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Internet, children and space: Revisiting generational attributes and boundaries

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Abstract
At the dawn of modernity, in the 18th century, space became a critical category in defining generational attributes and locations. However, borders that previously tightly isolated adults and children are nowadays continuously challenged and modified by a constant and ubiquitous use of new information and communication technologies, namely the Internet, blurring notions of 'private' and 'public', 'outdoors' and 'indoors', 'real' and 'virtual'. Giving voice to children, this article explores qualitative empirical data from a research project carried out in Portugal. It focuses on children as subjects and actors of these processes, especially in the way they combine 'real' and 'virtual' space and place in a geography of their own.

Keywords
Children, communication, everyday life, Internet, social networks

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Introduction

The 18th-century modernity mapped national and collective spaces, reinforcing sharp frontiers between 'us' and the 'others', based on binary categorisations of the world (Prout, 2005). An illustration of this dichotomised framework was applied specifically to generations: adults were opposed to children, either by nature (competent, rational and mature beings vs incompetent, irrational and immature becomings) or by their spatial location in society (public vs private, outdoors vs indoors places).

Nowadays, 'hard' and 'closed' generational frontiers seem to be challenged by the recent appropriation of the Internet by families, in parallel to its intense and proficient use by children (Livingstone et al., 2011). From home, a confined 'proper place' for them to be (Rasmussen, 2004), children access the Internet through multiple devices (computers, tablets, smartphones) and can easily navigate 'online' through the global cyberspace. They cross the private, local, material boundaries of the home, intruding on adults' public territories. As a result, the 'indoors' and 'outdoors' dichotomy, and its rigid correspondence to spaces and generations, is progressively being eroded.

Reviewing literature on the subject, Valentine and Holloway (2002) abundantly describe and exemplify the first discussions on the emergence of a 'virtual', 'inauthentic', 'disembodied' sphere, Internet-mediated, in contrast and disconnected to physical, material, 'real-world' environments. The 'virtual' domain was often portrayed either as an 'improvement', an 'emancipation' of the 'real' or conversely as an impoverished, 'inauthentic' copy of it. Evaluated either as a positive or negative outcome, this dichotomised and essentialist perception is mostly assumed, rather than studied or tested in specific contexts. Since the late 1990s, the 'new social studies of childhood' (Holloway and Valentine, 2000) begun addressing this hypothesis. Our article is a contribution to this debate.

Giving voice to children, we explore and illustrate the argument that offline and online worlds are not different domains, disconnected, contained or set apart by a sharp frontier. In contrast, the borders between them are increasingly fuzzy; they mutually breed and fluidly constitute each other, originating arrangements where so-called virtual and real spheres are juxtaposed and part of the same whole.

The research is based on a project concerning children and the Internet in Portugal. As in other European countries, Portuguese families rapidly adopted information and communication technologies (ICT): according to Eurostat, in 2004, the percentage of households with children having Internet access at home was 39%; in 2012 that figure reached 85% (quite close to the European average of 89%). Data also show that children are intense and competent Internet users: according to the European Union (EU) Kids Online survey, 53% of the Portuguese children access the Internet daily and report an average of 4.9 Internet skills (out of a list of eight), which places Portugal in 8th place in the ranking of 25 countries (Haddon and Livingstone, 2012: 51). Web access being almost universal among them, it is therefore relevant to examine modes of combining and crossing borders between 'real' and 'virtual' arenas from home.

Four levels of articulation between online and offline environments are addressed in this article, in order to enlighten, as Ansell and Smith (2006) put it, the particular children's experience of space 'in' and 'out' the home private border: time spent on media

use, favourite activities and interests, communication activities and everyday relations and participation in social networks.

Theoretical framework

'Children, perhaps more than any other group of people, are regulated by place and space' (Jenks, 2005: 419). This statement brings forward an alternative to the importance of time in defining generations in contemporary societies, either because childhood is perceived as a previous or preparatory stage in a temporal linear continuum towards adulthood or because growing up in different moments of time marks each generation with cultural and historical specificities that make them unique phenomena (Holmes, 2011). But space and place are also crucial constitutive dimensions of the generational order (Qvortrup, 2004).

First, because the contexts of childhood and adulthood are far from being homogeneous or universal categories, countries and regions, neighbourhoods, social class, gender and ethnicity strongly modulate generational conditions. If childhood is not to be considered a natural or universal category pasted into the individual abstract child, but a social construction transported by collective or situated actors (Prout, 2005), the theoretical gaze must comprise its internal diversity.

