the rules, etc. For players, the rhetoric of play as power, the visibility of the conflict between two groups, is not the main interpretation, and much less the source of pleasure that motivates it. In other words, ideology is not required to engage in it.

Other games could be understood from the perspective of **the rhetoric of play as identity**. This rhetoric is mainly concerned with the celebrations and festivals

of traditional popular culture, and is a means of establishing collective identities, reinforcing the links between participants and observers.

According to the author, the key to this rhetoric is that reducing the ambiguity of identity is the source of the rhetoric: "ambiguity creates the rhetoric, the rhetoric creates the festival, and the festival reduces the ambiguity" (Sutton-Smith, 1997: 110).

The fifth rhetoric, the **rhetoric of play as the imaginary**, idealizes aspects related to imagination, improvisation and creativity that the act of playing provides. The ambiguity in this case lies in the duality between adult play and children's play. While adults avoid games focusing on the imagination, children tend to organize their play around imagination, improvisation and creativity, which according to Sutton-Smith are key parts of what play means.

The **rhetoric of the self** is mainly a primarily individual type of play in which the player seeks entertainment, relaxation or escapism. These theories focus on the player's individual psychology: the significance of the game lies in the experience that the player obtains or seeks – in his or her subjective experience. It is this subjectivity which the author identifies as the source of ambiguity: the meaning of the self, individuality, pleasure ... Different theories offer different answers.

Finally, the **rhetoric of frivolity** includes the discourses that interpret any type of play in negative terms. It refers to all of the rhetorics mentioned above. For example, in the rhetoric of play as progress, all play activities that do not fall within the concept of the exercise of skills or competences are looked upon by adults as frivolous. The aim is to organize their play based on an adult concept of progress and exercise, disparaging spontaneous child's play.

Another of the discourses used by the rhetoric of frivolity refers to games of minorities. The games of less powerful groups, such as the games played by women, are implicitly excluded and even ridiculed.

With this argument, by carefully analysing all these rhetorics and examining the ambiguities in each one, Sutton-Smith aims to ascertain the extent to which ambiguity is a result of the rhetorics used to discuss games or whether, conversely, ambiguity is inherent in the nature of play itself, which prevents its definition.

Everything seems to suggest that Sutton-Smith believes that defining what are already complex and multiple forms of play comes up against different rhetorics and complementary or divergent points of view which attempt to explain play. These definitions or approaches to the act of playing in turn also depend on broader or narrower rhetorics, such as religion, economics, gender or ethnicity, among many others. Play and its practice is therefore a confusing field on which conflicting discourses are superimposed, which tend to define play and playing based on ideological positions that are not so much dependent on the formal characteristics or the dynamics of play itself but instead on the discourses that address it. These discourses are motivated by class and gender interests as well as other partisan interests that are expressed as natural and objective: both the definition of play as an object/system and its practice is therefore ideological and partial.

3.4. The classic model of play

Apart from emphasizing the discursive problem that underlies any attempt to consider play, we should not lose sight of our objective of defining play and the act of playing. In *Half-Real* (2005), Jesper Juul rejects any ambiguity and argues for a strict definition of play based on six features:

- Rules: games are based on rules.
- Variable and quantifiable outcomes.
- Assessment of the outcomes/consequences: different results of actions in the game have positive or negative results.
- The player's effort: the player's efforts aim to influence the outcome.
- The player's interest in the outcome: the player is emotionally attracted to the game's outcome. He will feel happy if he wins, and unhappy if he loses.
- Negotiable consequences: the same game (the set of rules) can be played with or without consequences in real life.

According to Juul (2005: 36), a game is a rules-based system with various quantifiable results and consequences, in which different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels emotionally attached to the outcome and the consequences of the activity are negotiable.

Table 2. Juul's classic game model

	The game as a formal system	The player and the game	The game and the rest of the world
1. Rules			
2. Various and quantifiable outcomes and consequences			
3. Valorisation of the outcome/consequences			
4. Player effort			
5. The player's interest in the outcome			
6. Negotiable consequences or results			

The definition of the classic game model in the figure above arranges and distributes the six characteristics described by Juul in depending on whether they refer to the game, the player or the world. Features 1, 2 and 4 describe the properties of the game as formal system; feature 3 refers to the values assigned to the possible consequences of the game system; features 4 and 5 describe the relationships between the system and the player, and, finally, the last characteristic refers to the relationship between the activity of playing and the possible consequences in the real world.

Apart from the characteristics described by Juul, it should be noted that this author believes that the game is both an object and an activity. As an object, the game is a set of rules that players or computers unambiguously implement, and which produce diverse and quantifiable outcomes or consequences and describe how the player must exert an effort.

However, the game as an activity is a system that changes according to a set of rules that are implemented by humans or computers, or natural laws. In this case, the results or consequences are indeterminate, vary, are quantifiable and are ideally negotiated before the game.

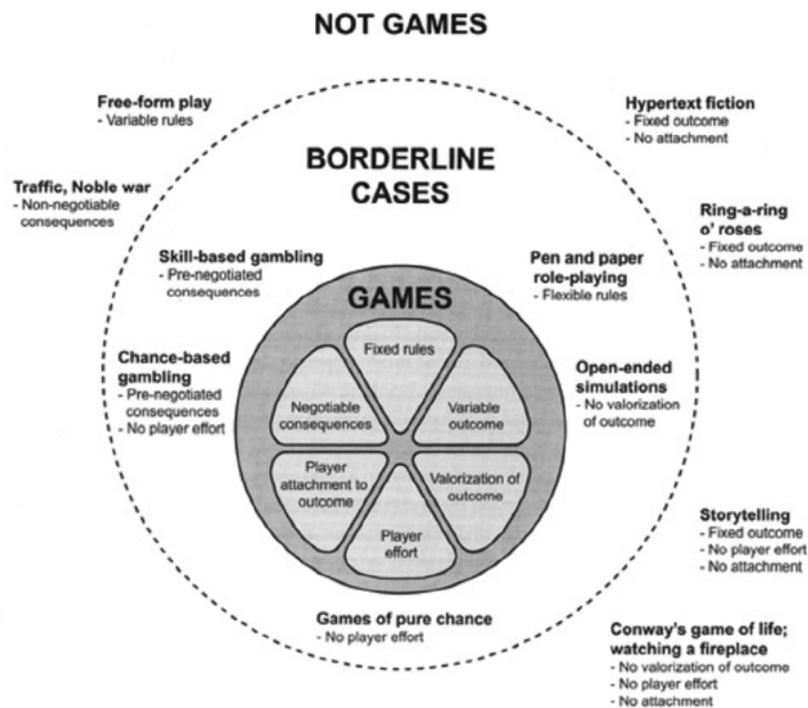
Juul says that from the psychological point of view, it is difficult to determine what is and is not a game. Does any activity subject to rules, with variable out-

comes, involving some effort by the player and which assigns values to the results obtained by the players, fall within the category of "games"?

In the diagram below, based on the classic definition explained previously, Juul classifies the various experiences of games based on two concentric circles. These are the experiences that fall within the classic definition, borderline cases such as gambling and classic pencil and paper role-playing games, and finally, what the author does not consider as games, such as free-form play (races down the street between two friends) and hypertext fiction. Each exception and borderline allocation is justified by the failure to comply with one of the characteristics that define the game according to the classic model.

Finally, Juul notes that the classic definition he proposes does not limit the game to any particular environment, tools or objects. However, with the emergence of video games, various characteristics warrant explanation as they bring significant variations to the experience of playing and to the game as an object.

Diagram: not games - borderline games



| Figure 2.10 |
On the borders of the classic game model.

3.5. Video games

Based on the definition above, it is possible to summarize the basic characteristics of video games. This will enable us to provide an explanation of the workings, structure, the involvement of the players and their emotional relationship through the rules, tricks, the pleasure and the relationship between learning and play.

3.5.1. Rules and tricks

Juul (2005: 58) argues that rules are the elements that structure and organize the game. Rules impose limits, force us to take specific paths in order to achieve specific objectives, help us understand the world of the video game while making it fair, egalitarian and exciting. According to Salen and Zimmerman (2003: 122), rules are the formal structure of the game and have the following characteristics: they limit the player's action, they are explicit and unambiguous, they are shared by all the players, they are fixed, they are binding and they are repeatable.

While in most traditional games the rules are clear or are agreed upon before starting (e.g. in chess or football), in video games they are usually discovered while we are investigating or trying out what we can do – what is allowed and what is not. Most of the rules in video games are not given as explicit starting points. On the contrary, discovering them is part of the game itself. Deducing the rules is part of the player's task and part of the pleasure the game provides.

Although the rules act as a feature that introduces some degree of justice, breaking them (or cheating) is not an unusual phenomenon in video games. Breaking the rules is not something that paralyzes the game, but instead, on the contrary, can add dimensions of complexity, emotion and pleasure to it.

So much so that most of today's video games incorporate features providing advantages in their design, which are either hidden and available to the player, or involve exploring "short cuts" in the system. For example, some of these features are *Easter eggs* or secrets in the form of images, messages or hidden areas that the players have to find.

These features bring the idea of breaking the rules into play, offering the players new possibilities, e.g. hidden levels, new characters, secret skills. Others are *cheat codes*, which give the player advantages over the game's default strate-

gy. Sometimes they are a combination of keys or buttons on the remote control which are pressed in a certain sequence. These codes are distributed on websites and in magazines, and are part of the gaming experience. Knowledge and use of them increases the player's skill and enhances their prestige among their community of players or group of friends.

Another interesting case are game guides (audiovisual and on paper), which are long documents containing comprehensive information on gameplay, as well as the characters, story, maps and levels and structure.

These products give the player step by step instructions to overcome different levels, obtain additional information or understand specific aspects of the plot. The most interesting feature is that some of these guides are official products, which are fully endorsed by the game's distributor or developer, while the majority are produced by the players themselves, or rather by an elite group of players. This phenomenon is explained in greater detail by Mia Consalvo: "Being a member of game culture is about more than playing games or even playing them well. It's being knowledgeable about game releases and secrets, and passing that information on to others" (Consalvo, 2007: 18).

Consalvo takes the concept of cultural capital coined by Bourdieu to the sphere of video games. As a result, secrets, tricks, game guides, *Easter eggs* and codes are an important part of the gaming experience, and are part of the "gaming capital" that defines competent players.

Players want to play the game. They want to "have fun", but, more importantly, they want to succeed. Success is a result of progress, achieving objectives, immersion in increasingly interesting and challenging environments and a firm control of the elements within the game. However, games do not always offer players the same opportunities for success; players may have different skill levels, be in a bad mood that day or the game may simply be poorly designed.

