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Internet, Children, and Youth

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Introduction – The "Digital Generation"

In late modernity, "self-actualisation is understood in terms of a balance between opportunity and risk" (Giddens, 1991, p. 78). For the first generation to fully experience the Internet in industrialized countries, negotiating this balance has fast become integral to growing up. Framing this is a story of "great expectations," circulated among both parents and children, and strongly fostered by governments and business. But what fuels these expectations? Are they being realized? What are the real benefits of using the Internet? Or the risks?

Children and young people are usually among the earliest and most enthusiastic users of information and communication technologies, and households with children lead the diffusion process. It is often argued that children are more flexible, creative users than adults, having fewer established routines or habits and being oriented toward innovation and change. As young people make the transition from their family of origin toward a wider peer culture, they find that the media offer a key resource for constructing their identity and for mediating social relationships. Does this live up to the popular rhetoric regarding youthful "cyberkids" (Facer & Furlong, 2001) or "the digital generation" (Buckingham, 2006; Tapscott, 1997)?

The demands of the computer or web interface render many parents "digital immigrants" in the information-age inhabited by their "digital native" children (Prensky, 2001). Only in rare instances in history have children gained greater expertise than parents in skills highly valued by society – thus young people's new-found online skills are justifiably trumpeted by both generations. Yet this chapter will argue, following research revealing that children as well as adults may struggle in mastering the Internet (Livingstone, 2008a), that children and young people are divided in their take-up of online opportunities. For some, the Internet is an increasingly rich, diverse, engaging, and stimulating resource of growing importance in their lives. For others, it remains a narrow and relatively unengaging if occasionally useful resource. Boys, older children, and middle-class

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children all benefit from more and better quality access to the Internet than girls, younger, and working-class children, and although access does not wholly determine use, it certainly sets the conditions within which children explore, gain confidence and skills, and so take up more or fewer online opportunities (Livingstone & Helsper, 2007).

A simple tally of online activities reveals how children and young people are using the Internet to explore, create, learn, share, network, and even subvert. Consider this list of online activities, here asked of 9–19-year-olds in the UK who use the Internet at least weekly (84% of the population in 2004; Livingstone & Bober, 2005):

- 90% do schoolwork
- 94% search for information
- 72% send/receive email
- 70% play games
- 55% do instant messaging
- 55% (aged 12+) visit civic/political site
- 46% download music
- 44% (12+) search careers/education information
- 44% completed a quiz
- 40% (12+) search goods/shop online
- 40% visit sites for hobbies
- 34% made a website
- 26% (12+) read the news
- 28% visit sports sites
- 25% (12+) seek personal advice
- 23% search information on computers/Internet
- 22% voted for something online
- 21% visit chat rooms
- 17% post pictures or stories
- 10% visit a porn site on purpose

For many Internet users, the move is well underway from being primarily an information receiver (typically of mass-produced content on a one-to-many model of communication, albeit often an actively interpretative receiver) to being also a content creator (of peer-produced content, typically on a one-to-one or some-to-some model of communication). A recent Pew Internet survey in the US found more than half of online teens are creating content in one way or another (Lenhart & Madden, 2005). The rise of social networking is rapidly advancing these and other forms of user-generated content creation and sharing, opening up possibilities for participation well beyond a few media-savvy aficionados (boyd & Ellison, 2007; Livingstone, 2008b).

Yet as children and young people move beyond the initial hiccups of acquisition and early exploration, there is evidence that many make the unfamiliar familiar by establishing a fairly conservative pattern of use primarily defined by pre-existing interests and preferences, notwithstanding the huge diversity of possible activities and contents. These familiar use practices tend to be mass-media related, particularly fandom for certain television programs, popular music groups, football teams, and so forth; thus strongly branded contents predominate among children's favorite sites (Ofcom, 2007), and these are often organized as sticky sites or walled gardens (Burbules, 1998; Grimes & Shade, 2005). In short, consumer culture more than new creativities frames many young people's

engagement with the Internet. As the European project, *Mediappro* (2006, p. 16) observed, "the evidence here was that creative work was limited, with a minority of young people developing their own websites or blogs, and some evidence that these products could easily become inert."

How, then, should we understand the apparent gap between the great expectations and the often disappointing realities of children's Internet use? And what implications does this have for the unfolding balance between online opportunities and risks in the lives of children and young people?

Theoretical Framings

Research on children, young people and the Internet is structured around a strong tension between two competing conceptions of childhood. On one view, children are seen as vulnerable, undergoing a crucial but fragile process of cognitive and social development to which the Internet tends to pose a risk by introducing potential harms into the social conditions for development, necessitating in turn a protectionist regulatory environment. On the contrary view, children are seen as competent and creative agents in their own right whose "media-savvy" skills tend to be underestimated by the adults around them, the consequence being that society may fail to provide a sufficiently rich environment for them.

