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Digital Learning and Participation among Youth: Critical Reflections on Future Research Priorities

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Introduction

The still-emerging field of youthful digital learning and participation has grown fast in recent years. This growth has been stimulated on the one hand by unprecedented government, industry, and community interest in policy-relevant research and on the other hand by an intellectual and critical fascination with the empowerment potential of social media. The new field has been constituted through the spontaneous collaboration of diverse participants, for diverse reasons. Among these participants are educators, political scientists, and civic activists who seek to reinvigorate tired, even failed, institutions of learning and participation with the exciting potential of the digital. Participants also include those keen to ask what children and youth need and deserve, especially now that the digital seems to overturn generational hierarchies and unsettle authoritative adult structures with the exuberance of youthful creativity. Third are technologists and designers fascinated by what can be made and done and hoping to see new ways of thinking and acting enabled by new means of connecting people and ideas. Fourth are scholars with a long-standing interest in the changing media and communications environment—scholars who are concerned to understand how digital media represent continuity with or transformation of longer-established media.

For the latter constituency, the fascination lies in the shift from an oral communication environment to one increasingly complemented by modern mass media to today's thoroughly mediated world shaped by multimodal, interactive, convergent, and networked media and populated as much by hybridized and intersecting texts and forms as by readers who are creative and participatory, though still socially constrained (see, e.g., Seiter 1999; Jenkins 2003; Livingstone 2004; Silverstone 2005; Buckingham

2007). The present article is written from this perspective, its purpose being to allow insights from media and communications research over recent decades to inform a critical analysis of present strengths and weaknesses in the multidisciplinary field of study of youthful digital engagement. The intent is not, however, to be media-centric: what matters about media is less changes in media per se than how they—as texts, technologies, practices, and institutions—shape, influence, enable, or undermine the activities of young people, parents, teachers, educators, politicians, youth workers, civic bodies, and governments. What is most important to most researchers is the *mediation* of vital social phenomena—learning, participation, identity, knowledge, and sociality.

To understand this process of mediation, we must seek "to understand how processes of communication change the social and cultural environments that support them as well as the relationships that participants, both individual and institutional, have to that environment and to each other" (Silverstone 2005, p. 189). Until the past decade or so, media technologies occupied a discrete portion of the analytic space, along with other institutions or social and personal spheres such as education, work, family, citizenship, friendship, and intimacy. Researchers could (and did) analyze these separately, or they could interrogate their overlaps. "The media" could be captured by distinct nouns—*television*, *radio*, *cinema*, *press*. But as analog media are displaced by the digital, everything seems to have become mediated (Livingstone 2009b). Researchers must now contend with the fashionable prefixing of *digital* (an adjective) to almost any and every object of study, resulting in the construction of a research field that is superficially homogeneous—it's all "digital"—and yet extraordinarily heterogeneous. Methodologically, this greatly expands researchers' ambitions while making boundaries difficult to draw around a project. Arguably, the expansion of the field to everything digital stretches the expertise of any single researcher too far, inviting interesting but sometimes difficult multidisciplinary collaborations. The expansion may even lead to the misleading construction of new objects of study. This is less apparent when *digital* modifies verbal nouns—as in *learning* and *networking*—because processes are always fluid; it is more apparent when *digital* modifies nouns, seeming to redefine what is important about them—for example, *digital youth* and its popular counterparts, *digital natives*, *digital citizens*, and the *digital generation*.