But even with these challenges, the players try to play the game, and elements of cheating can help the players to pass certain points and achieve even more demanding objectives. However, regardless of how individuals define cheating, what was clear in my study is that many players engaged in what they themselves defined as cheating, either occasionally or regularly. Because of the negative connotations associated with cheating, it was frequently justified. So why cheat if it has such unpleasant connotations?

They cheat for many reasons. Those reasons can help us understand the process of the game experience for different people, in different places, at different times and in various contexts. This is because cheating does not only consist of subverting the system (of the game), but also enhancing the system. It is a way for individuals to keep playing:

- Overcoming boredom
- Overcoming difficulties
- Pushing the boundaries of the scenarios
- Overcoming slumps or simply bad games

Cheating, or however these activities may be defined, is the players' firm representation that they are in control of their gaming experiences. These players go beyond the "expected activity" in the game. Knowing how, when and why people cheat (or refuse to do so) can help us improve the design of the gaming experience.

As regards objectives and rewards, which are created and achieved by complying with the rules, it seems appropriate to note that common sense tells us that games have a goal – a clear and well-defined purpose. Players are obviously initially motivated by the ultimate goal of ending the game. Assuming that this is the case, we should remember that rewards are almost never obtained solely as a consequence of finishing the game.

The objective in many games, such as *Pac-Man* and *Tetris*, is not to complete the game, since the game always ends in defeat (very few people have beaten the game). The objective in this case is to improve the high score. Other games such as *The Sims* have no fixed objectives, but instead the player decides on how to play and when the objectives have been fulfilled. Thus, as Frasca (2001) argues, it is the player and not the designer who ultimately decides how a video game is used. The designer may suggest a set of rules, but it is the player, based on their sense of use, who has the last word.

3.5.2. The pleasure of playing

Some authors suggest that video games, and games in general, work towards the player achieving a mental state called *flow* (Csikszentmihalyi, 1996; Sherry, 2004) or an optimal state of inner experience. Mihaly Csikszentmihalyi worked on this concept in the 1970s in order to explain the pleasure we find when en-

gaged in everyday activities. By analysing artists and musicians involved in creative acts, Csikszentmihalyi discovered how they isolate themselves from the world around them. Artists describe this experience of immersion, concentration and isolation in terms of intense pleasure: when consciousness is orderly and people want to engage in what they are doing because of the satisfaction it gives them. The author says that flow is important because it makes the present moment more enjoyable, and because it promotes self-confidence and allows us to develop skills and achieve goals.

We can summarize the characteristics of this experience in four points:

- A focused and intense concentration on the activity being performed.
- The sensation of control over one's actions. The feeling of being in control of the situation because of knowing how to respond to or resolve the various phases of the process.
- A distorted experience of time: the feeling that time passes more quickly.
- The activity is experienced as pleasurable. The goal is often an excuse for enjoyment of the process.

The characteristics of the activities that enable us to attain this state of concentration, isolation and pleasure, most easily share the following features:

- They have specific goals with easy rules.
- They match the opportunities for action to our abilities.
- They provide clear information about how to engage in the proposed activity.
- They eliminate distractions and enable concentration.

Flow is therefore what we experience when there is a balance between individual skills and the difficulty of the activity. Activities that enhance flow have clear goals, stable rules, and challenges that are appropriately matched to the skills that lead the player towards growth and discovery.

It therefore appears that video games can take the player to this state: video games have specific objectives and actions that match the player's skills; the difficulty increases as the player's command of the skills that the game requires improves; players obtain pleasure from improving their skills and from interest in discovery.

3.5.3. The video game as a machine for learning

The immersive properties of video games, as well as their ability to stimulate concentration, interest in discovery and the desire to improve the skills that the game provides are of great interest to some academics and professionals, who have begun to define *gamification*, the discipline of *game-based learning* (GBL) and serious gaming.

Prensky (2007), one of the leaders in the field of GBL, highlights three aspects that make the use of video games in formal and informal learning interesting, if not essential:

- 1) The needs and style of today's students converge in GBL.
- 2) GBL is motivating because it is basically fun.
- 3) GBL is versatile, adaptable to almost any material, information or ability if used correctly.

In the same vein, Egenfeldt-Nielsen (2004) has shown that learning is built into the very structure of the game; learning is, in fact, a prerequisite for playing.

From this perspective, a video game is always a learning machine. And in addition to being known to expert educators and researchers in the field, it is also a governing principle for the creative teams who design them. As Egenfeldt-Nielsen explains, the prestigious game designer Chris Crawford argues that the main motivation in any game is to learn, thereby conceptualizing one of the most commonly explored lines by designers, whose work is worth monitoring.

Learning is consequently built into the DNA of video games, so that learning things becomes a prerequisite for playing. It therefore does not make much sense to think that game-based learning can only happen in what have been called "educational games". Players do not learn any more with interactive software like those we have all endured than with a mainstream game, or more with *Brain Training* than with *Final Fantasy XII*. In fact, it is clear that players learn much more with an interminable Japanese role-playing game than with some pieces of educational software. All those wishing to explore the educational potential of games need to study them as texts that are used, stories that are read and as living artefacts, matching the agendas of the games with the agendas of learners, and searching for relevant and meaningful experiences in the action of playing.

Throughout this chapter we have argued that the idea of a game, whether digital or analogue, is a complex activity and an object that cannot be covered with a single definition. We have shown that play is a human activity consisting of many practices that are closely linked to our social and cultural evolution (Huizinga and Caillois). Defining the activity of play and the object of the game runs into the obstacle of competing and complementary theories and approaches that highlight the high degree of ambiguity underlying the theoretical field of play (Sutton-Smith).

Finally, we have decided to limit play to its formal characteristics, its lowest common denominator (Juul), with the description of the player's experience, pleasure (Sherry and Csikszentmihalyi), concluding with the general idea of that the game, as an expression of play *par excellence* in today's world, is nothing more and nothing less than a machine for learning (Squire, Prensky and Egenfeldt-Nielsen).

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4. How digital gaming enhances non-formal and informal learning³

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4.1. Introduction

The debate over the use of video games is one of the most lively and omnipresent in our public discussions regarding contemporary media, especially in those areas where entertainment and educational practices converge. When most parents and teachers think about video games, they show an obvious concern about the dynamics of use among the younger population in issues, such as excessive consumption or overuse of violence in some games.

Schools, as the formal education institution of reference, have long reflected and investigated the possibilities of introducing different digital resources into the classroom, including video games. The aim of these interventions, without going into too much detail, is to improve the quality and effectiveness of school educational practices and processes.

With respect to educational institutions that work in the field of non-formal or leisure education, this reflection and experimentation with digital leisure resources has not yet been carried out. Despite the fact that these institutions use the traditional game as an educational tool, digital gaming is still seen as the enemy they have to fight against.

In relation to informal learning, the family and household context is one of the most important settings where informal learning takes place, and at the same time, is also the primary location where the activity of playing video games occurs. On most occasions, the conversations around video games in the household revolve around the time spent on them or the kind of games that the youngsters play. On the contrary, the conversations regarding how to play or the ways of achieving some of the goals of the game are not common.

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This study provides some conclusions of three activities or research projects in the field of leisure education and informal learning related to children, teens, and parents regarding video games (or better stated, digital gaming and tinkering with digital technologies) as tools that can potentially enrich their institutional or family activities and relationships. Taking into account that aiding access to Information and Communication Technologies (ICTs) is a primordial aim in any contemporary educational project, this study states that it is necessary to go one step beyond, thus using and reinforcing ICTs as significant personal and social objects. We need to integrate new digital technologies, which obviously include video games, into our daily lives, involving education and family context, as video games can be powerful tools in the sense that they can be used to work on group social cohesion as well as to reflect about effort, frustration, and pleasure. Thus, three activities are presented in this study on the use of video games in non-formal (leisure institutions) and informal (household context) education: (1) an empirical research embedded in a larger project funded by the Spanish Ministry of Industry, which aims to integrate resources and digital tools, including video games, in the space of non-formal education in collaboration with the Catalan Esplai Foundation – an organization that mobilizes more than 15,000 children and youngsters; (2) a digital classroom in a public school in Barcelona in the context of leisure activities; and (3) a set of workshops for families on the cultural and social significance of the use of video games, funded by the autonomous administration of Catalonia.

With regard to the nature of the cultural and social transformation in a digital environment, it is obvious that the new generations are growing up in a social and cultural context in which sharing is associated with social networks like ©Facebook or peer-to-peer networks; buying or selling is related to ©Ebay or ©Amazon; creating is linked to blogging; and collecting information is associated with using ©Google or the ©Wikipedia. Beyond labels and stereotypes, most of the studies on the activities of youth in these digital environments state that these activities profoundly affect the way they work, study, collaborate, communicate, and solve problems. Common sense seems to assume that the so-called digital natives are completely immersed in the world of video games. In contrast, the results of our quantitative research in Spain show that only 42.4% of the young people from 12 to 18 years of age usually play video games.

Given that the cultural context that surrounds us is increasingly digital, the digital game might play an important role in the leisure context of individuals in our

society. It is now widely accepted that for any culture to be reproduced, it needs to be played. There is no culture without game, because culture is not merely a compilation of texts, works, and images, but a whole set of processes that allow us to think, relate, and be entertained. Culture cannot be developed without a playful context because "culture is [and developed] in the shape of a game," as claimed by Huizinga (1994:67). There is no doubt at this point that (traditional) gaming is a tool for social and cultural learning, in particular in the stages related to childhood. However, there are still many who see digital game as a stranger, as a threat that promotes violence or social isolation.

In order to explore the potential of video games is undoubtedly helpful to establish a definition that allows structural analysis. By picking up the definitions that have been constructed historically, we have offered one of our own. We understand videogame as the rule-based systems with goals that must be overcome with the effort and interaction of the players and their emotional bond, which are implemented through software and through computers, game consoles, and other platforms.

With regard to the practical proposals, in recent years, our research group SPIDER (Smarter People through Interactive Digital Entertainment Resources) has been working to explore the tools and devices related to digital entertainment (video games, social networks, mobile phones, and other portable devices) as potential resources for education. The various research projects in which we work are aimed at studying the technology in entertainment, and their use and application in the leisure space for children, young people, and parents, in both non-formal educational institutions and household context.

4.2. The meaning of digital gaming

Before tackling the description of the landscape shaped by the uses of digital game technologies and the depiction of the experiences above mentioned, in this section we outline a reflection on the meaning of gaming and tinkering with digital media within contemporary culture. To frame the subject, we must first analyze how young people are building their relationships with digital technologies in general and video games in particular.