Piaget's developmental psychology has provided the dominant research paradigm for the former view (Piaget & Inhelder, 1969), with the focus on the individual child's cognitive development in "ages and stages" through an active and curious exploration of the environment, including the media environment (e.g. Dorr, 1986; Valkenburg, 2004). Its strength is a careful account of children's interests and abilities at different ages, including a theory of developmental transitions from one age to the next. Its weakness is a relative neglect of the ways in which the process of development towards adulthood is shaped by the activities, expectations, and resources of a host of socializing agencies and institutions – parents, teachers, technology and content providers, marketers, welfare bodies, politicians, governments. The importance of these in mediating social relations, including providing a social "scaffolding" for learning, is now being articulated by those following Vygotsky ([1934] 1986) (e.g. Erstad & Wertsch, 2008; Kerawalla & Crook, 2002).

The new sociology of childhood emerged as a reaction to Piagetian individualism and universalism (James, Jenks, & Prout, 1998). Qvortrup (1994) characterizes this approach as stressing three elements. First, it stresses the structural aspects of childhood, with its dynamics and determinants, rather than a naturalistic conception of the individual child and its development. Second, it emphasises relational elements, seeing neither "the child" in isolation from others, nor "the household" as sufficiently descriptive of its members; rather these relationships are worthy of study in and of themselves. Third, it prioritizes the present – children as people now, their relationships and cultures considered worthy of study

in their own right, rather than looking forward by regarding children as merely persons-to-be and so as indicative of the adults they will become. Thus Corsaro (1997) observes that through their daily actions, often invisible to adult eyes, children construct their social worlds as real places where real meanings (rather than fantasy or imitation) are generated, and thus they contribute to social structures which have consequences for both children and adults. This involves, too, a politicization of childhood – childhood is seen as not only a demographic but also a moral classification, central to the project of making children count – and so addressing their needs and rights – when apportioning the resources of society (Qvortrup, 1994).

In seeking to avoid the extremes, and to integrate the insights of each approach, social scientists rely on the contingent and contextualized knowledge derived from detailed, preferably child-centered empirical work. In so doing, they either draw upon or even integrate two somewhat contrasting but potentially compatible approaches regarding the Internet – diffusion and domestication theory. As statisticians chart the rise in Internet access across and within countries, and as governments rely on the public to gain access at home, evidence for the gradual diffusion of the Internet from the "innovators" and "early adopters" through the mass market until eventually reaching the "laggards" is readily obtained (Rogers, 1995). But this neat account of the spread of a more-or-less stable technology through the market is quickly complicated and qualified once one explores the nature of use. For the Internet itself means different things to different users and at different points in the passage through design, production, marketing, consumption, and use (Livingstone, 2002; Silverstone, 2006).

Beyond the obvious practical and financial barriers that face ordinary users, ethnographic studies of technology use and domestic consumption practices draw attention to the symbolic struggles involved in going online (Bakardjieva, 2005; Van Rompaey, Roe, & Struys, 2002). Mothers have traditionally regulated their children's media use, and fathers have traditionally been relied on to fix household appliances, but the Internet may challenge both their competence and, in consequence, their social status in the family. Living rooms have long been places of leisure, but now they contain an object from the office. Living rooms have also been places for shared activities – eating, watching television, talking – but now they contain something that monopolizes one person's attention and excludes the others.

Research on children, youth, and the Internet requires, in short, a theory of both childhood and youth and, further, of the Internet. Already in the decade of so of research on the enticing intersection between young people and this young technology (Livingstone, 2003), there has emerged a neat synergy between classificatory approaches based on age (i.e. theories of child development) and on technology (diffusion theories of technology), just as there has emerged a parallel synergy between the social constructionist account of childhood and the ethnographic or domestication account of the appropriation of the Internet in everyday life. Often, therefore, research splits along these lines. In this chapter, I seek a more synthetic account of children, young people, and the Internet, focusing on

three prominent areas of online opportunity – explorations of the self, traditional and alternative modes of learning, and opportunities for civic participation; to balance the optimism that these opportunities often occasion, I also consider the mounting evidence for online risks to children and young people.