Second, the definition of sharp spatial boundaries, the regulation of movements in, out and around them, as well as the enunciation and control of spatial transgressions are at the very heart of the eighteenth-century modernity construction and of the emergence of new representations of private life and the child (Ariès, 1973). In that period, 'indoors' and 'outdoors' became a significant dichotomy, structuring communities, families, gender and generational identities. New individual and collective values sustained the distinction between home and workplace, initiated in the bourgeois family. Home was the place for private life, expressive activities and emotional bonds, ultimately involving women and children; beyond this micro arena, set apart from it, the public sphere emerged, prepared for work and politics, and for men, dominated by rational interests and instrumental competencies. At the centre of a sentimental cocoon, immature children were regarded as unique creatures deserving protection and care (Ariès, 1973). Later on, this bourgeois ideal was diffused or imposed to other social classes by modern nation-states.

According to Prout (2005), the contrasted representation of adulthood and childhood illustrates that general dichotomised worldview, used to distance men from women as well: public versus private, culture versus nature, rational versus irrational, independence versus dependence, active versus passive, competent versus incompetent and work versus play. Children are thus 'trapped inside' (Jones et al., 2003: 167), compartmentalised in the private domain of the home or in institutionalised, supervised educational settings (Brannen and O'Brien, 1995), their 'proper places' (Rasmussen, 2004), and kept away from unknown, larger social bonds.

A dualistic discourse on generations, rooted in modernity, has persistently influenced the scientific approach to children and childhood. More recent theoretical contributions positing the *métier d'enfant* (Sirota, 1998) or interpretations of Actor Network Theory (Lee, 2005; Prout, 2013) put forward concepts such as children's 'agency', 'networks' or

'hibridity' which contribute to move or renew established sociological perspectives within the 'new paradigm of childhood' (James and Jenks, 1998): (social, spatial) context has to be considered, as children are not universal or natural entities; children are participatory agents in constructing their daily (Internet) experience; children's perspectives are to be considered on their own, independently of the adults' ones; children are competent informants about their (online–offline) activities. Adults' control strategies over children seem also to be challenged today by an impressive family appropriation of the Internet. The 'indoors' and 'outdoors' stark dichotomy, its rigid correspondence to spaces opposed by nature and circulating protagonists, appears to be put into question, if not eroded, by an emergent children's 'digital culture' (Buckingham, 2007).

These changes have a precedent in the disruptions induced by other media, namely the printed press, the cinema, the radio and, since the 1950s and in a very pervasive way, the television (Buckingham, 2003). Periodical 'waves' (Critcher, 2008: 91) of 'media panics' (Drotner, 1999: 597) reflect adults' anxieties towards children's upbringing. Children are often viewed as vulnerable to moral corruption through the consumption of inappropriate messages and exposure to values which undermine family cultural cohesion, parental control and authority. Also, the home perimeter is eroded by the intrusion of external, non-supervised and indiscriminate influences. These concerns are recurrent in public debates and they represent, following Drotner (1999: 593), the 'complex constellation of generational, cultural and existential power struggles' through which adults negotiate children's 'character forming' in modernity. They are especially intense nowadays: the broad scope, omnipresence and potential for interactivity the new media have (the Internet in particular) is unparalleled.

From home, children can navigate 'online' in the global, virtual cyberspace, crossing private, local, 'offline' and material boundaries, as well as disturbing established generational categories and the adult–children power balance: they 'play' on their own and 'work' for school in the Internet; in some national or social settings, such as Portugal, they often reveal themselves as more independent, active and competent users than their parents or teachers (Hasebrink et al., 2009). Nevertheless, as shall be seen below, for some social groups, parental control is not entirely absent.

Furthermore, controversies proliferate about the impact of the intense use of the Internet upon children's childhood. As Valentine and Holloway (2002) clarify, for the sceptical ones, 'debunkers', the Internet is contributing to isolate children from family or friendship conviviality or to shrink emotional social bonds; it exposes them to risks in the cyberspace; it deprives them from imaginative, physical, spontaneous and creative activities outdoors, in 'the fresh air' (Jones et al., 2003), while imprisoning and limiting them in sedentary, routine and monotonous tasks. By and large, in the 'virtual' world, 'face-to-face relations are eroded by online simulations' (Valentine et al., 2000: 162), as if the expansion of the first was reducing the virtues of the latter. In the same dichotomous logic, optimists or 'boosters' (Valentine and Holloway, 2002) subscribe to positive arguments: children's online cultures 'approximate the distant and the different', the global and the local, they promote inclusion of the excluded, they are a means of 'transcending the constraints of physical location' (Facer et al., 2001: 13) and they empower children, who 'live and breathe' technological innovation (Tapscott, 1998).