Video games, like any other cultural resource, are basic tools for learning and socialization, which provide the player with social and instrumental skills. From our point of view, video games are communication products that respond to the

desire and need of many children, youngsters, and adults to be entertained, and above all, to enhance different aspects of their social identity. We also suggest that video games generate contexts that foster digital literacy, problem-solving, and decision-making skills among young people. As stated by Gee (2004a), video games are particularly good learning tools in which people learn to situate meanings through experience. The games promote learning in the player (which could be a student), seducing him/her to try to overcome a problem, devote effort, and finally, achieve some significant success. There is no doubt, at this point, that game (traditional) is a learning tool for social and cultural development, especially during child-related stages. However, there are still many who see digital game as a stranger and as a threat that promotes violence or social isolation. This is, in fact, a part of a larger debate in which the young constitutes a fundamental concern in relation to the broader field of ICT use and consumption. These kinds of contributions are built around the heralding of the young as “the digital generation,” which “is claimed to represent the future, being ‘in the vanguard’; yet it is also vulnerable, at risk from new information and communication technologies” (Livingstone, 2003:148).

4.2.1. The young and digital technologies

Indeed, with regard to research that tackles the relationships between the young and digital technologies, the outcome of the reports easily falls, and all too often, into the youth-as-digital-generation heralding trend. Arguably, this effect is due to the plain fact that people appropriate these technologies, just as any other, in straightforwardly natural ways according to the needs, obligations, interests, and preferences that are significant of their everyday lives and contexts. Thus, notwithstanding the complexity of the factors involved in these processes (Lin, 2003), it seems altogether logical that the young, upon having access to these technologies at an early age than other media technologies, try to make the most of their technical traits and possibilities insofar as they can (or are allowed to) afford a minimum time to tinker with them. Within this framework, children and adolescents are usually regarded “as a special object of study, as a homogenous category” (Livingstone, 2003:148) with the capability to appropriate digital technologies in completely different and innovative ways, when compared with their elders. The images thus range from the natural child computer user, i.e., the perceived “transformative capabilities of the use of IT when in the hands of children” and the adult child computer user, i.e., children as teachers for adults with regard to the use of digital technologies, to the child

computer addict, i.e., the victimized child computer user and the “needy” child, i.e., children lacking the necessary skills to make the most, as conceived by adults, of these technologies (Selwyn, 2003).

Accordingly, we may consider one aspect that is essential concerning the debate over the young’s access to digital technologies. We must indeed pay special attention to the household, because “the family plays a key role in [children’s] introduction to [...] technologies” (McMillan and Morrison, 2006:88), within what is usually a media-saturated environment, at least in places where ICT use is becoming thoroughly widespread, and thus, a primary site for people’s appropriation of media and ICTs. Interestingly, the terms of the discussion very often come down to time-related issues concerning the frequency and total amount of time spent by children and adolescents with media and technology (Dickinson et al., 2001; Hagen, 2007), which, in turn, even though are apparently value-free, carry a significant sociocultural weight. Nevertheless, the values underlying these domestic generational negotiations constitute a projection of the larger cultural, institutional, corporate, and academic debate, because they deal precisely with the wonder-and-concern perception of technological developments and their sociocultural significance, and thus, with the combination between advocacy and warnings regarding the use of digital technologies by children and teens. These opposing values are often summarized within the notions of “hedonic/instrumental dichotomy” or “work/play dichotomy” (McMillan and Morrison, 2006:80–83).

4.2.2. The young and video games

In the case of video games, we suggest that playing (and playing video games) is, as claimed by Goldstein, Buckingham, and Brougère (2004), an activity that strengthens social bonds and self-esteem. Video games and gaming, in general, improves the quality of our social relations by allowing spaces of relaxation and pleasure. Play is, in short, a way to minimize the consequences of our actions, and thus, a way of learning in less risky situations. The idea that has guided our research and intervention proposals is that video games not only satisfy the need for recreational pleasure, but they become experimental laboratories for emotional and social development, as evidenced by Williamson and Facer (2004) and Jansz and Marten (2005), among others.

Video games not only allow young (and not so young) people to strengthen social bonds with their peers, and at the same time, enhance their networks for

material exchange (videogame copies, magazines, and consoles), but also aid in knowledge exchange (walkthroughs, tricks, or passwords). Understanding what playing video games means obviously requires thinking about what happens in the hardware--software--player interaction, as well as, more importantly, thinking about a bunch of processes related to discussion, evaluation, comparison, exchange, social relations, and identity construction of players. Mia Consalvo (2007), by collecting the concept of *cultural capital* as coined by Bourdieu, developed the idea of *gaming capital*, to understand individuals' interaction with games, information about games, the game industry, and other players. Becoming a member of the gaming community does not mean just playing, or even playing well, but mastering the secrets of the game and being able to disseminate this knowledge among peers. Furthermore, the gaming experience is a complex phenomenon that takes place in a social context (Mäyrä, 2007). There are many reasons to support the notion that it is necessary to have a more comprehensive view of the player's experience as something that occurs not only during the play session, but as a broader phenomenon. The gaming experience is predefined and postmodified by multiple dimensions that are a part of several networks of meaning. To focus the research on what playing a videogame means, we advocate for a better understanding of the sociocultural extension of these structures of meaning. We honestly presume that we cannot investigate the gaming experience in laboratory conditions, detached from the experiences and social networks that are the real testing ground in which the game experience takes place.

We have developed our interventions from this conceptualization of video games as tools for situated learning, as social acts, as social and emotional laboratories, and from the consideration of gaming capital as an observable phenomenon. On the one hand, these interventions are boosting activities in themselves, and hence, have been submitted to the educational project of leisure-based educational institutions. On the other hand, it is an ongoing research, guided by the certainty that only participant observation can thoroughly map out how the young use video games and connect them with their lives. Therefore, though several theoretical approaches may be useful to reveal some aspects of our research, we consider that it is, at this point, grounded on empirical observation.

4.3. Youth and digital entertainment in Spain

A necessary second step in order to observe the complexity of the relationship of young people with video games is effectively determine their uses and perceptions by obtaining a set of quantitative data. This data would eventually reveal the big picture in which the research on the potential of video games for non-formal and informal learning makes sense.

The everyday life of adolescents takes place in contexts characterized by the increasing presence of different kinds of media involving digital technologies. Computers, video games, the Internet, digital cameras, or mobile phones are basic in their lives, being essential tools to communicate, share, consume, participate, and create. In fact, as has been argued in recent years (Taberner et al., 2008, 2009), the number of teens who actively create and maintain spaces for communication, self-presentation, and contribution is growing. In this context, it is clear that such activities are necessarily associated with the ways of adoption of these technologies, tools, and services for youth, having a significant effect on the dynamics of production and skills development with regard to social, cultural, and educational aspects. In this sense, some argue that it is precisely the young who are contributing in a particularly eloquent way in developing a participatory culture, characterized by a greater ease of expression and civic engagement. In this new culture, knowledge, whether it is social, cultural, or technical, is shared informally. This sharing constitutes one of the main factors in peer recognition (Jenkins et al., 2008). Thus, youth acquires network capital, i.e., knowledge associated with the contribution to the community by sharing their experiences and views on new spaces of support, sociability, and recognition that they generate and develop (Rheingold, 2002). Thus, the activity articulated through the tools and services of digital technologies, such as online social networks, can be understood as collaborative non-formal learning spaces, sustained by relations of friendship and/or interest (Ito et al., 2008). The social use of video games has a prominent place in this emerging digital culture (Gee, 2004b).

4.3.1. An empirical observation

Our research made an attempt to explore the communicative practices and cultural consumption of adolescents related to the use of digital technologies through a nationwide survey conducted in Spain. The objective of this survey was to establish the actual uses that young people make of these technologies,

and thereby, to have more arguments to analyze their potentialities as informal learning spaces. For the purposes of the case being analyzed here, we were particularly interested in gathering data about video-game uses as well as the perceptions and opinions about them. In this sense, the survey is primarily a tool to get a picture of the social context in which digital gaming is employed in our surroundings.

According to the ideas commonly expressed in popular informal discussions on video games, one would think that they represent a serious public health problem. Thus, in this debate, it is not uncommon to hear or read that: 1) All young people play video games and spend much of their time on this activity, 2) Video games are targeted only at boys, while girls do not play because the contents are sexist and prevent them for feeling comfortable, 3) The activity of playing video games prevents young people to do other things traditionally considered healthier, like going out with friends, 4) Video games promote youth isolation and alienation, and 5) Young people are not aware of the risks that come with playing video games. Even though academic research has debunked these myths (Jenkins, 2004), the above-mentioned statements are a part of many public discourses that often underlie the debate on video games. Our intention was, first, to determine to what extent the image that data drew corresponded to these popular intuitions, and, second, to draw a context that would allow us to better understand the current relationship of youth with technologies, in this case, the video games. Consequently, it should be stated that the survey design and approach to the resulting data did not pursue the goal of validating the results or intuitions clearly defined in advance, but tried to obtain empirical data on the forms and determine the factors of the relationship between young people and technologies.

4.3.2. Procedure and sample

The results of this survey were based on telephone interviews among a sample of Spanish teenagers. The population consisted of all teenagers between 12 and 18 years of age living in Spain (a total of 3,044,131 inhabitants, excluding those living in the Canary Islands, Ceuta, and Melilla). Overall, this population generated a final sample of 2,054. The number of telephone interviews followed a distribution proportional to the Spanish population both by gender and age. From this premise, 51.7% of the interviews were conducted with men and 48.3% with women. With respect to age, 53.9% of the interviews were conduc-

ted with boys and girls between 12 and 15 years of age, and 46.1% were conducted with those between 16 and 18 years of age. Additionally, the sample was also segmented by the size of the place of residence. The sampling procedure followed a multistage selection of persons according to the following scheme: (a) primary sampling units: municipalities, randomly selected, (b) secondary sampling units: households, by random selection of phone numbers, and (c) the ultimate sampling units: individuals, by selection of person between 12 and 18 years of age. Besides the segmentation variables of the sample, a set of additional variables such as place of birth or extracurricular or leisure activities that characterize the profile of this population group were also included.

The questionnaire consisted of 85 questions divided into several sections. The first section was conducted with parents to obtain the sociodemographic data. At the end of this section, the interviewer requested the consent of the parents to carry out interview with the boy or girl living in the house. The second section was designed to gather data on the characteristics of boys and girls, with regard to their current level of education and extracurricular activities, to determine the constraints for the interviewee's management of time. The third section consisted of questions concerning the use, perception, and parental control of the Internet and tools, such as instant messaging and social networks. The fourth section consisted of questions concerning the use, perception, and parental control of video games.