Explorations of the Self

In late modernity, characterized by globalization, commercialization, and individualization, Buchner argues that:

> every child is increasingly expected to behave in an "individualised way" . . . children must somehow orient themselves to an *anticipated* life course. The more childhood in the family is eclipsed by influences and orientation patterns from outside the family . . . the more independent the opportunity (and drive) to making up one's own mind, making one's own choice . . . described here as the *biographization* of the life course. (Buchner, 1990, pp. 77–8)

In undertaking what Giddens (1991) called the "project of the self," children and young people are experiencing the Internet as a valued new place for social exploration and self-expression (Holloway & Valentine, 2003). Drotner (2000) proposes three key ways in which young people may be said to be "cultural pioneers" in their use of new media technologies, centering on innovation, interaction, and integration. Under "innovation," she notes how young people combine multiple media, multitask, blur production and reception, and so make creative use of the opportunities available. By "interaction," she points to how young people engage with each other within and through different media and media contents, opening up opportunities for intertextuality and connectivity. And by "integration," she points to the transformation of the distinction between primary (or face-to-face) and secondary (mass-mediated) socialization, resulting in diverse forms of mediated communication (see also Lievrouw & Livingstone, 2006).

For a prime example of the way in which an online, converged media environment affords distinctive forms of social identity, consider the popularity of witchcraft and "wiccan" subcultures across many media, linking primetime television shows (such as *Buffy the Vampire Slayer, Sabrina the Teenage Witch, Charmed, Bewitched*) with online communities – playing with identities, creating alternative worlds, writing fan fiction, sustaining niche networks and so forth. This testifies to the fascination of many, especially girls and young women, with subaltern notions of female power, spirituality and adventure, these providing a possible cultural repertoire with which to resist disempowering norms of femininity (precisely without, typically, embracing the term "feminism"). Clark (2002) argues that the wiccan subculture affords powerful mediated identifications that contrast with the relatively powerless position of teenagers in everyday life. Further, it allows for an exploration of morality and, indeed, an identification with

"goodness" (for these are typically good, not evil, witches) that sidesteps acceptance of dominant adult morality (as often expressed, especially in the US, through organized religion).

In terms of content, then, "for the young, the media are part of a range of cultural signs available for processes of interpretation that are situated in time and space and dependent on constraints of production, distribution and resources for reception" (Drotner, 2000, p. 59). Or as 14-year-old Elena said, in my study of social networking sites, "I think layouts really show like who you are. So look at the rainbow in that. I think that would make you sound very like bubbly . . . I like to have different ones . . . it's different likes, different fashion, different feelings on that day" (Livingstone, 2008b, p. 399).

If media generally enable particular ways of constructing and participating in mainstream and alternative youth cultures and lifestyles (Ziehe, 1994), the specific technological affordances of the Internet play a role here too, for the Internet is a far from neutral, singular, or disinterested actor in reshaping everyday cultures (Hutchby, 2001). Boyd (2008) argues that social networking is particularly characterized by persistence (being recorded, it permits asynchronous communication), searchability (affording the easy construction of new, extended or niche networks), replicability (enabling multiple versions which do not distinguish the original from the copy) and, last, invisible audiences (resulting in a radical uncertainty about who is "listening"); one might add that there is also a radical uncertainty about who is "speaking," facilitated by online anonymity. All of these features of the online environment serve to disembed communication from its familiar anchoring in the face-to-face situation of physical co-location, an embedding that, traditionally, provided certain guarantees of authenticity, authority, and trust. As communication becomes re-embedded in new, more flexible, distributed, peer-oriented relations of sociability (Thompson, 1995), new conventions of authority and authenticity are emerging, as are new forms of play, manipulation, and deceit.

Creative, especially "self-authoring," practices may be especially significant when the participants are those "whose lives are often storied by others," as Vasudevan (2006: 207) observes when examining the online identity practices of African American adolescent boys. Again because their lives are often represented more powerfully by others than themselves, the exuberance and diversity of a girls' subculture online seems especially compelling. Mazzarella and Pecora (2007) argue that this affords a means of affirming the experiences of those who otherwise, being on the edge of adolescence, stand to lose their "voice" in the face of a mainstream public culture in which commercializing, pathologizing, or marginalizing messages predominate. So, extending the critical work of McRobbie and Garber (1976) on girls' magazines, and that of others on teenage bedrooms as a site of identity construction and display (Lincoln, 2004; Livingstone, 2007), Stern (2008) argues that web content created by, rather than for, girls enables the construction of a self-presentation by which girls can speak to each other "in a different voice" (Gilligan, 1993).

As Kearney (2007, p. 138) observes with some optimism, "contemporary female youth are not retreating to private spaces; they are *reconfiguring* such sites to create new publics that can better serve their needs, interests, and goals." Illustrating the point, Guzzetti (2006) discusses two girls aged 17–18, Saundra and Corgan, who had co-created an online magazine or "zine" that integrated activist themes of social justice and feminism with punk rock and entertainment content. Guzzetti argues that the development of digital literacies required to sustain the zine was embedded in social practices via the online community activities surrounding zines, rather than simply reflecting individual skill. Thus it enabled identity work that affirmed these young women as authentic members of the punk community, a world in which their expertise was essential, their performances valued, and within which they could escape stereotyped notions of gender. As she also showed, these benefits influenced Saundra's offline writing, stimulating a satirical and witty writing style with significant consequences for her social and cultural capital.