An early work on ethnography on the Internet (Hine, 2000: 27) already criticises the 'mythologising' of virtual culture and presents the Internet as closely tied to 'personal and collective lives'. On a later essay concerning ethnography of adolescents' everyday practices, Leander and McKim (2003) put in question the duality between the Internet and the 'real world' and the construction of cyberspace 'as a "world apart" through technocentric visions' (p. 217). They underline the interpenetration of offline and online activities, which are 'co-constituted, hybridised and embedded with one another' (Leander and McKim, 2003: 223). Burnett's (2014) research on educational uses of digital environments in primary school settings signalled the importance of 'looking beyond binary distinctions' (namely on/off-screen, on/offline activities, material/virtual contexts) to capture the 'complex and nuanced ways that children make meaning around new technologies' (p. 1) and the growing porosity and hybridity between different lived contexts. Focusing on media mixes of cartoons, online games and offline ones, Ito (2003) also highlights this interpenetration, stating that 'the real is being colonized by the virtual as technologies of the digital imagination become more pervasive in the everyday environment' (p. 31).

This article complements this work by considering the following questions: how do offline and *online* worlds, often perceived as fixed, discontinuous domains set apart by a sharp frontier, intertwine and become part of the same whole through children's appropriation of the Internet? How do children daily fabricate, through an intense and multipurpose use of the Internet, fluid and mobile space arrangements where 'virtual' and 'real' are juxtaposed, mutually breeding each other?

Methodology

The analysis in this article is based on a set of 158 semi-structured interviews carried out with children with Internet connections at home in Portugal, selected through a quota sampling method (see Table 1). Since the interview process was based on schools, only children attending the 4th, 6th and 9th grade in state and private schools were selected (aged between 8 and 17 years). The sample was designed to include some degree of regional and social diversity: the interviews were carried out in schools located in Lisbon and Oporto (the two major cities of the country, both on the coast) and in Viseu (an inland region); parents' education was used as a proxy for social class, dividing the sample between children of university graduates and children whose parents have lower educational credentials (see Table 1).

The interview script covered the most significant issues regarding ICT use by children: technological objects at home, Internet uses and routines, rules of use (locus, times and lengths), sources of learning and objectives and practices of Internet use at home and in school. The script followed closely the questions and structure of a previously applied questionnaire to (other) children in the same age cohorts, with the explicit intention of deepening the results brought by the quantitative phase of the research. The interviews were conducted in the school premises, after informed consent was obtained from educational authorities, parents and children themselves. The average length of interviews was 45 minutes, the median was 43 minutes, the 25 quartile 35 minutes and the 75 quartile 53 minutes. Audio files were later transcribed, coded and analysed

Table 1. Interviews sample (%).

Sex	Boys	50.0
	Girls	50.0
School year	4th grade	27.8
	6th grade	31.6
	9th grade	40.5
Type of school	Public	74.1
	Private	25.9
Location of school	Lisbon	40.5
	Oporto	41.7
	Viseu	18.4
Age	8 to 10 years	27.2
	11 to 12 years	31.0
	13 to 14 years	32.9
	15 to 17 years	8.9
Parent's educational level	Non-graduate parents	63.3
	Graduate parents	36.7

N = 158.

through the software MAXQDA by the members of the research team. The coding tree was thematically organised according to the script's structure and the coding process executed by only one researcher. However, the codification was afterwards revised by each member of the team to prevent coding biases and the interpretive differences worked out at joint meetings.

Excerpts of the interviews are used in this article with the dual purpose of illustrating the dominant trends of response (percentages are referred in Table 2) and also showing the diversity (and in some cases singularity) of practices, reasoning and engagements with technology by children. Children's names were changed in order to protect their identity.

Embedding Internet in everyday life activities

Quantitative studies on Internet use try to measure how often children go online and how much time they spend on digital activities (Livingstone et al., 2011). However, interviews allow a deeper understanding on how the time devoted to the Internet is fluid and intertwined with other activities.