A pilot test was carried out between 5 and 6 March 2009, in which a total of 51 consultations were conducted in the region of Catalonia. The results obtained were used to reorder, reformulate, and adapt some of the questions, a factor that led to gather more reliable data through the improvement of the questionnaire. Finally, the fieldwork was carried out between 16 March and 1 April 2009 by the reputable market research company Instituto Opina.

4.3.3. Results and discussion

As mentioned earlier, the use of video games among teenagers is often one of the key points of debate about the relationship between youth and consumption of new media. Aspects such as access to relevant content regarding the age of the players and matters related to addiction and alienation of social life in adolescents are standard arguments that are discussed at all levels (academic, administrative, public). Overall, according to the data obtained in this study, only 42.4% of the adolescents in Spain usually play video games.

Table 1. Do you usually play video games?

Total	42.4
Male from 12 to 15 years	67.1
Male from 16 to 18 years	56.6
Female from 12 to 15 years	27.1
Female from 16 to 18 years	14.1

Table 1 reports the data by gender and age group. In this respect, there are significant differences in relation to gender and age (confirmed by preliminary regression analysis): first, boys (62.3% of total) are found to play more than girls (21.0%); second, younger teen players, between 12 and 15 years of age (47.9%), are observed to be more common than those between 16 and 18 years of age (35.9%). The average age at which teens begin to play is found to be 9.3 years.

For most who do not play video games (57.6%), the main argument, so far, is the lack of interest (I'm not interested, 79.2%) and the next argument is the lack of time (12.2%) (see Table 2).

Table 2. Which is the main reason why you do not usually play?

I have not got a console	4.6
I am not allowed to by my parents	2.0
I am not interested	79.2
Lack of time	12.2
I prefer to spend my time in the Internet	0.9
Video games cause addiction	0.3
I prefer to spend my time with my friends	0.5
<i>Refuse to answer</i>	0.2

The average time that young people spent playing games was observed to be 5.2 hours per week, and the most common playing place was their own room (49.0%) and the living room (40.8%). While younger teens tended to play more

in the evenings and at weekends and in the common living spaces of the home, older teens played more at night and in the private environment of their room. In relation to the average time spent, there were differences with regard to age and gender: 6.3 hours per week for those between 16 and 18 years of age, when compared with 4.4 hours for those between 12 and 15 years of age, and 5.9 hours for boys, when compared with 2.8 hours for girls.

Moreover, a large majority of the players (72.6%) personally decided on the kind of games that they acquired. In this context, it is not surprising that a majority (51.3% of the adolescent boys and girls) claimed to have no rules at home about the use of video games. When there are parent rules, they are primarily related to the time spent (time, days of the week that they can play). Only 14.4% reported that parents had some kind of control on the type of games they could or could not play.

An interesting question to examine video games as a cultural resource capable of generating the above-mentioned gaming capital, which could be used by young people in their social relations in particular contexts, is: Who do you usually talk about video games with? Table 3 shows the answers to this question.

Table 3. Who do you usually talk about video games with?

Parents	36.2
Relatives	56.8
Friends	85.5
Classmates	77.9
Teachers	6.9
People I have met online, but not in person	27.1
Friends' friends	50.5

Friends and classmates were the people with whom they mostly talked about video games, while parents were much less common partners. The preliminary regression analysis confirmed that girls, in general, but especially those between 12 and 15 years of age, have significantly closer relationships with parents when playing or talking about video games. With regard to the social habits associated with the use of video games, 66.3% of adolescent boys and girls

usually played alone in Spain. However, 52.2% played with friends and 43.3% played with siblings. Fathers and mothers, in contrast, appeared just as companions and playmates in 7.8% of the responses.

With regard to their perceptions, and contrary to what one might expect, the majority of the teen population recognized that they “prefer to go out with friends than playing video games” (89.2%), which is a proof of the fact that video games do not necessarily become substitutes of their everyday social life. Moreover, they preferred playing video games to watching television (49.9%), which illustrates the strong competition between the different modes of technologies available at home. It might be strange, but significant numbers of videogame players attributed some openly positive characteristics associated with sociability, their welfare, and notably, learning, to video games: 31.6% of the players said that video games allow them to make friends; 39.3% said that they were more relaxed after playing; and 45.3% said that video games allow them to learn things.

In summary, the findings of this survey reveal that young people do not play as long as stated by those who defend the idea of video games as a sort of epidemic. The findings also show that gaming activity is just one among a set of activities consistent with their socialization and learning processes, and that the risks associated with digital gaming does not seem to be as many as some may presume. Moreover, young people themselves are aware of the numerous possibilities with regard to socialization and learning that video games have.

4.4. The digital classroom

As mentioned earlier, one of our practical proposals was to create a digital classroom in a public school (32 boys and girls in their last year of primary school, 11 and 12 years of age) in Barcelona in the context of what we call in Spain, an Esplai Center. An Esplai center is an educational and nonprofit organization working for the comprehensive education of children and young people outside the formal educational system. In these sort of non-formal educational facilities, children and teens learn by doing and playing values of equality, democracy, peace, co-operation, or friendship (among others) through a set of activities (conceived as educational tools), such as drama, music, nature, sport, game, craft, or trip. In this educational methodology context, we created a digital classroom where we endeavored to provide the first impetus to those working in

the field of leisure education centres (Esplais) to see video games as a tool that could potentially enrich their educational project. The project's aim was to explore and document the results of introducing digital games as educational tools in non-formal education.

Although we had mentioned earlier that the debate on video games is biased by some prejudices unproven empirically, i.e., video games promote the isolation of young people and, therefore, they are a waste of time, we must state that professionals of non-formal education are not strangers to these preconceptions. On the contrary, we propose that quotidian culture or everyday culture, which is not valued but which we live each day, including those resources that form a part of young people's digital leisure, needs to be a part of the educational toolkit for all those proposals that see leisure as an opportunity for investment. In the explained case, rather than denouncing the existence of violence or socially undesirable cultural models and extrapolating the effects in terms of antisocial behavior and consequences, we wanted to study the meaning of the social uses of these artifacts, bearing in mind that, as stated by Salen and Zimmerman (2004), playing video games is related to experience, meaning, pleasure, or simulation.

Hence, the classroom was set up in the school's computer room, which had 16 computers connected to the Internet. Alongside the room's own infrastructure, we also installed a ©PlayStation 2, a ©PlayStation 3, a ©Nintendo Wii, two ©Nintendo DS Lite, and an ©Xbox 360. Plans were made for 14 workshop sessions on Mondays and Wednesdays from 1:30 pm to 2:30 pm, under supervision from an instructor responsible for the classroom and two members of the research group. Our presence was aimed, on the one hand, to offer support to the instructor and to ensure that the strategies and dynamics agreed to by the research group were met; and, on the other hand, to act as participants and observers, and to take charge of the proper audiovisual recording of each of the sessions.

The first session was dedicated to presenting the proposal to the 32 boys and girls who were signed up for the school dinner service. Given the need to have a small number of participants in the digital classroom, the decision was taken to create two groups of around 15 to take turns. The first turn involved observation by the research group, the second, during the month of June, allowed the other children to take part and not be left out of the project that was so exciting

for them, as is the prospect of playing cutting-edge video games in a non-formal educational context.

The choice of turns and the make-up of the groups were decided by lottery. The name of each child was placed in a bag and the first 16 names pulled out entered the first group, and the rest, the second. The boys and girls celebrated enthusiastically, with cries of joy and embraces, not because fortune saw them form a part of the first group, from April 20 to June 6, but for the fact that the groups of friends were not broken up. The vast majority of the children chosen to form a part of the first group had sufficient friends with them to feel happy about the result. The group of boys and girls who were to form a part of the second group were equally satisfied with the results, despite having to wait another month to take part in the activity. It should also be pointed out that three girls decided, voluntarily, not to take part in the video games workshop, even before the draw was made; however, they were not the only ones; two more girls turned down the chance to take part as one of their friends who had already pulled out asked them to.

In short, this shows that video games are not, on their own, exciting enough to break up a group of friends. The gaming experience has to be enjoyed as a group. In other words, the pleasure, in this case associated with video games, is greater and more desirable when enjoyed socially.

Likewise, this fact reinforces the need to overcome the myth of the asocial and solitary game player, which is very much rooted among educators and their non-formal methods. Newman (2004:146), citing the work of Carsten Jensen (1995), stated that “the suspicion about the content is however only one side of the widespread scepticism about computer games. Another, far more serious criticism is levelled at the influence of the medium on children’s social relations. It is a common assumption that computer games lead to children becoming socially isolated, all in their separate rooms where they engage in a lone struggle in the artificial universes of the games. In other words, the computer destroys social relations and playing.”... As Jensen follows: “Fortunately that is not so. In fact children rarely play alone, and computer games are about more than the actual game. Contrary to appearances, the computer and the games are absorbed into the existing children’s culture.” (Jensen, 1999:158).

Cultural consumption, and the consumption of video games, has to be understood as a participative, social, and cooperative activity, similar to traditional play. As stated by Vigotski (quoted by Delval, 1994), playing is a social activity whe-

re, owing to the cooperation with others, we can take on roles that are complementary to our own. Playing is a social activity, a shared activity that forms a part of a network made up of people, tools, and technologies. Notable examples of this configuration of playing as a social activity were seen throughout the activity. The session dedicated to the ©Space Invaders game was, for example, the quietest and most productive of all. The fact that each player had their own position, but, at the same time, were playing in a competition involving all of them created a very special feeling of communal participation.

The following sessions were organized to present the video games that were to form a part of the proposals for the workshop. Nine proposals were presented: four by the participants themselves and the other five chosen by the workshop's instructors. The list of games presented was as follows: Wii Sports, the PS3's MotorStorm, Space Invaders and King Kong for PC, Rayman for the Wii, Pro Evolution Soccer and Guitar Hero for the Xbox 360, and finally, Dance Factory and MotoGP 4 for the PS2.

The first half an hour of each session was spent explaining the characteristics of the games, the group's reasons for presenting the proposal, and its interest. The second half an hour was devoted to playing freely. It should be pointed out that the definitive list of games presented was to be voted on and only four from the total chosen, and only these four formed a part of the list of games to be used during the workshop.