However, some critics are more concerned with the defining trend in post-traditional society of individualization than they are with opportunities for creativity. Contrary to the optimism of Kearney and others, one may read the privatization of public spaces and, for children, the rising importance of bedroom culture as well as the growing role of online culture, as evidence of the individualization of culture. For, being closely linked also with consumerism, these new freedoms afford new occasions for targeted advertising and marketing, and the development of "taste" and lifestyle is shaped significantly by powerful commercial interests in the fashion and music industries online as offline. Not only are advertisements are commonly placed at the top or centre of homepages, blogs, chat rooms and social networking sites, but also the user is encouraged to define their identity through consumer preferences (music, movies, fandom). Indeed, the user is themselves commodified insofar as a social networking profile in particular can be neatly managed, exchanged or organized in various ways by others precisely because it is fixed, formatted, and context-free (Marwick, 2005).

Learning – Traditional and Alternative

There is little doubt that the main ambition society holds out for children and the Internet centers on learning – both informally at home and though formal education in school. The perceived educational benefits of domestic Internet use have fuelled its rapid diffusion, and the Internet is becoming, it seems, as central to education as books, classrooms, and teachers. It is not yet, however, part of the educational infrastructure, not yet so thoroughly embedded in the social structures of everyday life as to be "invisible," taken for granted. Rather, while most schools in developed nations provide Internet access to their pupils, just how this is achieved, maintained, and valued is still fraught and problematic.

Infrastructure, as Star and Bowker (2002) explain, means that a service has become linked into the conventions of a community of practice; undoubtedly, this is underway – consider the changes in teacher training, curriculum redesign, and education budgets as well as classroom practice that have accompanied the introduction of education technology into schools – but the many difficulties and debates over how to fund, implement, and evaluate these changes testify to the efforts still required. Infrastructure also, Star and Bowker add, embodies particular standards, expectations, and values; here too debates rage on, with contestation accompanying such diverse matters as government targets for school information and communication technology (ICT) provision, parental expectations of a "good" school, pupils' understanding of learning values and practices, and teachers' expectations of educational outcomes.

Given the considerable financial investment in ICT hardware and software in schools, it may seem surprising that convincing evidence of an improvement in learning outcomes remains elusive. A recent report to Congress in the US found that test scores in classrooms using reading and mathematics software for a full year were little different from those using traditional teaching methods (Dynarski et al., 2007). This study found some indication that more use could improve results for reading (but not mathematics) among nine-year-olds and that, among five-year-olds, results were larger when class sizes were smaller. Since, for the most part, ICT investment uses resources that might otherwise be used to reduce class sizes, this latter finding is not encouraging – and indeed the same might be said of all the study results. A British government evaluation of the ICT in Schools Programme obtained similarly mixed and weak findings regarding improvements in national test scores (Harrison et al., 2003; see also Condie & Munro, 2007).

Other sources of evidence are surprisingly sparse. Thiessen and Looker (2007) asked whether learning to complete a range of computer and educational software tasks transfers positively to reading, finding that up to a certain point, more ICT use on educational tasks was associated with improved reading achievement scores, but beyond that, more ICT use was associated with lower scores – hence the often contradictory or inconclusive findings obtained by those seeking wider educational benefits of ICT use in the classroom or home. Not only is the amount of use crucial, so too is the quality of use, as Lei and Zhao (2007) found when examining the student learning outcomes in an American middle school (with pupils aged 12–13 years). Improvements in grade point averages were associated with subject-related technology uses but, unfortunately, these tended to be among the least popular activities. This contradicts the easy assumption that because children like using technology, this in and of itself gives them the confidence and motivation that enhances learning. It also contradicts the hope for a positive transfer from entertainment and communication uses to those that specifically facilitate school grades. Instead, it suggests that the technology uses that aid learning are the unpopular or difficult tasks (i.e. designed specifically to teach a certain topic), not the free and fun searching, game playing, or informal exploration.

Is education best assessed through increases in test scores, whether measured as grade point averages, reading ages, or exam results? Surely the potential of the Internet is greater than this – as, more importantly, is the potential of a child to learn. While government departments call for ICT to improve test scores, reduce disadvantage, and ensure delivery of the basic skills of reading, writing, numeracy, and science, critics reject the lack of imagination in this agenda, seeing it as wedded to a twentieth-, even a nineteenth-century conception of drill-and-skill education (Smith & Curtin, 1998). The alternative proposition, however, remains somewhat speculative, namely the claim that ICT enables the development – in or, better, outside the classroom – of precisely the soft skills vital for meeting the new demands of the global service and information economy of the twenty-first century (e.g. Gee, 2008; Jenkins, 2006). Hence the argument that playing certain computer games within the classroom may foster constructive learning practices and encourage learner motivation (Merchant, 2007). But, "soft skills have yet to be adequately defined and their importance, relative to formal qualifications, for different groups of people and at different stages in the life cycle is unknown" (Sparkes, 1999, p. 7).