From Mass to Interactive Media

For media and communications researchers, a key question is, how do people generate and sustain a meaningful understanding of themselves and their place in the world in a communication environment replete with meanings not of their own making, and in what ways does this understanding inform their actions? To answer this question, researchers once interviewed people as they sat on the sofa in front of a television, often sharing the same soap opera or talk show—because mass communication dominated the research agenda. Today, though mass communication is far from over, researchers of interactive media increasingly interview children in their bedrooms or interview peer groups as they follow their interests online or check out their social networking sites. But, although media are ever more privatized (experienced in bedrooms, listened to with headphones, carried in pockets, and kept under pillows), the digital intersects with an ever-widening array of social activities and spheres of life, public as well as private, institutional as well as individual. This means researchers must follow digital media use wherever it takes them, and this in turn necessitates a wider view of the role of digital media in shaping changes in society. In contemporary society, digital media are fast becoming infrastructural—taken for granted as an all-pervasive backbone of society—in terms of their *artifacts* (technologies, texts, designs, representations), their associated *activities* (practices and contexts of use or conditions of interpretation and engagement), and their social *arrangements* (institutional structures, organization and governance) (Lievrouw and Livingstone 2006).

Krotz (2007) integrates several lines of argument regarding the historical changes at work when he proposes that four fundamental processes define late modernity. First, *globalization*—the transcendence of the nation-state with transnational flows of economy, influence, people, and ideas, including bringing self and other into newly reflexive if often unequal relations. Second, *individualization*—the disembedding of traditional, hierarchical relations and their reembedding in often heterarchical or peer networks freed from the constraints—or anchors—of class, ethnicity, and gender. Third, *commodification*—the interpenetration of instrumental and market values, along with practices of measurement, standardization, and surveillance, into the lifeworld. Fourth, *mediatization*—the gradual reshaping of institutional and

individual realities across all spheres of society in accordance with the logic of media systems and media forms. Mediatization—the historically and technologically shifting processes of mediation—is partly dependent on the combined logics of globalization, individualization, and commodification. However, these self-same processes are thoroughly dependent upon the existence and expansion of media and communications technologies, networks, and services.

The critical concern, as Krotz implies in his account of mediatization, and as Jenkins (2003), Seiter (2005), and Buckingham (2007) have also argued, is that notwithstanding the justifiable celebration of creative and expressive skills being acquired and enjoyed in digital environments, mediatization also facilitates the problematic dimensions of consumerism, individualization, and globalization. This commodification of learning is evident in developments as diverse as the rise of the domestic edutainment market, the profitability of learning technologies in schools, and the standardization and marketability of learning outcomes in education policy. These and related developments also support individualization—through the focus of digital learning policy on individual more than collective expression and outcomes; the promotion of the self ("the learner") more than community; and, where networks are recognized, the enhancement of peer-to-peer at the cost of cross-generational relationships and cultural traditions. These trends also both support and draw upon the globalization of networks as a new transnational elite emerges that excludes as much as or more than it includes, exacerbating knowledge gaps more than overcoming them and creating new forms of illiteracy as well as literacy. With this critical agenda in mind, the present article inquires into the often strong claims being made about digital youth, digital participation, and digital learning.

Beyond "Digital Natives"

I think in comparison to my parents and loads of the older generation I know, I do know more. But I think there are a lot of people that know a lot more than me. . . . A lot of my friends know a lot. . . . And I learn from them.—*Lori, age 17*

Every time I try to look for something, I can never find it. It keeps coming up with things that are completely irrelevant . . . and a load of old rubbish really.—*Heather, age 17*

Now that the first excitement regarding digital media has passed, we may ask about the justification for the often grand claims being made about digital media. What is the empirical support for these claims? Has research examined alternative claims or evidence that does not seem to fit? How far can claims be extended to include "all" groups or cultures?

Contrary to the popular rhetoric of a digital generation or digital youth (see, e.g., Prensky 2001; Palfrey and Gasser 2008), both conceptual and empirical critiques are gathering force (Buckingham 2006; Bennett, Maton, and Kervin 2008; Livingstone 2008a; Selwyn 2009; Helsper and Eynon 2010). For example, notwithstanding survey findings that most children use the Internet, that the Internet is the first port of call for finding information, and that teenagers spend more time online than other generations, detailed research on children's media use in the context of their everyday lives quickly reveals a more nuanced picture. Consider these observational research notes from 13-year-old Candy's family, revealing everyday struggles even in a middle class household:

Candy was trying to find a German website on food and drink to help her school work. First, she checks with her father that ".du" is the German url suffix. He suggests ".dr" for Deutsche Republik or "just to leave the last bit off and see if it finds it," but this doesn't work, so she tries www.esse.com.du. This doesn't work, so she tries .de, with no more success. The researcher suggests www.essenundtrinken.com.de but this doesn't work either, because mistakenly Candy typed "trinke" without the "n." Even with the "n" added, the url doesn't work (the .com is a mistake). Her brother, Bob, comes across to try to help, but he can't remember any German sites. Now Candy is trying www.yahoo.co.du. Bob suggests capital "D." Her mother suggests .uk to see if "the whole thing is working." Her mother clicks on "refresh" but Candy warns, "Don't do that! It goes on to a porn page!" Finally, her mother tries www.yahoo.co.uk, which works. The family concludes that the problem lies with the German site and Candy gives up. (Livingstone 2009a, p. 52)

Remembering that the researchers who identified active audiences on the sofa talking about the latest soap opera episode were criticized for prematurely celebrating their apparent agency and expertise (Seaman 1992), digital media researchers must be wary of prematurely celebrating youthful digital literacies. For in so doing, we may easily miss their struggles and their need for support. Take another example: Responding to newspaper headlines announcing a supposed transformation of youth—"Kids today. They have no sense of shame. They have no sense of privacy" (Nussbaum 2007)—Livingstone (2008b) sat with teenagers in front a computer screen displaying their social networking profile to explore why, as surveys suggested, so many had set their profiles to be publicly accessible. This study again belied the "digital native" rhetoric, finding that when asked to demonstrate how they change the privacy settings of their profiles, teenagers often clicked on the wrong options before managing this task and were nervous about the unintended consequences of changing settings (referring to "stranger danger," parental anxiety, viruses, crashed computers, unwanted advertising, and unpleasant chain messages). When asked whether they would like to change anything about social networking, operation of privacy settings was one of the teenagers' top priorities, along with the elimination of spam and chain messages—both intrusions of their privacy. Such responses are hardly those of a generation that does not care. Rather, they are the responses of a generation forced to negotiate its privacy with imperfect skills, inadequate tools, and jargon-ridden privacy policies.

In a society lacking in trust, doubtful of tradition, and highly attuned to risk, childhood is becoming, as Beck (1986/2005) puts it, the last place of enchantment—a precious source of hope and inspiration for parents, a place for children's agency and creativity, and even a cause for celebration among researchers. But the tendency to imbue childhood with enchantment also drives the construction of childhood as threatened, risky, and fragile. The "digital native" (or "digital generation") rhetoric may thus inadvertently fuel society's anxieties and its repressive efforts to preserve childhood innocence by keeping children under surveillance, apart from life.

Aside from its tendency to exaggerate the degree of change and to support a binary rhetoric of celebration and panic, the "digital native" rhetoric is also problematic because it tends to ask questions the wrong way round—as if the technology has brought into being a whole new species, a youth transformed, qualitatively distinct from anything that has gone before, an alien form whose habits researchers are tasked to understand. Instead, if researchers are to understand what is truly new about the digital and how this is tied to other concurrent vectors of change—in childhood, family, education, civil society, and culture—different ways of asking questions are needed. To ask what the digital, in isolation, can or does offer to learning or participation (or how it impacts on these) is too simple, implying the latter concepts are both already known and themselves unchanging. Instead, given all the factors that shape learning and participation, researchers should ask why, when, and how digital contributes and, if it does, how it relates to those other factors. This is a harder task because identifying the array of factors that shape the topic of study, only some of which concern digital media, quickly extends beyond many researchers' interest and/or expertise. But only thus can research escape the charge of technical determinism (Selwyn 2009).