Technological advances have changed the way families and young people manage online time: broadband connections in which costs are no longer linked to the duration of Internet use, home wireless networks that allow several computers to be connected simultaneously and laptop computers that can be used anywhere in the home. The Internet can now be 'always on', permanently available to be used at will. Transcending physical home borders to get into the cyberspace, on a casual or a routine mode, is a common experience for children. Mafalda, an 8-year-old girl, explains,

Table 2. Quantitative summary of coding results (%).

Connection to Internet	Yes	98.1
Number of computers	1–2	46.5
	3 or more	53.5
Internet always on	Yes	61.8
Internet use (time)	Intensive	33.1
	Average	33.8
	Weak	33.1
Multiple pages open	Yes	70.0
Internet use	Games	89.2
	Blogs	26.6
	Social network sites	50.6
	YouTube	65.2
	Instant messaging	74.1
	Email	85.4
	Download content	15.1

N = 158.

> The desktop computer is always on, we connect my laptop in the morning, afternoon and evening! … When we arrive home at six-thirty, my dad fetches me [from school], I connect the internet 3G dongle and my father also connects his laptop to the internet

Restrictions for this 'always on mode' occur mostly for two main reasons: parental concerns over children's free navigation and transgressions of safe childhood perimeters; and financial constraints.

To keep watch over their movements in cyberspace is frequent among well-off families, where parents are informed digital tutors of their children, setting rules and recommendations in order to control time spent on the Internet (see also Leung and Lee, 2011). Rita, 11 years old, refers to her dad's decisions: 'Only if my dad forbids my brother from playing and turns off the internet, but usually it is always on'.

At 14, Sofia comments on her mother's tight control: 'my mom has an internet 3G dongle, only she knows the password, I ask for the 3G dongle, she puts in the computer and types in the password, then I spend half an hour or one hour [online]'.

In less affluent households, restrictions are applied mostly due to financial difficulties. Teresa, aged 14, tackles it explicitly in her interview: 'I have an internet dongle … I can only spend €15 per month and I have spent it already'.

Interviews reflect a media abundance which transformed home territories into open spaces where technology ensures a permanent connection with the outside world (Livingstone et al., 2011). They also show that using the Internet is often done in parallel with other offline activities and children enjoy the experience of *navigating simultaneously in different spaces*, 'virtual' or 'real'. Manuel, 16 years old, is enthusiastic about his 'dispersive multitasking' (Davies, 2011), characterised by using different media at the same time: 'Sometimes I watch TV and I'm on the internet and I'm playing and doing several things at the same time and talking to a friend [on instant messaging]'.

Multitasking also applies to cumulative online activities. Most children often have several webpages opened at the same time; they chat with their friends on instant messaging programs, while doing their homework or Web searches, often accompanied by background music from YouTube videos. The account of Andreia (aged 11) illustrates this saturated and fragmented digital environment:

> Everything at once. I turn on the music and then I'm on Messenger, listening to music … and every once in a while I open a game or the horoscope … I always have background music and I always check my email.

Time devoted to online surfing is often integrated in a scheduled agenda, compartmented into intervals between school and other home or leisure activities. In the following excerpts, Tiago (aged 11) refers to the place of the Internet in between hygiene and meal routines:

> [I use the computer] in the evening, at 7 o'clock, because I go to the [activities] centre always in the afternoon. In the morning I'm at school. When I get home, first I organise my backpack, then I take a bath, then I go [to the computer] a little before dinner and after dinner some more … I use it for an hour and a half

In turn, Manuel (aged 16) focuses on the conciliation of Internet and sport activities: 'On Saturdays [I don't use the Internet] because I usually play sports … When I come home, if I don't have anything else to do, I spend the rest of the day online'.

In other words, a first level of analysis, concerning time spent by children in the Internet at home, reveals that a strict separation between online and offline schedules is disappearing. They increasingly overlap and intertwine in a seamless stream. This porous 'in and out' border is reinforced by the merging and mutual reinforcement of children online activities and offline interests.

Intersections between online activities and offline interests

As for what the Internet is used for, a fuzzy frontier online–offline is also becoming evident. School is daily brought home through homework and children's learning tasks require an intense use of online resources. But here we concentrate on children's favourite activities.

Children's Internet searches and the webpages they visit are very often connected to their offline activities and interests. For instance, children look for webpages related to sports they play – rugby, gymnastics, surf – thus getting informed about news, athletes, best examples and references – as indicated by Bernardo (14 years old): '[I often visit] the webpage of the club in which I play rugby … Club news, the matches I'm going to play, the scores in different leagues. It has rugby videos'.