The results, with respect to the competences, know-how, knowledge, or cultural capital that they had acquired, whether because they were videogame players, or because they had read about them in magazines or on websites, was virtually nonexistent. They were not able to offer reasons or justification for their proposals, or the pleasure they gained as players, beyond obvious factors or those highlighted by the games' advertising campaigns. In ©MotorStorm's presentation, they valued the spectacular graphics and spatial simulation, as well as the spectacular simulation of the physical behavior of the vehicles or the represented crashes. In this case, the element valued was simply the spectacular nature, which is, similarly, the main argument used in the advertising campaign for this product, one of the first latest generation games to appear on the ©PlayStation 3. In another case, in the presentation of ©Pro Evolution Soccer 6, the focus was again on the fidelity of the graphic representation and its playability (a concept which they used without really knowing what it meant) being better or worse than ©FIFA 07; likewise, discussion centred on the licenses required repre-

sentation of the actual teams and players, i.e., all those debates that are to be found in the magazines or on the internet.

The time spent playing freely allowed us to see that there was no fear in terms of putting their skills to the test in public, in front of schoolmates. There was no fear of failure. The classroom was a safe haven where mistakes formed a part of the playing, and their aim was to improve and dominate a range of skills including coordination, rhythm, or strategy. While in real life, mistakes are penalized, in the context of playing video games, mistakes are the dynamic strategy that allows players to practice, try new strategies, and eventually progress. Likewise, mistakes generated collaboration dynamics between boys and girls. Those who were well versed in the basic routines and skills offered their know-how to the rest with the aim of improving the group's competence. Social spaces were established where the game was the object of discussion and evaluation, given that, as Frith (1996) stated, part of the pleasure of popular culture is talking about it; part of its meaning is this talk.

One of the signs from this initial stage of the research was that "there is no support for some of the common beliefs about the possibilities of computer games as educational media, at least when educational outcome is supposed to be the learning of specific curricular topics represented in the theme of the game" (Linderoth et al., 2004) However, the one which is strengthened by video games is the catalyzing and building of social structures that encourage discussion and sharing of knowledge. For example, in the case of the session on Space Invaders, the players acquired competences in the use of computers for playing games and finding resources for casual play (quick games), and found out about a virtual community of players. In the case of Wii and Dance Factory, the players acquired technological skills in the use of alternative controllers, such as using their own body at the same time as using the game's remote controller. Other know-how worked on in the presentations included knowledge of the physical simulation in games (in MotorStorm: acceleration and simulation of impact; or in Virtual Tennis: direction, rebounds, and force of impact). Thus, players quickly became familiar with the aspects of physical simulation increasingly used in game design.

The research, despite still being in an embryonic stage, has highlighted that video games, contrary to the common beliefs (Jensen, 1995; Jenkins, 2004), are tools that could enhance some educational objectives in the context of non-formal education systems such as Esplais Centers.

Thus, the main results from the pilot can be summarized in three statements:

- 1) The pleasure associated with video games is greater and more desirable when enjoyed socially, and is not directly related to social isolation.
- 2) No fear of failure. Mistakes are the dynamic that allows learning the rules of the game, and thus, effort, concentration, and communication are required.
- 3) The know-how, the cultural capital regarded with video games, is very poor at these ages, and Esplais Centers can be the place where this capital cultural can be enriched.

In summary, children and teens have to be in contact with playful contexts with regard to the so-called Information or Digital Society. Digital gaming is one of the practices, as traditional games, that help us to a better understand our current digital society. Non-formal education has a key role in transforming the negative myths of video games into an opportunity to work with values, senses, or tools that are, and will be, a part of our culture.

4.5. The Family Workshops

Over the last months of 2008 and early 2009, SPIDER developed, together with the media cooperative Drac Magic, a series of workshops funded by the Department of Family Policies and Citizens Rights of the Generalitat de Catalunya, to promote responsible use and a more complete understanding of the complexity of the cultural phenomenon of video games. In these workshops, we observed and talked to the participants (families with children) about the numerous possibilities of interaction that a videogame offers, emphasizing proactive demands and social requirements of video games with the intention of providing alternative viewpoints to the common assumptions seeded in the collective imagination, such as player addiction or isolation. As Ito states, the “instances of families’ spending time together in and around new media, (is) a practice not commonly discussed in much of the literature on the generation gap” (Ito et. al., 2010). Second, in these workshops, we proposed an analysis of the imagery of video games, connecting their symbolic strategies with the logic of communication and the contemporary entertainment industry. Factors such as the spectacular and the sensational attraction of violent representation were treated as complex communication phenomena, observing and discussing the way video

games, just like the media, in general, deal with fiction in a challenging, sometimes disturbing, way, both to provide information and establish their own and specific entertainment dynamics. With this proposal, we tried to give some clues to address the use of video games as a responsible and creative activity within family life and household environment.

The need to generate a dynamic of family work is given by two certainties: the first is that there is no doubt that video games are nowadays the most significant part of the whole young leisure toolkit. The second is that there is a noticeable gap between what children and young people know (or want to) about video games and the knowledge that parents can give to their children. Thus, what is important in an experience, like in these workshops, is to provide a framework to establish discussions that generate knowledge about the game, to promote a proactive use.

In general, we described the proposed activity as an exercise for 2 hours in two parts. In the first part, a simulation of a game was used. In this case, the simulation was a complete game previously played and recorded. The person in charge of the workshop, sometimes a member of the research team, commented on the game, stopping the recording at the proper moments to facilitate reflection on the game and its demands. With this exercise, we were able to discuss how concentration and engagement were key factors, not only to play, but to optimize the strategies and skills of the players in relation to the challenges proposed by the game system.

In the second part of the exercise, the person responsible for the workshop provided the opportunity to parent–children teams to play together with one of the leading game consoles: the Nintendo Wii. The objective of this second part, and the purpose of the overall experience, was not only the achievement of the objectives of the game, but to explore the relational dynamics that emerge when dealing with a game, such as organization, responsibility, coordination, playing according to standards and rules, or reinventing the game itself, dynamics that were evident in the gameplay. Finally, the workshops ended with the screening of a short documentary used as a guide for further reflection on the representational and narrative orders proposed by video games. By means of comparing the internal logic of videogame storytelling with those of other media content, the participants were able to outline the significant practices of gamers, paying particular attention to the critical analysis of the similarities and differences between games and other media content consumed through film and television.

The game that held the design of the workshops was ©*Lego Star Wars The Complete Saga*, a game that shows that one of the main traits of contemporary popular culture is what Henry Jenkins (2006) called as transmedia storytelling. Briefly, transmedia storytelling is a process in which the integral elements of fiction are systematically dispersed by multiple distribution channels to create a unified and coordinated entertainment experience. Despite neither being a canonical example nor a particularly significant example, a relatively close reading of *Lego Star Wars* was a good starting point that allowed us to introduce the concept into the debate to very young people and parents who were not used to think critically about the entertainment industries. In the field of transmedia storytelling, *Lego Star Wars* is a worthy case study because of its double position in two streams of entertainment experiences. On the one hand, the game is obviously just one of the many pieces in the transmedia discourse of the ©Star Wars universe, because, together with films, animated series, comic books, toys, and other video games, it is a part of the complex set of products in which the franchise is deployed. On the other hand, the game is clearly integrated into the ©Lego universe, not only because the product ©Lego Star Wars is an established part of the supply of the toy company, but mainly because it incorporates into the gameplay procedures and tactics derived from the experience of mounting Lego blocks. However, understanding ©Lego Star Wars as a transmedia piece involves paying more attention to its potential than to that offered in the first instance, because it is possible to complete the game without drawing a greater knowledge of the plot and the world of Star Wars when, paradoxically, it is played in the *story mode*. In that case, what we have is a playable adaptation of the main action sequences of the films in the series, and the player's success depends less on the prior knowledge of the films, owing to the strict adherence to the rules of each of the genres and specific codes in which the gameplay is embodied. In essence, playing the story mode in ©Lego Star Wars is like stepping into the highlights of each of the motion pictures to solve the different challenges for the sole purpose of progressively progressing in the events predetermined by the plot of the films already known. This is, without doubt, the immediate and easy way to dive into the gaming and narrative experience that the game offers.

For example, to complete the Episode V – *The Return of the Jedi* – the player has to overcome two levels – *The Battle of Hoth* (1) and *Persecution in the asteroids* (3) – which are pure shooters that must be solved through the use of different ships, weapons, and combat strategies. The other four levels are action adventures that include cooperative puzzles. As each character has its own

characteristics —the robots can open doors, while the human (or humanoid) characters can shoot, jump, push blocks, and drive or ride animals— the problem-solving strategies must take into account the proper selection of characters to perform tasks in a sort of dynamic that should ideally be played by two players. Nevertheless, a single player can, and have to, run dozens of different actions to solve all the problems that the game unfolds: run, jump, shoot, connect remotely to control mechanisms through robots, capturing, drag and firing torpedoes, get through obstacles with the help of a hook, drag blocks, ride different animals, trigger several mechanisms, and even dress up in costumes to unlock certain doors. By being a Jedi character, the player can enter melee combats with the lightsaber, use the weapon to deflect enemy fire, and above all, use the Force to solve puzzles. All these comprise a maximum guideline to be followed: pick up pieces and assemble Lego blocks. The rest of the levels follow the same outline design: genres and codes are combined and the player is allowed to discover the internal logic of each of them. In addition, the game offers the chance to go collecting hidden objects such as Lego Minikits and increase power. All the rewards that the game offers are helpful to progress and conclude the story, which is, at the same time, the way to unlock new characters that delves into one of the most utilized strategies in contemporary game design: the collector eagerness. The unlockable stuff and second-best rewards improve, by far, the gaming experience, because they manifest potentialities, i.e., enrich the game with promises of future.

Returning to the dynamics of the workshops, we can say that the first subject discussed by the instructors of the workshops was the narrative nature of the game and its association with a transmedia discourse. More specifically, topics for discussion were the links between the six films and the game, as well as the link between the knowledge needed to play the game and the knowledge about the specific movie the game is based on. In this sense, the main question was: Is it essential to know the plot and conflicts of the movie in order to play, or can players discover the rules of the game by themselves? Another important issue is the link between the Lego toy and the game. As a part of the gameplay is based on assembling Lego bricks, a further reflection on the use of specific bricks for specific purposes emerges. The point here is to establish the skills that the player must develop to solve these kinds of puzzles. In short: What are the relations, if any, between gameplay in ©Lego Star Wars and the previous experiences defined by the consumption of the film and toy-industries products?

In short, the purpose was to promote responsible use and a more complete understanding of the complexity of a cultural phenomenon like video games. In these workshops, the families had the chance to see so many opportunities for interaction offered by game to provide a certain level of nuance to assumptions installed in the collective imagination, such as addiction or waste of time. Knowing how to explain their own cultural consumption is essential, as is knowing how and what they play.

Family videogame play, similar to traditional gameplay, can provide a frame for informal socialization, and thus can enhance family communication. However, this will happen only if families jointly learn what a videogame is, or what play does mean. Promoting this kind of workshops is a way to minimize the common sense that links video games to isolation, violent behavior, or addiction, giving the parents a context to experiment the possibilities of being involved in their children's digital leisure.