Contextualizing Digital Media

This critique is both theoretical, demanding an account of all the other elements framing children's engagement with digital media, and methodological. Consider the research observations of Megan, age 12, and Mary, age 18. In each case, examination of their Internet use alone impedes any celebratory conclusions, though a wider gaze reveals much that is positive in the girls' lives.

> Megan showed me how the AOL [America Online] kids' home page offered a story writing option. The site contained a standard story with gaps—you insert your own name, that of a friend, your favorite color and so on—and the result was a personalized story to print out. Megan enjoyed this, and I might conclude that the internet affords her interesting opportunities to develop her creative interests. But I would have been wrong. Our discussion then turned to story writing in general, and Megan switched to Microsoft Works to show me a story she was in the middle of writing. This turned out to be a lengthy, closely written thriller, heavy on dialogue and drama, containing tragedy, murder, and centering on a mysterious beautiful foreign

woman saying dramatic and intriguing things as she rushes about solving mysteries. In telling her story, Megan had employed elaborate forms of expression, a complex vocabulary, and an exciting and witty writing style, if rather breathless and melodramatic. (Livingstone 2009a, p. 60)

In this case, the contrast with the "creative" opportunity afforded by AOL was striking, and a glance at her bedroom—full of books—revealed the source of her inspiration. The key question to be asked, therefore, was not what does the Internet offer Megan, but, given all the different things going on in Megan's life, most of them having nothing to do with the Internet, what does the Internet really add? Now consider the second case, summarized below:

Mary, 18, was completing her A levels in a well-off family in the rural north of England and hoping to study medicine. Having reached voting age, she feels it important to think about politics but finds it hard: "I know what I'm thinking but I can't get it out properly. . . . I can't put it into a proper argument." So she asks her parents' advice on how to vote, despite being skeptical about democratic participation: "Yeah, you're allowed to say what you think but it might not always be heard." The internet, as she sees it, is for communication and information: "I go on MSN and talk to my friends. . . . I use it for school work. . . . I just use it for work, all search engines and stuff." For more serious matters—news, medicine, science—she replies, "I wouldn't look on the internet. I would probably ask my Mum if there's anything in the paper about it or I'd have a look in the paper and then I'd sort of have a discussion with my Mum or Dad, Mum and Dad if, 'cos they'll, one of them will have heard about it." (Livingstone, Couldry, and Markham 2007, p. 29)

From Mary's comments about the Internet, one might conclude that she typifies so-called youthful apathy. But asking her about the rest of her life quickly reveals that she is a member of the school council and that this requires her to campaign for her own election, mentor junior pupils, and "do speeches and stuff." In short, she uses the internet, she is interested in the world around her, and she engages in civic participation—but she sees little connection among the internet, learning, and participation.

As with Megan and Mary, a focus on the internet to the exclusion of the rest of young people's lives can be positively misleading, encouraging an ill-considered critique of their limited creativity or participation. Just as evidence of audiences relaxing in front of the television led not only to "findings" of passive audiences but also grand claims of the gullible and mindless masses, so too does a limited engagement with the internet seem to encourage claims of limited engagement among youth more generally. The difference is that more television viewing was never seen as the solution to the "problem," whereas in many policy circles concerned with education and civic participation, more internet use is framed as precisely the "solution," as part of a normative agenda that asserts it to be desirable for all youth to use the internet for expression, learning, and participation.

After all, the simple response to the above cases is to suggest to Megan that she should use better story-writing software online (say, in an online fanzine) or to encourage Mary to use the internet for organizing her school community more effectively. While neither suggestion is necessarily inappropriate, authors of digital media studies ought to ask, self-critically, whether their work harbors an assumption that Megan and Mary are somehow missing out, that greater use of the internet is self-evidently the preferred solution to difficulties in learning and participation. If not—and researchers might find it easy to concede this in principle—the task becomes that of examining "offline" alternatives for, in this case, supporting self-expression, learning, or civic participation, a task that is harder in practice. Intriguingly, if one then judges Megan's and Mary's practices of creativity and participation outside their engagement with the internet to be, in fact, both commonplace and effective, one might conclude that perhaps the problems of digital exclusion are not so great.