Some children visit pages connected to their hobbies and even upload their own content. Diogo, 14 years old, is a fan of 'Lego creations' and paints miniatures with his father; he very often goes 'to a miniatures site … we send them stuff, photos … or another site, that is MOC pages, about Lego creations'.

Joaquim, aged 11, tells the interviewer,

> I have two [YouTube] accounts, one for making videos with dolls and another account for claymation, those plasticine stop motion films … I usually receive and send messages through YouTube … I talk with other users, someone tells me he bought a new figurine and I reply that I can customize it, I take a similar one and say 'I can paint it in acrylic' and then I do it and upload the video to YouTube.

Other children look for information on their interests, such as animals or cars: 'I like to look for animals for adoption, because I love dogs, only since I live in an apartment building, I'm not allowed to have dogs' (Tiago, 11 years old); '[I search for] Cars, tuning, Opel Tigra … Cars equipped with all sorts of things … I just go online and type "cars"' (Manuel, 9 years old).

To search for information about music, films, actors ('idols') or TV programmes is another activity promoting either permeability between different media or proximity between online and offline spaces. Flávia, aged 14, asserts, 'I always check out the blog of my favourite singers, I adore them, my mom says I'm addicted to them, I have twelve hundred pictures of them'. Similarly, Rita, aged 11, goes 'to Google and looks for pictures of Disney Channel characters and cartoons'.

Curiously, the downloading (legal or illegal) of music and films is a rather infrequent practice among the children interviewed. Only a few, most of them boys, speak about downloading content from the Internet. Bernardo, a 15 year old, explains,

> I always go to the same site because it's easy … It is always open in the taskbar. I click on it, I write the title of the music and it starts the download. In five seconds it will be recorded on Music [Windows Library].

Finally, children also search online for wanted products, although their shopping is done mostly offline. They see what is new in their favourite shops, check models and compare prices. Maria João, aged 11, took great care before buying her new computer:

> Some time ago I bought a new computer. Often, besides talking to sales people at the shops, I also look online. I selected the computer at the store but then I went to the internet to look for pictures, for its technical details and then I printed it to study it a little better and to compare with other computers

Similarly, Francisco, aged 16, spent a considerable amount of time before choosing the 'right' drum kit: 'I check out the prices, see if they drop, look for opportunities … I use mainly shops' sites, for instance Bmpage, FNAC'.

Online games played by children often reproduce traditional offline games and are strongly structured along the gender divide (Bryce and Rutter, 2002; Kelly, 2006; Valkenburg, 2005). Boys play games with cars, football and fights: 'I like to play football games, war and stuff' (Ivan, 11 years old); 'Games, shooting games. With blood!' (Bernardo, 14 years old); 'I play racing games, airplanes, sometimes strategy games' (Diogo, 14 years old). Girls play with dolls, dressing them up, using makeup and running hairdressers or shops: 'I play games with dolls, with makeup, sometimes it's decorating

a house' (Ana, 9 years old); 'Fashion games, cooking games' (Priscila, 10 years old); '[I play] hairdressing games and sometimes I go to a website that has models, different cinema characters and we dress them up' (Francisca, 12 years old).

Some differences can also be observed between younger and older children. The former tend to use more gaming sites aimed at children (e.g. Club Penguin, 1001 games), whereas the latter, especially the boys, play online games also frequented by adults (e.g. World of Warcraft, Travian):

> Counterstrike is a game played worldwide … […] It's a game of strategy, basically it's strategy. After perfecting the shooting aim you join a team and there are 5 players in a team, there are terrorists and counter-terrorists and the aim of the game is to plant a bomb and the bomb explode and kills the terrorists, basically that, the game ends when the one team has killed the 5 others from the other team. (Jorge, 16 years old)

Additionally, online multiplayer games can be played together with 'real life' friends, in a virtual continuity of everyday interaction and play. Classmates are typical partners and arrangements are made to set schedules. Francisco, aged 16, explains the procedure: 'When I play online, sometimes I play in a team, I play against classmates. We make an appointment at a certain time, we know each other names and we agree to meet there'.

In short, there is a strong connection between children's offline interests and the webpages they visit and the activities they perform online. This illustrates how 'real' and 'virtual' territories are merging through an intricate and permanent repertoire of activities performed by children.