Many remain optimistic. Nyboe and Drotner (2008) describe a school-based Danish animation project that deliberately broke with school routine and teacher–pupil hierarchies to enable pupils to co-design a digital animation over a two-week period. The process of decision-making, design, construction, and implementation all emerged from lively and often playful peer interaction – showing how learning itself is social rather than purely individual, being enabled by discussion, negotiation, imagination, conflict resolution. Significantly, as often argued but too rarely demonstrated, the project proved effective in terms of pupils' learning not only about software, media production, and team working but also in terms of gaining the media literacy required to analyze and critique the multiplicity of representational forms and knowledge claims that surround them in daily life. This, then, was a case in which peer culture was harnessed to deliver learning outcomes valued by teachers, children and, most likely, future employers, capitalizing on the observation that "mobile texting, online gaming, and blogging as well as digital editing of visuals and sound are all embedded within youthful communities of practice" (Nyboe & Drotner, 2008; see also Cassell, 2004).

At present, the great expectations associated with the search for alternatives have been neither supported nor disproved by evidence; nor, however, has the huge investment sunk into injecting ICT into the traditional model yet proved its worth. Whether society can harness the Internet to deliver the more radical and ambitious vision, whether it even really desires its alternative pedagogy, and whether education can resist the commercializing pressures to co-opt, constrain, and commodify the routes to knowledge opened up by this vision all remain to be seen (Buckingham, Scanlon, & Sefton-Green, 2001). For there is, undoubtedly, both money and power at stake here – "vying for position . . . are not only educators but also publishers, commercial hardware and software producers,

parents, governments, and the telecommunications players of the corporate world" (Hawisher & Selfe, 1998, p. 3).

Opportunities to Participate

In recent decades, political scientists have been charting, with mounting concern, the steady decline in political participation by the public, across many countries, as measured by such indicators as voter turnout, party loyalty, and representation in decision-making bodies. Since this decline has coincided with the spread of mass media into daily life, media critics have scrutinized every dimension of the media's relations with political institutions and the public sphere. While some ask whether the media are responsible for the withdrawal from civil society, others are intrigued that the public seems to be reconstituting community online, discovering common interests with a potentially huge network of likeminded peers, developing new skills, building alternative deliberative spaces, raising the possibility of a virtual public sphere.

For many, the Internet is inherently "democratic" for, even though its features – interactivity, global scale, fast connectivity, unlimited capacity, etc – are not radically new, the Internet's possession of them in combination introduces a qualitative shift in the potential for democratic communication (Bentivegna, 2002). Intriguingly, there appears to be a promising match between the style of deliberation afforded by the Internet and that preferred by the very population segment – young people – who are in many ways the most disengaged from traditional forms of political activity. The very architecture of the Internet, with its flexible, hypertextual, networked structure, its dialogic mode of address, and its alternative, even anarchic feel, particularly appeals to young people, contrasting with the traditional, linear, hierarchical, logical, rule-governed conventions often used in official communications with youth.

For children and young people, then, the Internet appears to be "their" medium; they are the early adopters, the most media-savvy, the pioneers in the cyber-age, leading for once rather than being led, thus reversing the generation gap as they gain confidence and expertise. Online, we are witnessing a flourishing of the kinds of life-political or single-issue networks, campaigns, or groupings, whether on a local or a global scale, which may be expected particularly to appeal to young people (Bennett, 1998). These groupings are generally project-focused, idealistic in their hopes but pragmatic in the low level of obligation expected of members. They are characterized by openness and spontaneity, generating ad hoc, low-commitment, self-reflexive, and strategic communications within a flexibly defined, peer-based network (Coleman, 1999).

Today, the number and variety of initiatives to harness the Internet to encourage youthful participation has exploded, with the Internet widely hailed as the technology to bring new, more participatory, forms of civic engagement, political deliberation, and e-democracy to the polity. In a key report a few years ago, the

Center for Media Education in the US charted "an abundance of civic and political activity by and for youth," much of this using the Internet to "invite young people to participate in a wide range of issues, including voting, voluntarism, racism and tolerance, social activism and, most recently, patriotism, terrorism and military conflict" (Montgomery, Gottlieb-Robles, & Larson, 2004, p.2). They argued for the creation, and economic viability, of a "youth civic media" online (CME, 2000).