Between Dependence and Independence

To frame research projects first and foremost in terms of the wider contexts of childhood and youth rather than (just) in terms of changing digital media, researchers are turning to theories that, for the most part, have little to do with media. For example, to put internet use into perspective, many researchers are finding the sociology of childhood useful (Qvortrup

1994; James, Jenks, and Prout 1998), both for its theoretical integration of structure and agency (Giddens 1984) and its preference for a contextualized, child-centered methodology (Greig and Taylor 1999). This approach interprets sociological and historical evidence (Cunningham 1995) to identify key trends, including the phenomenon, in developed countries especially, of children "getting older younger" because of marketing, commerce, and the so-called sexualization of culture, and because of the competitive pressures exerted by what Hey (2005) calls the "offensive middle class," while also "staying younger longer" because of extended education and delayed employment and financial independence. Youth are held for longer than ever in a tension between childhood and adulthood, dependence and autonomy. This helps explain why they seem too knowing, too confident, to submit to the authority of teachers and parents, even as the expectations on them to compete, to achieve, are ever greater. In response, parents are trying to recognize children's independent tastes, interests, and rights by democratizing their relations with them. Society still tends to blame parents for the ills of youth, however, adding to their burden of responsibility with every apparent failure of the school or state.

Add to this a fear of the streets that keeps children home more than historically was the case, and one can see how the media look like the solution to many problems—a way to occupy children indoors, preferably in their bedroom, to reward or control them, to provide them with opportunities for self-expression, and maybe even to redress the multitude of tensions that surround them (Livingstone 2009a). On a wider view of childhood, media increasingly fill the gap, not only occupying children's time, their private and public spaces, and their disposable income but also mediating their identities, their privacy, their intimate relationships, and their wider connections. At least some of the explanation for why young people are turning to digital technologies or why society sees these technologies as offering a solution lies not in the motivation to use technologies nor in the appeal of the technologies themselves (though such appeal and motivation exist) but is connected to parental uncertainties over what knowledge is worth passing on, teachers' sense that the system they are locked into does not serve children's interests, the loss of alternative activities (playgrounds, affordable swimming pools, local community centers), and the years that youth must be productively occupied where once

they would have been working, joining trade unions, or learning a valued craft.

That teenagers engage in "boundary performances" (Hope 2007)—breaking the rules, taking risks, and trying out new identities that transgress adult norms, both in public and in private and often in relation to media—is unsurprising in the present-day context. Such activity is a serious enterprise for teenagers because they are, and must be, "constantly engaged in risk assessment, actively creating and defining hierarchies premised upon different discourses of risk as 'normal' and acceptable or 'dangerous' and out of control" (Green, Mitchell, and Bunton 2000, pp. 123–24), this being the way they move from dependence to independence. Thus, we may better understand teenagers' search for freedom, connection, and identity online, a space they are allowed to occupy because of the popularity of the digital native rhetoric among parents and the media. Consider the following interview summary with Anisah, age 15:

> A lively and confident girl, who lives in a small house on a troubled housing estate, her highly educated parents had not found work in the UK which matched their qualifications. This leads them to place huge educational expectations on their three children—evident in their many encyclopedias and educational CD-ROMs, the emphasis placed on homework and computer access, and the parental support for children's offline and online learning. Life centres around school and church: Anisah is articulate, hardworking, serious, moral—she uses the internet to read the news, revise for exams, plan further study, never to download music. But, with the mother out of the room, I discover that Anisah spends many evenings on the internet until late into the night chatting with her friends. And her mother, on her return, seems to focus her anxieties about Anisah on the computer—seeing her both as part of the "guru generation" and as in need of strict guidance (for "children are children"), and this sparks a row between them even in the interview. (summarized from Livingstone, Couldry, and Markham 2007, p. 28)

For Anisah and many others, the internet offers both a source of new opportunities and an escape from offline constraints. As survey evidence confirms, online opportunities and risks (as adults define them) go

hand in hand: the more children experience of the opportunities, the more also of the risks, and vice versa (Livingstone and Helsper 2010). This may explain why the risks often lurk beneath discussions of digital learning and participation, surfacing with apparent unexpectedness in conferences, though more commonly encountered in question-and-answer sessions than in formal presentations and strangely sanitized from many written publications.