However, the goal of these workshops was not only to share gaming experiences, but to reflect on the acquirement of some (gaming) capital cultural, in this case, derived from the consideration of video games as a complex set of rules that develop organization, responsibility, or coordination.

4.6. Conclusion

The main objective of the experiences described earlier is to thoroughly develop a background for the forthcoming phases of our project "Rethinking Digital Entertainment: a project in young people's digital socialization in leisure time." This project aims to build up methodologies, dynamics, and effective training to enable educators and leisure-time associations to integrate the current and future digital screens as an educational tool, which have become common in teenage leisure. To do so, our research group is currently carrying out a qualitative enquiry on the usage and meanings of the digital devices used within the spare time of the teenagers, as well as the practices of leisure-time educators involving these devices. In this sense, qualitative research, comprising analysis of 16 focus groups, in-depth interviews with adolescents, and participant observation of 28 new activities through pilot classrooms, will allow us to further describe and understand the processes of foundation of a symbolic space for personal expression and identity creation, and to analyze the discourses made by young people on these technologies and ways of sociability. In this future research, we

would examine the concept of transfer in depth, by understanding transfer as the phenomenon of taking what youth learn in the context of digital gaming and transferring it to broader social contexts. We suggest that a fruitful research direction would be not only to study what causes transfer or what prevents it from happening, but also to identify what counts as transfer in the context of digital gaming and how to assess when it might be taking place, bearing in mind that we are reflecting on the field of non-formal and informal learning. One final goal of this future research will be to establish the suitable methodological criteria for the use of digital media in the context of leisure education through the development of a white paper.

4.6.1. Recommendations

It is important to note that, according to our study, teenagers associate digital technologies primarily for entertainment and not for learning, even though it is certain that youth, through the use of these technologies, are generating spaces of sociability and recognition that are also collaborative learning spaces, though certainly not formal, sustained by everyday social circles. Sharing their experiences, concerns, and opinions through alternative spaces and leisure participation is an important vehicle for learning.

This is exactly what we wanted to highlight by using video games in non-formal learning activities. By introducing video games in leisure-based education, our intention has been to go one step further from considering these products, moving away from the superficial analysis of what games show or how they influence young people, to finding what young people do when they play. Our concluding remarks in this regard are that videogame consumption has to be understood as a participative, social, and cooperative activity, similar to that of traditional play. Digital gaming is a social activity where, owing to cooperation with others, we can take on roles that are complementary to our own. Gaming is a shared activity that forms a part of a network made up of people, tools, and technologies. In our participant observations of children and youngsters gaming freely, we could see that there was no fear in terms of putting their skills to the test in public, in front of schoolmates. There was no fear of failure. The digital classroom was a safe haven where mistakes formed a part of the playing. The aim of those who played was to improve and to dominate a range of skills including coordination, rhythm, or strategy. Besides, the gaming experience has to

be enjoyed as a group. In other words, the pleasure associated with video games was found to be greater and more desirable when enjoyed socially.

All these issues demonstrate that the activity of play cannot be understood by observing 20 or 30 minutes of a game session. The game experience has to be put in sociocultural and educational context to be understood in all of its complexity. Besides, promoting a responsible use of video games in non-formal and informal education implies a more complete understanding of the complexity of the cultural phenomena in which they are involved.

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5. Defining Ludoliteracy

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5.1. Introduction

Digital infrastructures in today's society are not only composed of the Internet, social networks and mobile devices. Digital games also take up part of the time and effort of young people and adults. Digital games, in all their guises and devices (consoles, PCs, tablets, mobile phones, etc.), are a cultural industry of great economic importance that is going to generate an income of 99.6 billion dollars worldwide in 2016 (Newzoo, 2016).

It is only in recent years that playing video games has become a mainstream activity, since the perceptions of gamers have moved from being a socially stigmatised sub-group to a majority activity (Ericsson, 2014). The increasing diversity in game types as well as platforms has led to an increase in the types of people who play video games, with a particular increase in female and older players (ESA, 2014).

Play, in all its manifestations, as exhibited by animals or human, digital or analog, has a significant cultural and social importance in any civilization, human group or community. Videogames and digital games are a part of the ecosystem of media around us (Dovey & Kennedy, 2006). In the current digital context, digital games have experienced a tremendous growth in audience and diversity in recent years. Playfulness, gamification or digital gaming permeates personal relations, business and education with a hitherto unknown intensity: it was forecasted that prior to the year 2014 70% of the top 2,000 companies in the world will use and apply Gamification (Jung & Hawan, 2014: 22). In relation to mobile content services, games are the most downloaded apps and they also make the most revenue (MobiForge, 2013; App Annie, 2015).

With reference to this gaming phenomenon there are two kinds of contrasting popular discourse. The first asserts the importance of playfulness and its potential to generate cultural, educational and economic innovation processes in today's society. The second criticises the excessive presence of playfulness, seen as a threat to productivity in all spheres of society (study, work, social relations-

hips). At the same time, spheres such as the economy, marketing, health or professional training, which until recently could be considered as totally distant from anything playful, find new spaces for the development of game-based practices and activities in phenomena such as gamification.

Stuart Brown, founder of the National Institute for play and author of *Play. How it Shapes the Brain, Open the Imagination, and Invigorates the Soul* (2009), describes the meaning of the act of playing and the cultural and social implications of games, both for animals and human beings. According to Brown (2009), games are a catalyst for positive socialisation and he postulates that the antithesis of playing is not work but rather depression. Play is fundamental, he argues, because of a biological urge that is necessary for survival and that playing is vital for human beings from a biological-evolutionary, as well as from a philosophical point of view.

Therefore, we argue that it is necessary to begin to incorporate digital games and playful digital aspects, and an understanding of their place in society — ludoliteracy— as an indispensable part of media literacy. Ludoliteracy must be a part of the competences, skills and communicative and cultural literacy of our times if we want young and adult citizens to have the necessary skillsets to understand, create, analyse and enjoy playful media, a language and an experience that completely permeates modern life.

Livingston (2004: 4) defines traditional media literacy as "the ability to access, analyse, evaluate and create messages in a variety of forms. She is aware that the advent of the information society (a concept coined by Manuel Castells, 2001) and the generalized use of different digital technologies requires the construction of a media literacy that promotes more than isolated skills in a general conceptual framework independent from the media necessary.

"Visualize someone reading a book, watching television, playing a computer game, searching the World Wide Web – evidently there is not only skill involved but also an interpretative relationship with a complex, symbolically-encoded, technologically mediated text. I suggest that, as people engage with a diversity of ICTs, we must develop an account of literacies in the plural, defined through their relations with different media rather than defined independently of them" (Livingstone, 2004: 8).

This angle, the need and obligation to contextualise media competence according to and related to the texts and technologies are what gives meaning to ludoliteracy and the reason why it deserves special attention. In this article, we

will first discuss the current status of the field of academic gaming, presenting the social and cultural analysis of play and games, the classic model of games, exploring the pleasure of games and their value in the social sphere. Second, we will present the notion of ludoliteracy and make a case for its importance within media literacy. Finally, we present a model for ludoliteracy, and the main competencies and skills that should be considered within it.

5.2. Current status of gaming theory

In the academic context, Game Studies encompasses a wide variety of disciplines and researchers have studied commercial videogames, game-based learning and serious games from different points of view for some years. Above all, this evolution of the academic context has generated an enormously valuable and useful cultural capital (data, theories, concepts, answers and new questions) from a range of discipline perspective. As a result of this academic cultural capital, we know that video games and digital games are currently a privileged media from which a large part of society improve their digital skills and competences necessary for the current digital society, their digital literacy (Jenkins, 2009; Aranda & Sánchez-Navarro, 2009, 2011; Gee, 2004a, 2004b; Buckingham & Burn, 2007). This is achieved in many ways: by playing games people obtain pleasure and fun as a fundamental tool for cultural reproduction (Huizinga, 1971; Sherry, 2004), creative participation is promoted through video game fan communities (Wirman, 2009; Hills, 2002; Consalvo, 2007); players socialise and strengthen bonds with their peers and at the same time generate exchange networks (Jansz & Marten, 2005; Zagal, 2010; Taylor, 2006; Dondi, Edvinsson y Moretti, 2004); and curricular and extracurricular contents and skills are developed (Gee, 2004a, 2004b; Lacasa, 2011; Whitton, 2009 & 2014; Mitchel & Savill-Smith, 2004). There is not only a huge body of research about the positive aspects of the daily and educational use of videogames but also scholarship focusing on negative aspects such as psychological disorders (Chappell et al., 2006), aggressiveness (Gentile & Gentile, 2008; Anderson, 2004) and racist and sexist behavior (Burgess et al., 2011; Dickerman, Christensen & Kerl-Mcclain, 2008; Leonard, 2003).

5.2.1. Social and Cultural analysis of play and games

Huizinga (1971) argued that two main objectives of the culture of a society are those of reporting pleasure and strengthening social relationships between members of the culture. Culture is not only a collection of texts, works or images (without entering into the discussion of high and popular culture) but also a collection of processes that allow us to think, relate and, evidently, enjoy. Huizinga stated that human characteristics such as thinking (*sapiens*) and doing (*faber*) that are intrinsically linked to our social and cultural evolution, have to incorporate playing and our capacity to play, the "Homo Ludens". Playing is understood as a distinctive and vitally important factor in the social and cultural world of humans: "for some years now I have had the conviction that civilization arose and developed as a game" (Huizinga, 1971: 67).

However, any attempt to define the activity of playing and games themselves offers the same problem, that is, the ambiguity of the concept, due to the complex and varied types of games and practices. Sutton-Smith, one of the seminar thinkers in the social and cultural analysis of playing, in his book *The Ambiguity of Play* (2001), dissects the ambiguity of play and how this ambiguity is transferred to the field of game study. He defends the idea that the ambiguity of games lies in the diversity of forms of games, in the diversity of players, the multiplicity of types of equipment needed by games, the different scenarios where games are played, and the plurality of pleasures they produce:

"There are infant, preschool, childhood, adolescent, and adult players, all of whom play somewhat differently. There are male and female players. There are gamblers, gamesters, sports, and sports players, and there are playboys and playgirls, playfellows, playful people, playgoers, playwrights, playmakers, and playmates ...there is the diversity of multiple kinds of play equipment, such as balls, bats, goals, cards, checkers, roulettes, and toys. The scenarios of play vary widely also, from playpens, playrooms, playhouses, and playgrounds to sports fields, circuses, parade grounds, and casinos." (Salen & Zimmerman, 2006: 301).