All of this energy and creativity designed to mobilize the Internet so as to enable youthful participation is, at heart, a response to two fundamental and somewhat contradictory shifts in society. The first, we have already seen, is the claim that youth are apathetic, lacking the political commitment of previous generations, alienated from the political system. Here the Internet is seen as a means of countering a downward trend in participation, and the focus is "citizens in the making" or "citizens-in-waiting" who must be prepared for their future adult responsibilities (Lister et al., 2003). The second shift is historically radical, for it positions children and young people for the first time as citizens now. The extension of the twentieth century movement for civil rights, women's rights, and human rights also to encompass children's rights, and children's voices, is formalized in the United Nation's Convention on the Rights of the Child (1989).

In other words, some initiatives are motivated by the challenge of stimulating the alienated, while others assume young people to be already articulate and motivated but lacking structured opportunities to participate. Some aim to enable youth to realize their present rights while others focus instead on preparing them for their future responsibilities. These diverse motivates may, however, result in some confusion in mode of address, target group, and, especially, form of participation being encouraged. As the *Carnegie Young People Initiative* (Cutler & Taylor, 2003, p. 11) noted, with concern, "the benefits and impacts of children and young people's participation are not clearly identified" in many of the projects they reviewed.

What does the evidence say about whether the Internet can be used to enable political participation (or, reverse the apparent political apathy) among children and young people, and under what conditions might this be brought about? The results are, in some ways, encouraging. Nearly one in five of those aged 18–35 in the UK had contributed to an online discussion about a public issue of importance to them, while for those over 35 the figure falls to 5 percent (though people aged 55 and above were more likely to have contacted a local politician about the issue), reviving hope that the Internet could help rather than hinder youthful civic engagement (Couldry, Livingstone, & Markham, 2007). Young people are more likely to participate online than take part in more traditional forms of politics: while only 10 percent of 15–24-year-olds took part in any form of political activity offline, three times that many did something political on the Internet (Gibson, Lusoli, & Ward, 2002). In the US, 38 percent of 12–17-year-olds said they go online to express their opinion (Lenhart, Rainie, & Lewis, 2001).

However, generally, evaluations of online initiatives are less than optimistic (Phipps, 2000). Not all voices are heard equally online (Bessant, 2004), there being many

impediments to open online exchange (Cammaerts & Van Audenhove, 2005). An American survey of 15–25-year-olds found the Internet an even less effective means of engaging disaffected young people than traditional routes, though very effective at mobilizing the already-interested (Levine & Lopez, 2004). Commonly, it is the already-engaged for whom the combination of new media and alternative politics seems especially potent (Dahlgren & Olsson, 2007), possibly because so many of the rest are socialized – by media and other means – not into a culture of activism but rather into one of inefficacy and distrust.

Contrary to the popular discourses that blame young people for their apathy and their lack of motivation or interest, it seems that young people learn early that they are not listened to. Hoping that the Internet can enable young people to "have their say" thus misses the point, for they are not themselves listened to. This is both a failure of effective communication between young people and those who aim to engage them, and a failure of civic or political structures – of the social structures that sustain relations between established power and the polity, or what Meyer and Staggenbord (1996) term the "opportunity structures" that facilitate, shape, and develop young people's participation. What matters, in short, "is not whether new media are capable of capturing, moderating and summarizing the voice of the public, but whether political institutions are able and willing to enter into a dialogical relationship with the public" (Coleman, 2007, p. 375).

Risky Encounters

With headlines full of pedophiles, cyber-bullies, and online suicide pacts, it is unsurprising that much academic research is wary of research on online risks, for these moral panics, amplified by the popular media, have their own pernicious consequences, including the call for censorship or other restrictions on freedom of expression and the deflection of public anxieties about economic and social change onto technology. Public anxiety regarding risk in relation to children and the Internet is exacerbated by the coincidence of three factors: first, the extraordinary rapidity of the Internet's diffusion and development, faster than any previous medium (Rice & Haythornthwaite, 2006) and so outpacing adults' ability to adjust; second, an endemic cultural fear of the new, encouraged by media panics framing the Internet both as responsible for scary threats to children's safety and as escaping traditional forms of regulation; and third, the novelty of a reverse generation gap whereby parental expertise (and, therefore, authority) in managing children's Internet use is exceeded by children's ability both to use the technology and to evade adult management.