Online communication and face-to-face sociability

The amount of time children spend online is a motive for adult anxiety, as noted before (Valentine and Holloway, 2002). Children's deprivation from emotional and social bonds, isolation from the outside world and loneliness are supposed to be encouraged by their intense use of the Internet. Nevertheless, the isolation myth of the cyberchild is questioned by our data: to be online is almost always to participate and to activate a close network of peers through diverse means, such as email, instant messaging and online social networks. The interviews help to clarify the purposes of online communication. For some children, communication occupies a core place in their online activities; it is the first thing they look for when they connect to the Internet. Thus, Mafalda (8 years old) describes her routines:

> I turn on the computer, I connect the 3G dongle, I go on Messenger, I talk a bit with M. and then I talk with my cousin. Then I talk again with M. and I connect the video camera. While I'm talking to her with the camera, I go to Google and search for games

For many children, communication is something that is always on, on the background, while they pursue other online activities.

Online messaging is often the continuation of conversations and sociability deployed in offline 'real' settings, namely school and family (Livingstone, 2008). This conversation

flow mutually reinforces 'real' and 'virtual' relations, in what Horst et al. (2010) characterise as 'hanging out': 'youth mobilize new media communication to construct spaces for copresence where they can engage in ongoing, lightweight social contact that moves fluidly between online and offline contact' (p. 38). Or, as boyd (2010) puts it,

> When teens are involved in friendship-driven practices, online and offline are not separate worlds – they are simply different settings in which to gather with friends and peers. Conversations may begin in one environment, but they move seamlessly across media so long as the people remain the same. (p. 84)

Children talk about their school and extra-curricular activities, their interests and their personal relationships. Tiago, a boy aged 11, enounces his favourite conversational topics: '[We talk] about girls, about school grades, about life, about websites and games'.

Bárbara, a girl aged 14, emphasises the importance of talking online with her cousin, even though they live very close:

> I'm not with them every day. Even though my cousin lives next door, I'm seldom with her, because she's now in high school and we are seldom together, we talk online. When she wants to tell me something very funny, or sometimes she says 'Bárbara, lend me this, lend me that', I go to the window and I lend it to her … Because her house and mine are joined together.

Another girl, Filipa, aged 11, exemplifies the kind of conversations she has online with her friends: 'We say: "Is everything ok? What did you do today?". "Have you done your homework?" and then we talk about things that happened in our class, romance and stuff like that'.

In addition, online conversations are sometimes seen as preferable to face-to-face ones, since they allow 'disembodied' interaction, 'keeping face' in embarrassing situations (Valentine, 2006) or facilitating communication of emotional content (Kaare et al., 2007), such as romantic entanglements or, conversely, disputes and misunderstandings between peers. Margarida, aged 11, is playing matchmaker to two close friends:

> I've been talking with a friend who likes another friend of mine and that friend also likes him, but he hasn't got the courage to say it. Today he was going to declare his love for her and was telling me to set things up, Messenger is very convenient. … It is! Because the things we are embarrassed to say in person, we can say it there, with less embarrassment, because we can't see the other person's face.

Lurdes, aged 16, praises the importance of Messenger to clarify and work things out when a discussion between friends arises:

> Some issues are more easily talked about [online], for instance, people who are angry at each other end up talking just the same on Messenger and they work things out on Messenger and the following day everything is all right […] Messenger makes everything so easy, we say things, people read it. It's just that deep down we don't really say them, we just write them.

Online communication is also used to overcome the barriers of physical distance and to stay in touch with friends and relatives seldom seen in person. For Miguel, aged 14, it is very important to keep in touch with holiday friends: 'When we go to a holiday camp, we make friends and I ask them their email and they ask me mine and we are registered as friends'.

Two other testimonies illustrate the possibility of communicating with physically distant family members – a godmother abroad, an absent parent after a divorce: 'My godmother lives in Germany, so we talk via Skype, she has a camera and everything!' (Álvaro, 11 years); 'My parents are separated and my father is living at my grandmother's house. When I go to my grandmother's, to stay with my father, I sometimes talk with my mother through Messenger' (Tiago, 11 years old).

Similar to 'real' relationships, children also accurately distinguish conversations they have with different recipients. In their discourse, they separate friends from relatives, as Tatiana, 14, in the next excerpt:

> With friends we usually arrange to meet and go out together or we talk about music or boys or clothes … with relatives it's totally different, we tell them we miss them, we ask when are they coming to Portugal, when are going to visit them.

But conversations also separate girls from boys, as Filipe (14 years old) explains, 'Girls are always asking who do we like. And I tell them "why do you want to know?" But they keep insisting … With boys we talk about football and sports'. Hugo (11 years old) also differentiates between conversations with adults and with young people: '[We talk] about how someone is, if everything is ok, the same old conversation, but it's just with adults. With my friends I talk about girlfriends and stuff'.