Three points are crucial here in explaining why consideration of online risks not only does but should enter into analyses of such online opportunities as learning and participation. First, children do not draw the line where adults do, so opportunities and risks often relate to the same activity. Consider the distinctions, if they can be so drawn, between making new friends and meeting up with strangers, or exploring your sexual identity and exposing your private self, or remixing new creative forms and plagiarizing or violating copyright. Second, the design of digital resources confuses, bringing opportunities and risks into collision. For example, any search for information on sex or images of teens online results in a mix of factual information, sexual advice, and pornography. A pro-anorexic forum might be a source of either sympathetic advice or manipulative persuasion (or both). Recall Candy's anxiety about searching too freely for fear of encountering a pornographic site, or the concern of social networking teenagers that getting their privacy settings wrong will open them up to "stranger danger." Third and most important, learning in and of itself involves risk taking—"resilience can only develop through exposure to risk or to stress" (Coleman and Hagell 2007, p. 15). To expand their experience and expertise, to build confidence and resilience, children must push against adult-imposed boundaries. Thus, identity, intimacy, privacy, and vulnerability are all closely related.

Playing with Fire

Based on extensive ethnographic work, Ito et al. (2010) proposed three *genres of participation* that characterize youthful engagement with digital media— "hanging out," "messing around," and "geeking out." "Genres of participation" refers to the particular and recognizable social and semiotic conventions for generating, interpreting, and engaging in the collaborative activities that are distinctively enabled by the practices of digital media. Participation genres

"describe how culture gets embodied and 'hardened' into certain conventionalized styles of representation, practice, and institutional structure that become difficult to dislodge" (Ito 2009, p. 14). The concept is promising not least because it points to practices of communication among multiple participants, thereby moving communications theory beyond its traditional focus on the dyad (speaker-hearer, sender-receiver, text-reader) to recognize the diverse ways people may participate, whether parasocially around a soap opera on the screen (or in front of it during a talk show) or via social networking and other online interfaces (cf. Goffman 1981). Linking this to questions of digital literacy, Ito adds, "[A] notion of genre foregrounds the interpretive dimensions of human orderliness. How we identify with, orient to, and engage with media and the imagination requires acts of reading and interpretation. We recognize certain patterns of representation (media genres) and in turn engage with them in routinized ways (participation genres)" (p. 15).

To the three genres identified by Ito et al., each conceived as opportunities, can be added a fourth participation genre, "playing with fire." In this genre, teenagers are motivated to explore precisely what adults have forbidden, to experiment with the experiences they know to lie just ahead of them, to take calculated risks to test themselves and show off to others. Playing with fire is evident when children hold lively conversations among themselves about pedophiles—whether about the "dirty old man" in the park or the "weirdo in the chat room"—in their attempt to work out for themselves what adults consider "normal" or "dangerous" (Willett and Burn 2005). As social networking sites are increasingly regulated, new sites spring up where risk taking is easier, these spreading like wildfire within and across peer networks. Where once young teenage girls told their parents they would stay at a friend's house but then dared each other to sleep in the street or park instead, now they play with fire online. Their screen names— "Lolita," "sxcbabe," "kissmequick"—make this evident. Livingstone (2009a) offers illustrative cases:

> Candy, 13, flirting in a chat room, asks, "Hi r there any fit guys on here??? pm me if interested." Responses come freely—"giz uz a snog" and "FUCK OFF BITCH." Rosie, 13: "I've got about five buddies on my thing, but you can't really say, oh, this is a young girl,

she's got brown hair, blue eyes, 'cause she could be an old—she could be a he and it's an old man but I suppose it's quite nice to just say, oh, I've met someone on the internet."