Yet these public anxieties regarding the "child in danger" (and the "dangerous child," Oswell, 1998) remain, for the most part, familiar ones, having accompanied previous mass media from the nineteenth-century comic through the advent of film, television, and computer games, up until and including the Internet and

mobile media of the twenty-first century. As Critcher puts it: "The pattern is standard. A new medium, product of a new technology or a new application of an old one, emerges and finds a mass market. Its content is seen as criminal or violent or horrific. It constitutes a danger to children who cannot distinguish between reality and fantasy." (Critcher 2008, p. 100)

In Western thinking about childhood, and for parents especially, risk anxiety has become "a constant and pervasive feature of everyday consciousness" (Jackson & Scott, 1999, p. 88). In relation to the Internet, one reason is that the opportunities and the risks are inextricably linked – on reflection, we cannot sustain the commonsense polarization of opportunities and risks, the idea that young people engage in some activities of which society approves and others of which society disapproves. Rather, these are often the same activities, not only because teenagers especially like to test adult authority, challenging adult-imposed rules and boundaries and evading parental scrutiny, but also because of the design of online contents and services.

To take up an opportunity one must, very often, take a risk. To make a new friend online, one risks meeting someone ill-intentioned. To engage even with the children's BBC website, one must provide personal information online. To meet your offline friends on a social networking site, you must tell the truth about your name and age. To search for advice about sexuality, one will encounter pornographic content also, since there is no consensual line between them. Thus we must examine the way that websites and services have been designed, socially shaped by producers, content providers, and users: the Internet does not create risk for children but it mediates the relation between risk and opportunity, and could be made to do so differently.

Research is now accumulating an array of evidence for online risk (Millwood Hargrave, & Livingstone, 2009), notwithstanding a series of conceptual and methodological difficulties with identifying and assessing risk, especially given the ethical issues involved in asking children about the risks that concern policymakers – illegal content, contact with pedophiles ("grooming"), exposure to extreme or sexual violence or other harmful or offensive content including racist material, commercial persuasion, biased or exploitative content, abuse of personal and private information, cyber-bullying, stalking, harassment, gambling, financial scams, self-harm (suicide, anorexia, etc), illegal activities (hacking, terrorism). Such a list invites classification, dividing content risks from contact risks, for example (Hasebrink, Livingstone, Haddon, & Ólafsson, 2009); here the former represent an extreme version of risks long addressed, and regulated, on mass media, while the latter present new challenges, for little or no regulation restricts who can be in touch with anyone else, particularly when age can be disguised online.

With the explosion of user-generated content, some hosted on commercial (i.e. professional) websites (e.g. social networking, gaming, or blogging sites) and some circulated peer-to-peer (e.g. via email or instant messaging), the distinction between content and contact is breaking down. The reluctant recognition that children and teenagers may be perpetrator as well as victim has led to the proposal

of a third category, namely conduct risks (Hasebrink, Livingstone, Haddon, & Ólafsson, 2009). Offline, conduct between people, whether strangers or acquaintances, is socially regulated by behavioral norms and accepted sanctions. While not suggesting that social conventions are absent online, they are more flexible and more easily circumvented without sanction.

What is the scale of these online risks to children and young people? Across Europe, 18 percent of parents/carers state that they believe their child has encountered harmful or illegal content on the Internet (Eurobarometer, 2006). National surveys in Norway, Sweden, Ireland, Denmark, and Iceland found that a quarter to a third of 9–16-year-old Internet users had accidentally seen violent, offensive, sexual or pornographic content online (Larsson, 2003). A 2006 update in Ireland found that 35 percent had visited pornographic sites, 26 percent had visited hateful sites (mostly boys), and 23 percent had received unwanted sexual comments online (again more boys); further, one in five chatters was upset, threatened, or embarrassed online, and 7 percent had met an online contact offline. Of these, 24 percent turned out not to be a child but an adult, and 11 percent said the person tried to physically hurt them (Webwise, 2006). In the US, a survey of 1500 10–17-year-olds in 2006 found that, compared with an earlier survey in 2000, online exposure to sexual material had increased (34 percent versus 25 percent of young Internet users), as had online harassment (9 percent versus 6 percent), though unwanted sexual solicitations – often from acquaintances rather than strangers – had reduced (13 percent versus 19 percent); 4 percent had been asked for nude or sexually explicit photos of themselves, and the proportion who had been distressed by such experiences increased (9 percent versus 6 percent) (Wolak, Mitchell, & Finkelhor, 2006).

In countries where Internet diffusion is more recent, risk figures are rather higher, presumably because here especially, youth encounter online risk in advance of regulators and policymakers. In Bulgaria, one in three Internet users have met in person somebody they got to know online, one in three have experienced insistent and persistent attempts to communicate with them (often about sex) against their will, and four in ten are unaware of the risks of meeting online contacts offline (Mancheva, 2006). In Poland, a 2006 survey found that two in three Internet users make friends online and many give out personal information; almost one in two had gone to a meeting with someone encountered online, and half of them went alone; one in four of these described the behavior of the other person as "suspicious" (CANEE, 2006).