Finally, mostly in the case of boys, multiplayer games are also used to communicate, often with strangers from around the world. The next example illustrates the wide and global horizon a virtual network can reach: '[I met new friends] though games … They are just virtual friends because most of them are from Poland and other are from the US … We talk often about the games, but not other conversations' (Diogo, 14 years old).

In a nutshell, online conversations put the child at the centre of dense sociability arenas, which he or she manages at his or her convenience and which are an extension and an update of face-to-face ones. With a surplus: they offer the advantage of overcoming spatial distance and preserving self-esteem. To sum up, our data put into question the isolated and lonely cyberkids narrative, by showing the superimposition of 'real' and 'virtual' sociabilities.

Online and offline social networks

Online social networks are one of the fastest growing services on the Internet. These networks are constituted by websites of rather diverse nature (Facebook, MySpace, Hi5, LinkedIn etc.) where users build profiles based on textual and visual content. These profiles are interlinked with profiles from other users based on offline or strictly online relationships, and users can post comments on each other's profiles, send messages or play games. Due to the nature of these sites, there are some legal restrictions on its use

by minors; however, children are among their more intensive users (Lenhart et al., 2010). In Europe, 60% of 9 to 16-year-olds use these services (Livingstone et al., 2011: 38).

Half the children we interviewed stated that they used social networking sites. The most significant difference pertains age: only a fifth of fourth graders use social networks, but this value rises to half in the 6th grade and over 70% in the 9th grade. Hi5 and Facebook are the most often cited social networks, with slight class variations: children of less educated parents are more prone to use the former, confirming at least partially that girls (54%) more than boys (48%) and children of non-graduate parents (53% against 51%) have a slightly higher propensity to use these services (see Leung and Lee, 2011). For all, 'virtual' social networks add and multiply peer exchanges in the 'real' world.

Most children start using virtual networks by suggestion of members of their offline networks, as was the case of Teresa (14 years old):

> I joined Facebook because I received an invitation from a cousin that lives in the US, she did her Facebook [profile] and sent me an invitation to share photos because it's easier to see photos on Facebook than through MSN.

Although some users (especially younger children) are motivated by games, most of the interviewees justify using online social networks with the need to stay in touch with both close and distant friends or relatives, much like Facer et al. (2001) have found as the main reason for children acquiring ICT skills. Face-to-face relations simultaneously breed and are activated by virtual exchanges.

Despite the growing literature on the dangers of social networking (Livingstone, 2008), children seem to prefer to restrict access to their virtual network to members of their offline network: 'While many adults find value in socialising with strangers, teenagers are more focused on socializing with people they knew personally' (boyd, 2007: 4–5; see also boyd, 2010). This was evident in our sample. When asked about their 'friends' in online social networks, children named mainly their relatives, in the case of younger children, such as Isabel (aged 9):

> My father, the daughter of my father's friend, the wife of my father's friend, my stepmother, my stepfather, my mother, my stepmother's sister and no one else. And the girl from the café, but that one I know too well.

Friends and schoolmates are the more frequent members of the social networks of older children, as the next testimony of Maria (aged 13) shows: 'Mainly people I know from school. People with whom I have already spoken or people I usually speak with. And the friends I have outside school'.

Many referred setting restrictions for outsiders, by adjusting their profile so it can only be seen by the members in their network ('friends') (see also Livingstone, 2008). Two girls offer good examples of such safeguard procedures: 'I have one [profile], in Hi5 … but it's private … only my friends can see it' (Aldina, 12 years old); 'Since [my profile] is private, I put photos of me and my family, my friends, when I'm on holidays' (Filipa, 11 years old).

However, social networking sites are sometimes used to make new friends. The risk of being approached by adults exists (and is acknowledged by many of the interviewees), but often these new friends are other children, who live in distant places, with whom they share interests and activities. They can be players in online games, children with similar hobbies, fans of the same music groups or the modern replacement of 'pen friends', as illustrated by the next statement: 'On MySpace I have about 50 [friends], in Facebook 47 … I don't know all of them personally. I know them from wrestling stop-motion animation' (Joaquim, 11 years old).

Thus, Internet-mediated social networks are closely intertwined with offline ones. Children are introduced to them by peer or family members, online friends are typically people who children meet face-to-face in their daily lives and although unknown persons can penetrate these networks, more often than not these strangers are other children, who present no particular danger. Perhaps unexpectedly, cyberbullying was not at all mentioned by the children in our sample.