To shed more light on the issue, Sutton-Smith (2001:304-306) proposes what he calls the "rhetorical solution" (discourse, arguments and theories that have a persuasive, ideological aim). This solution results in a classification of games according to seven rhetorical discourses that define games according to different beliefs, arguments, ideas or theories, often antagonistic, at other times complementary, but always partial, incomplete or fragmented. These rhetorics are:

- 1) The rhetoric of games as progress (e.g. child development)
- 2) The rhetoric of games as destiny or luck (e.g. games of chance)
- 3) The rhetoric of games as power (e.g. sports)
- 4) The rhetoric of games as identity (e.g. traditional celebrations)
- 5) The rhetoric of games as imaginary (e.g. creativity)
- 6) The rhetoric of oneself (e.g. escapism)
- 7) The rhetoric of games as frivolity (e.g. waste of time)

Without going into each of these rhetorics in detail, we would like to highlight three that we consider more significant in order to understand Sutton-Smith's point of view, that the discourse problems that underlie all attempts to understand games. These are: the rhetoric of games as progress, the rhetoric of games as destiny or luck, and the rhetoric of games as frivolity.

The rhetoric of games as progress, which mainly comprises children's games, understands the playing activity as a developmental and socialisation tool. The discourse explaining children's' games from this rhetoric understands that game situations help a child to incorporate and practice skills, competences or values that correspond to those required in the child's social context: "the social world around the child, its moral regulations and rules are reflected in games. By accepting a role, the child accepts rules and tries to act according to them... this fact improves assimilation of the most common social standards" (Sutton-Smith, 2001: 36). This rhetoric strengthens the belief that games have positive effects on learning and development, but as Sutton-Smith is to affirm later, criticism and scepticism have increased in the last few years. It is difficult to ensure to what extent game results can be attributed to the skills the child already has and what skills are developed through contact with the game.

In contrast to the rhetoric of progress, Sutton-Smith proposes the rhetoric of games as destiny or luck that mainly refers to games of chance and betting games. This rhetoric understands that life, as well as games, is governed by the forces of destiny, by the gods or luck and not by the need to learn or socialisation like the former rhetoric: "play as an irrational act of gaining pleasure through one's own illusions is hardly consistent with the rationality of the rhetoric on progress" (Sutton-Smith, 2001: 54).

Finally, the rhetoric of frivolity points to discourses that interpret any type of game negatively, and stands in opposition to the previous rhetorics. For example, in the framework of game rhetoric as progress, all game activities that are not within the framework of the concept of the exercise of skills or competences are seen by adults as frivolous. Another of the discourses that is used by the rhetoric of frivolousness refers to the games of minorities. The games of less powerful groups, such as, for example, games played by women, are implicitly excluded and even ridiculed. As stated by Sutton-Smith, throughout history women and minorities such as homosexuals have not played a part in the most popular sports.

By analysing these rhetorics in detail and scrutinising the ambiguities each of them hold, Sutton-Smith proposes to establish the degree to which ambiguity is a result of the discourses used to discuss games or if, on the contrary, ambiguity is in the nature of the game itself, making its definition impossible.

Games and their practices are therefore a confusing field, superimposed with opposite and irreconcilable discourses that are used to define games and play from ideological positions that do not depend so much on the formal or dynamic characteristics of the game itself, but rather the discourses that are used to discuss them.

5.2.2. The classic game model

Beyond highlighting the discourse tensions that underlie all attempts to understand games, it is recommended to not lose one's way in the objective of defining games and the act of playing in which young people, and also adults are immersed. Jesper Juul in *Half-Real* (2005) disassociates himself from all ambiguity to support strict definition of games with six characteristics:

- 1) Rules: games are based on rules.
- 2) Results and diverse quantifiable consequences.
- 3) Evaluation of the results/consequences: different results of game actions imply positive or negative results.
- 4) The player's effort: The player's effort influences the result.

- 5) The player's attraction to the result: The player is emotionally attracted by the game results. He/she will feel happy when winning and unhappy when losing.
- 6) Negotiable consequences: the game (collection of rules) can be played with or without consequences in real life.

Beyond these characteristics, according to Juul, the game is both an object as well as an activity. As an object, the game is a list of rules that players or computers unambiguously implement and which produce diverse and quantifiable results or consequences and prescribe how players should make an effort. Gaming as activity is a system that changes according to a collection of rules implemented by humans, computers or natural laws. In this case, the result or the consequences are indeterminate, variable quantifiable and ideally negotiated before starting the game.

Juul (2005) argues that from a psychological point of view it is difficult to determine what is a game and what is not (based on his criteria of a game). He questions whether any activity that is subject to rules, with variable results, incorporating a certain effort on the part of the player and assigning values to the results obtained by the players should be to be considered to be a game.

"For example, two people walking down the street can decide to turn it into a race by describing it as better to reach the destination first. A single person performing a mundane task such as sweeping the floor can decide to turn it into a game by timing him or herself, trying to beat a personal record. Drawing on a piece of paper can be assigned simple rules and turned into a game. This can then become a convention-the two people who originally raced down the street can for a time permanently agree to race when turning a specific corner. The activity of doodling according to rules may feel sufficiently entertaining that the players tell others of their doodling game. Most of the things described as games are sufficiently well defined that they can be played again. This indicates that there is a loose idea that games are repeatable. When we speak of a specific game, we generally speak of it as being a repeatable event." (Juul, 2005: 45)

Juul notes that the classical definition he proposes does not circumscribe the game to a specific medium, tools or objects but with the appearance of video games, diverse characteristics deserve an explanation, as they provide game experience and the game as an object with significant varieties. A limitation of Juul's definition is that it does not discuss the relevance of fun to game. In contrast, Suits (1978) highlights the importance of what he calls 'lusory attitude', the

willingness to enter a game with the spirit of play and a certain suspension of disbelief.

5.2.3. The pleasure of games

Some authors defend the idea that the video games, and games in general, work so that the player can reach a mental state called *Flow* (Csikszentmihalyi, 1990; Sweetser & Wyeth, 2005; Sherry, 2004) or optimum status of internal experience. Csikszentmihalyi developed this concept in the 1970s to explain the pleasure we obtain when carrying out everyday activities. Analysing artists and musicians immersed in the creative act, he discovered how they become isolated from the world around them. The artists describe this immersion, concentration and isolation experience as intensely pleasurable: when conscience is orderly and people wish to dedicate themselves to what they are doing because of the satisfaction it gives them. He argues that flow is important because it manages to make the present instant more pleasant and because it encourages confidence in oneself and enables us to develop skills and achieve goals.

We can synthesise the characteristics of this experience in four areas:

- 1) Focused and intense concentration on the task at hand.
- 2) The sensation of control over one's own actions. The sensation that one can control the situation because you know how to respond or solve the different steps of the processes.
- 3) Distortion by temporal experience: the sensation that time passes faster.
- 4) The activity is experienced as pleasurable. Often, the objective is an excuse by which to enjoy the process.

The characteristics of the activities that most easily enable us to reach this state of concentration, isolation and pleasure share the following characteristics:

- Specific objectives with clear rules.
- Adaptable opportunities for action that match skill levels.
- Clear information about how the proposed activity is carried out.
- Eliminate of distraction to enable concentration.

In this manner, a person can experience a state of flow when there is a balance between individual skills and the difficulty of the activity. The activities that strengthen the flow have clear goals, stable rules, and challenges are matched with the skills that lead the player to growth and discovery. Draper (1999) has argued that one problem with Csikszentmihalyi's approach is that it fails to distinguish between "u-flow" (a smooth but unconsciously managed flow of actions by an individual), "c-flow" (a smooth flow of actions that, in contrast to u-flow, is managed by and fills the consciousness of the actor), and engagement. Nevertheless, Draper states that the concept of flow seems likely to be important for understanding fun and computer games by introducing an account of the quality of the cognitive processing as well as of the end results and motivation. So, from this point of view, it seems that (video) games can take a player to a state of engagement by immersion, a focused attention. Gaming proposes specific objectives and actions that are adapted to a player's skill; the difficulty increases according to the player's command of the skills required by the game; the player obtains pleasure thanks to the improvement of their skills and their interest in discovery.

5.2.4. Games and sociability

Playing (and playing video games) is an activity that reinforces social bonds and self-esteem (Williamson & Facer, 2004; Sherry, 2004; Feike & Nicholson, 2001; Jansz & Marten, 2005). Video games, and gaming in general, improve the quality of our social relationships, enabling spaces for relaxation and pleasure. Playing is a way in which to minimise the consequences of our actions and therefore a way to learn in less risky situations (Goldstein, Buckingham & Brougere, 2004). In essence, as has been argued by Egenfeldt-Nielsen (2011), learning is incorporated into the structure of video games, making learning an inevitable outcome of playing. As stated by Gee (2004a), video games are particularly good spaces in which people learn to locate meaning and build it through experience.

Video games enable the young (and not so young) to strengthen social ties with their peers; while at the same time they strengthen the creation of material exchange networks (video games, magazines, consoles) as well as an exchange of knowledge about clues, tricks or passwords (Aranda & Sánchez-Navarro, 2009; Wirman, 2009; Consalvo, 2007). Understanding the meaning of playing video games is evidently related to thinking about what happens at the moment

of hardware-software-player interaction, but also, and with even more importance, with all the processes related to the discussion, evaluation, comparison, exchange, social relationships and the identity of the players (Mäyrä, 2009; Jenkins, 1992, 2006).

Consalvo (2007), taking Bourdieu & Passerson's (1970) concept of cultural capital, coined the concept of gaming capital, suggesting that to be a member of a community of players or simply an apparently isolated player is more than playing video games or playing them well. The idea is to have command of the secrets of video games, their updates and also to be able to communicate this information to others (Consalvo, 2007). Gaming experience is a complex phenomenon that occurs in a sociocultural context (Mäyrä, 2009; Frasca, 2001). There are many reasons that point to the need for a more exhaustive vision of the player's experience as something that does not only take place just while playing the game, but is rather a more extensive phenomenon. Gaming experience is pre-defined, modified and post-defined by the multiple dimensions that form part of the networks of meaning established around playing.

For this reason, the relationship between the texts of popular culture, such as video games, and their multiple audiences is active and productive. No text bears its own meaning in itself, or its political agenda, or in other words, no text is able to guarantee what its effects will be. As Grossberg (1992: 55) stated:

"People struggle constantly not just to find out what a text means, but also to make it mean something that connects with their own lives, experiences, needs and desires. A same text will mean different things to different people, depending on how it is interpreted. Different people have different interpretation resources, just like they have different needs. A text can only mean something in the context of the experience and the situation of the specific audience".