These and other experiences do indeed seem to go beyond what society expects for children and young people, though perhaps not beyond what society has long silently tolerated (Muir, 2005). Although arguments are mounting against unrealistic expectations of a zero-risk childhood, policymakers find it difficult to specify a level of acceptable risk when it comes to children, the result being that media panics effectively construe all risk as unacceptable. In reaction, critics counter with children's resilience to harm, their sophistication in using the Internet, and the historical "fact" that risk has always been part of childhood.

The challenge is to move beyond these polarized positions, for we can conclude neither that the Internet is too risky to allow children access nor that it affords no threat whatsoever. The theory of the risk society (Beck, 1992) offers three useful directions for thinking about how, now that so many are online, risk is being reconfigured for (and by) today's children and young people.

First, the theory of the risk society problematizes the *identification of risk*, rejecting the notion of risk as a natural hazard "out there" and seeking to understand how it is precisely a consequence of the institutions, innovations, and practices of modernity.

Second, the theory of the risk society invites us to inquire into the social, political, and economic (as well as the technological) reasons for the *intensification of risk* in late modernity. A third dimension of the risk society thesis is that of the *individualization of risk* in Western capitalist societies. For the discourse of risk is, today, closely accompanied by a discourse of empowerment, this being largely lifted from the life-political movements which spawned it (especially feminism) and re-embedded within official establishment discourses as a means of legitimating the individualization of risk – in other words, the increasing exposure of the individual to the consequences of their own risk-related decisions. As Harden (2000, p. 46) observes, "while anxieties about risk may be shaped by public discussion, it is as individuals that we cope with these uncertainties." For children, teenagers, and their parents, already absorbed in the fraught emotional conflicts of negotiating boundaries of public and private, dependence and independence, tradition and change, this is indeed a new burden (Livingstone & Bober, 2006).

Conclusions

Everybody is affected, in one way or another, by the ubiquity of new online technologies (Lievrouw & Livingstone, 2006), this resulting in the blurring of hitherto distinctive social practices of information and entertainment, work and leisure, public and private, even childhood and adulthood, national and global. Nonetheless, children, young people, and their families tend to be in the vanguard of new media adoption. They benefit from the early take-up of new opportunities afforded by the Internet, although significant inequalities in quality of access, use, and skill remain. However, the risk of harm to children's safety and social development is attracting growing academic, public, and policy attention. Here too, children and young people are often in the vanguard, exploring new activities, especially peer networking, in advance of adult scrutiny and regulatory intervention and, perhaps too often, encountering negative experiences that are unanticipated, for which they may be unprepared, and which may challenge their capacity to cope.

Although new media "are usually created with particular purposes or uses in mind, they are commonly adopted and used in unanticipated ways – reinvented, reconfigured, sabotaged, adapted, hacked, ignored" (Lievrouw & Livingstone, 2006:

5). A child-centered approach is enabling researchers to explore just how this works – for better or for worse, advancing children's interests or the contrary – across the scope of their lives. They use the Internet for communicating, learning, participating, playing, connecting, and so forth in far more ways than I have had space to review here, though evidence of just how they use it can reveal not only exciting possibilities but also some limitations to the sometimes convenient or complacent perception of children as "the Internet generation," supposedly natural "experts" in using the Internet (Buckingham, 2006; Livingstone, 2008a).

A balanced picture has emerged that bodes well for further initiatives to encourage, celebrate, and support children's effective use of the Internet while not legitimating any withdrawal of the public resources that such initiatives will surely require. I have argued that research does not, and should not, focus solely on the activities of children and young people, for instead a dual analysis is required that encompasses the social and the technological, at the level of both individual and institutional practices. When examining children's and young people's Internet expertise and literacies, for example, we must consider not only their capabilities and skills but also the technological affordances designed into the interfaces they are faced with, and the institutional interests that lie behind. To take a simple example, having seen teenagers reveal personal information publicly online, rather than declaring that teenagers lack a sense of privacy online, we should instead ask whether they understand just how privacy controls work on social networking sites and, especially, whether these could be better designed (Livingstone, 2008b). Similarly, instead of despairing that online as offline, few young people become engaged in civic forums, we should instead – or also – ask what it takes to get political actors to engage with, and respond to, young people online.

Young people's Internet literacy does not yet match the headline image of the intrepid pioneer not because young people lack imagination or initiative but because the institutions that manage their Internet access and use are constraining or unsupportive – anxious parents, uncertain teachers, busy politicians, profit-oriented content providers. In recent years, popular online activities have one by one become fraught with difficulties for young people – chat rooms and social networking sites are closed down because of the risk of pedophiles, music downloading has resulted in legal actions for copyright infringement, educational institutions are increasingly instituting plagiarism procedures, and so forth. Although in practice the Internet is not quite as welcoming a place for young people as popular rhetoric would have one believe, in this respect it is not so different from offline social spaces. The future balance of opportunities and risks for children and young people online remains to be seen.

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