Conclusion

The above empirical tour allows us to retake our initial starting points. The aim of this article was to illustrate the dilution of hard frontiers and separate territories implicit in the dichotomy opposing 'real' to 'virtual', by means of family and children's appropriation of the Internet. In the four domains considered – time spent online, favourite sites and activities, communication and social networking practices – we have illustrated how children combine and juxtapose the 'real' and the 'virtual' spheres, fabricating hybrid spaces of their own. One does not exclude the other. Through the use of the Internet, children import routines and schedules, activities and perceptions, people and networks from the 'outside' world into virtual domains they have appropriated on the Web. By doing so, they monitor, diversify and multiply them.

These findings raise more general issues. Associated to modernity, binary categorisations of generations in terms of space (Prout, 2005) are put into question, as well as representations of children as inner and private home members, opposed to their adult gatekeepers, freely circulating in the public outside world (Brannen and O'Brien, 1995; Rasmussen, 2004). Our study suggests that the erosion of generational territory markers is underway through children's intense and ubiquitous use of the Internet. Much like other authors (Valentine and Holloway, 2002), we have sustained that the virtual is not simply opposed to or in competition with the real. But we have tried to go further. Giving children a voice, we have illustrated *how* through the Internet and from their home they fabricate new spatial arrangements and thus undermine held assumptions about childhood properties.

The changing scope of space *perimeter* is the first dimension to consider. This outline was significantly enlarged: the Internet puts the child in contact with much larger and global domains, overcoming local physical settings and barriers. Just as highlighted by other authors (Facer et al., 2001), this extension of childhood domains into the global sphere is parallel to a centripetal deepening movement, often underestimated in the literature: the Internet also updates and makes children's 'real' networks denser. The child makes incursions and navigates in the public sphere, formerly an attribute of adults, thus

neutralising the 'weeds metaphor', postulated by Jenks (2005). Border crossing control is still a parental anxiety, as noticed in previous research (Stevenson, 2011) – even if its effects are, as we demonstrated, limited, especially in families in which parents have lower levels of education (and are less digitally skilled than their children) or among older children (more autonomous and competent users than younger ones).

Second, *borders* between online and outline worlds are increasingly porous, permeable and discontinuous. As shown above, online time is also used to carry out offline activities; actors of the 'virtual' and 'real' spheres are combined and merged into particular arrangements, crafted by children. These are not single, rigid or unified blocks – as sometimes is implicit in essentialist narratives (Valentine and Holloway, 2002): 'virtual' and 'real' are themselves conjugated and fragmented by children's agency in multiple parallel platforms or activities.

A 'sponge' effect is noticeable: domains of the one sphere are absorbed and multiplied through their presence in the other sphere. The moving and fluidity of the exterior outlines have also to be registered. In what concerns social divides (Bryce and Rutter, 2002; Hargittai, 2002; Holmes, 2011; Kelly, 2006; Livingstone et al., 2011), we gathered evidence illustrating 'digital differentiation' (Peter and Valkenburg, 2006): different children fabricate different combinations and arrangements. For instance, gender and age subtly shape favourite things to do or to play online. But each child experiences his or her own mixture of 'real' and 'virtual' elements in a permanent multitasking performance. Space is fragmented into co-existing planes, which structure variable and moving configurations.

Third, the *nature* of contemporary space, under children's perspective, is another hallmark dimension. From a micro, limited and familial setting, nowadays their space accumulates macro, plural, anonymous and unforeseeable dimensions. While navigating online, children benefit from the experience of opening unlimited, varied windows, giving them cumulative insights into a close or to a more distant world. Their identity thus appears to be constructed not in relation to a single, one-dimensional place, but by means of migratory movements in, out and around multiple and co-existing spaces. Spatial mobility, the association of real/virtual space with movement promoted by technology use, is a main feature of contemporary childhood.

In conclusion, from a child's standpoint, the distinctive line between 'virtual' and 'real' spaces is an artificial frontier, which mostly translates an adult's perception of the historical crossing of a 'pre' towards a 'post' Internet era at home, typical of their generation. Applying this dichotomy to children's experience is inaccurate and fails to clarify one of the contemporary features of childhood: its intense, permanent and fluid forms of *de-territorialized mobility between 'virtual' and 'real' spaces*. Rather than eroding social bonds, this articulation promotes their changing nature.

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