The discipline of Cultural Studies has largely shown that our relationships with the products of popular culture work through the production of pleasure structures, and digital gaming is no exception. To analyse how these pleasure structures are created is fundamental in order to understand the cultural importance of a phenomenon such as video games. Wirman (2009) points out that the authority of the cultural use of video games is shared between designers and players. First, games are played in what is supposed to be a performance activity (Squire, 2008) because "the games, as media and as technology involve the users, in unique ways which produce as a result multiple forms of coproductivity" (Wirman, 2009: 147), and this differentiates them from other media based on reception. The player co-produces the game by the mere fact of playing, on up-

dating a text, which without being played, would be simply potential. In addition, video games have been shown to be an especially fertile terrain for the participation of the public in very different forms (Montola, 2012; Wirman, 2009). Wirman (2009) identifies these diverse manifestations such as: configurative productivity (how the fact of configuring a game in a certain way implies a participation in the text), instrumental productivity (how the players express themselves while they produce elements of the game, such as guides) and expressive productivity (how players can use game elements for their own expression). Any study of these forms of participation will reveal the enormous potential of video games for the production of very diverse pleasures.

In a diametrically-opposed position we can also find academic literature critical of the corpus of game studies, mainly from the field of psychiatry or clinical psychology that highlights the dangers associated with consumption of video games. Among other factors, they refer to psychological disorders, addictions or aggressiveness (Chappell et al., 2006; Etxeberria, 2011; Gentile & Gentile, 2008; Anderson, 2004; Burgess et al., 2011; Dickerman, Christensen & Kerl-Mcclain, 2008). The authors of this article tend to be sceptical about the alarmist discourses, because they are typically focused on exceptional uses and behaviours. However, it is also evident that these approaches must be a part of the wider cultural capital around digital games and more specifically video games.

In short, we consider that video games are not just a powerful cultural industry but they are also cultural and social artefacts, social and cultural tools for learning and reproduction that deserve special attention in current medial literacy policies. Ludoliteracy, therefore, underlines this need and complement Media Literacy with another focus of attention aiming to widen the knowledge and study spheres that enable "a strengthening of the capacity of individuals to interpret in an autonomous and critical manner the flow, the substance, the value and the consequences of the media in all their different forms " (EAVI Consortium, 2009).

5.3. Ludoliteracy

The aim of ludoliteracy, as discussed previously, is that children, young people and adults achieve a certain control over their use of the media, in this case digital games. Different authors (Aparici, 1997; Masterman, 1985; Buckingham, 2003) consider that if adequate analysis guidelines and pedagogic, reflexive, critical, playful and creative proposals are offered, citizens will have instruments

to make autonomous decisions on the messages (products and discourses) that they receive from the media about digital games. Thus ludoliteracy fits into media literacy plans and media education in the global context. Following indications of the UNESCO (2008: 15), the objective of media literacy and therefore literacy in video games is:

"to increase knowledge of the multiplicity of messages transmitted by the media present in our everyday life. It is expected to help citizens to recognise how to filter the media, their perceptions and beliefs, which configure popular culture and influence personal decisions. Today, media literacy is in fact one of the essential prerequisites for active and full citizenship". (UNESCO, 2008: 15)

In the European Parliament, Resolution of 12 March 2009, on the protection of consumers, particularly minors, regarding the use of video games, it appeals to the Commission to encourage:

"the exchange of best practice among competent national educational authorities in the short-term with a view to integrating gaming literacy within the educational objectives of primary and secondary schools; calls for a regular exchange of experience and information by all parties concerned with a view to developing best practices regarding video games".

Most of the educational proposals that include the context of video games focus on the use of video games as an educational aid at the service of contents. This didactic use of digital games aims to enrich and diversify educational content, making it more attractive and close to the reality of the pupils, through a medium that motivates and fascinates them. Serious games or educational games have been a very fruitful field led by the theoretical body of digital game-based learning (Gee, 2004a, 2004b) that focuses on the ways in which video games teach a set of new literacies, edutainment that use games as a motivational tool to make learning fun (Egenfeldt-Nielsen, 2011; Lacasa, 2011) or serious games that are used to serve a useful extrinsic purpose (Ritterfeld, Cody & Vorderer, 2009), and gamification (Werbach & Hunter, 2012) that uses game mechanics in non-game contexts. More recently, Whitton (2014) argued for a field of games and learning, which includes learning with entertainment or educational games in formal settings, analysis of the informal learning that happens in games when they are played for fun, learning that is inspired by games, learning about games as cultural artefacts, learning through building games, and the analysis of games and gaming communities to see how techniques and ideas from these areas can meaningfully be applied to learning.

Media literacy in digital games does not aim to use digital games as a didactic tool but rather as an object of study for its own sake. For Gatzidis and Poulsen (2010) understanding video games is valuable for its own sake as a necessary pedagogic prerequisite for all those interested in the educational use of digital games, serious game or game-based learning. In this manner, media literacy in digital games and digital gaming, ludoliteracy, aims to reflect on the technological, cultural, sociological and economic contexts of video games as media.

We need a Media Literacy that contemplates playful aspects that surround a multitude of educational activities, for training and even business relate to what Tornero and Varis (2010) call *awareness*:

“it is necessary to reach a new *media awareness*. This *media awareness* would help us to achieve two key goals: a) *ascertaining the importance and influence of the media system* in our everyday life and b) *developing the competences needed* to use the communication technologies bearing human goals and values in mind”. (Tornero & Varis, 2010: 55)

Zagal (2010), based on the proposals of Gee (2004a, 2004b), contemplates video game literacy as (1) The skills to play (to read them), (2) The skills to understand the meanings related to the games and (3) the skills to create them. This definition, which is common in almost all the proposals (Buckingham & Burn, 2007; Gatzidis & Poulsen, 2010; Squire, 2005; Livingstone, 2004) defines video game literacy according to the functional skills (the access or reading), the analytical/reflexive capacity, and the productive competence (writing). Zagal focuses his proposal on the second dimension, the analytical and reflexive. This analytical and reflective capacity, he says, aims to improve the ability to explain, discuss, describe, frame, locate, interpret and position the games in the context of culture, as a cultural artefact, in the context of other games.

As we mentioned previously, a commitment to digital game literacy needs proposals that understand digital games as objects of study: reflection and critical analysis on the technological, cultural, sociological and economic context of video games as media. Buckingham and Burn (2007: 329) note the problems created by fundamentalism in the analytical and reflective perspective with regard to media education:

“There seems to be little place in some conceptions of critical literacy for aspects of pleasure, sensuality and irrationality that are arguably central to most people’s experience of media and of culture more broadly. An emphasis on critical distance fits awkwardly with the emphasis on immersion and spontaneous flow – and even the pleasure of addiction – that is frequently seen as

fundamental to the experience of gaming. As such, we would wish to caution against a narrowly rationalistic conception of critical literacy – a conception that is arguably quite at odds with how the majority of players behave or might wish to behave.” (Buckingham & Burn, 2007: 329)

It seems clear that the scientific community coincides in indicating that a good approach in literacy should contemplate competence in reading, analysis, production, and the pleasure related to the sense of use of the media; a nuanced understanding and appreciation of the literacies surrounding digital games cannot be an exception.

5.4. Conclusions

As mentioned in the report *Media in Europe: New questions for research and Policy* (Alvares *et. al.* 2014), educational policies around the study of video games in the context of media literacy are almost non-existent within Europe. Most of the initiatives around the use of video games in educational contexts refer almost exclusively to game-based learning approaches: the use of video games as a tool at the service of curricular or extracurricular contents, or the creation of video games (coding). Previous studies have highlighted the difficulty identifying media literacy practices related to video games. The report *Media Education in Four EU Countries* (2013: 3), drawn up jointly by My Child Online Foundation and Kennisnet Foundation, affirms that "we have also not considered media education focusing on games —or using games— because hardly anything has been published on that topic". In our case, we consider videogames and digital gaming as new media. As we stated before, videogames are a part of the ecosystem of media around us (Dovey & Kennedy, 2006). Videogames as new media are defined as different technologies, means or channels of general communication, information, or entertainment in society that mediate our communication and affect how we perceive and understand the world around us.

Thus, ludoliteracy should necessarily include the main aspects of Media literacy. Game Literacy needs proposals oriented to a better understanding of digital games as objects of study: reading/access; reflection/critical analysis on the technological, cultural, sociological and economic context of video games as media; and production practices.

We propose to establish and define the main competences and focuses that ludoliteracy should consider:

- 1) **Playing digital games.** Meaning not only the skill/competence of playing a digital game but also equal opportunities to access and play games, and knowledge of gaming resources and technologies. Inequality barriers in gaming refer to the opportunity of access to a diversity of platforms, genres (not only mainstream) and gaming technologies that allow population developing the competences needed to use a heterogeneous and complex communication technologies in their leisure but also in learning or disability contexts.

Related competences and skills: understanding the principles of human-machine interaction, pattern recognition and understanding, understanding interfaces.

- 2) **Understanding digital games.** Understanding the social, economic, cultural and technological meanings of digital gaming, focusing on analytical/reflexive/critical skills that comprise among others, the following topics:

- Digital gaming as an activity: pleasure, sociability, flow and engagement, identity, gender, game communities and cultures of production.
- Digital games as simulated worlds, narrative structures, fictional worlds and genres.
- Learning and gaming.
- Games as cultural artifacts.
- Critical and reflexive scope: deconstruction of economical, technological and cultural production of gaming.

Related competences and skills: critical thinking, cultural skills.

- 3) **Producing digital games.** Refers to learning environments that provides players with many of the skills needed in today's digital cultures. The ability to be more creative in games is increasing, with games that allow players to create and share levels, to customize and personalize characters and levels and to take part in creative collaborative challenges. For example:

- Coding
- Co-produced media
- Modding
- User-generated content

Related competences and skills: technical skills, creative skills, communicative skills.

We propose this ludoliteracy framework, bearing in mind that the Internet and social networking sites have contributed surprisingly to promote the growing social presence of digital games, a phenomenon that needs to be understood in the wider framework of relocation, mobilisation and dematerialization of the technological devices. Examples of this trend are the so-called casual games, (reproducible in any mobile device) or games in social networks, phenomena that are gradually widening the number, profile and diversity of video game players.

Today, digital games transcend their traditional role as a part of a specific sub-culture, to become a genuine driver of a society and digital culture. However, there is a need for a rigorous and inclusive proposal of literacy that connects playful culture, digital competence and citizenship. Rigorous media literacy that defends the need for critical, analytical and productive competence regarding media, cannot ignore and actively strengthen everything related to digital gaming and the practical ubiquity of digital games in our society.

5.5. References

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