Manu, 14, likes to be offensive in chat rooms: "I drive people out all the time, it's my specialty. When the room is empty, I feel really content with myself. . . . I just sit there and wallow in my glory and then I leave. I might go to another room." (Livingstone 2009a, p. 164)

In one observation, Mark and Ted, both age 14, try to disrupt an adult Yahoo chat room for police and fire officers, pretending to be a blind orphan in a home with abusive care givers. They type: "Help!" and "They're coming to get me!"

As the history of childhood makes clear, children learn through taking risky opportunities. Today they play with fire online because adults have given them the digital realm to play in; it supplements or displaces earlier places used for similar purposes (the shopping mall, the bedroom, behind the school bike shed, a local waste ground). Although the internet affords a wider and more interactive array of possibilities for risk taking, many continuities exist between it and the "naughty" or transgressive uses of older media—for example, sharing pornographic magazines at school, gathering to watch horror films when parents are not at home, playing computer games when too young for the age rating, and so on (Buckingham 1996; Jerslev 2008). Whether online or offline, the actual risk of harm associated with such playing-with-fire activities remains hard to determine. As research on online risk experiences reveals, some activities regarded as risky by adults do not result in harm for most children (e.g., "meeting strangers" usually means making new friends), some remain contested with evidence on both sides (e.g., seeing pornography), and some risks of concern to children gain little public or policy attention (e.g., viruses, financial scams). As a genre, however, playing with fire does not primarily refer to activities that result in actual harm to individuals but to activities culturally construed as "risky" or "dangerous" precisely because children are likely to engage in these activities (from which harm *might* result) *in order to* transgress cultural norms.

With such risk-taking activities, young people might also be learning and participating through media, although neither the process nor the out-comes are generally recognized or valued within adult-centered discussions of digital learning and participation. At what point does the learning obtained through risky encounters, whether deliberate or inadvertent, become relevant to, and even useful within, adult-managed social or educational settings? In Ito et al.'s (2010) terms, to answer this question is to inquire into the relations among participation genres. Just as one may ask under what circumstances "messing around" leads to "geeking out" (or, more theoretically, when casual experimentation might stimulate interest-driven learning), so too one may ask under what circumstances "playing with fire" leads to experiences that build resilience, that teach self-confidence, or that develop skills to cope with the unexpected or knowledge of new community practices. If such circumstances exist, this in turn raises the question of how policymakers should balance the relevant considerations so as to permit some experimental, even transgressive, activity in order to enable new forms of learning despite the fact that some children, those who are particularly vulnerable in their everyday lives perhaps, might come to some harm from the same activities. This seems a fruitful way forward for the research agenda. But even within the conventional canon of studies on digital participation and digital learning, some pressing dilemmas are evident, rendering this just one of many key questions for future research.

Key Questions for Future Research

Unlike for the study of mass communication, where the research questions long centered on questions of media effects, the processes involved in today's digital media, perhaps because of the very newness of these media, seem to fascinate researchers more than the outcomes. If asked, many researchers state their research question as a "how" question: "How does technology a, b, or c mediate the activity of x, y, or z?" not "why" does technology a, b, or c mediate—in the sense of shaping or affording or influencing—activity x, y, or z in a particular way and could it be otherwise? The results may be insightful but tend to be descriptive, whereas addressing the latter part of the "why" question—could it be otherwise?—is, surely, the key objective of critical scholarship. Yet, some key dilemmas are already emerging from existing research and public policy initiatives regarding outcomes and alternatives.

Participation—which, grammatically speaking, results from the nominalization of the transitive verb *participate*—implies taking part in something; participation does not happen for its own sake. So, what are youth participation projects designed to enable participation in? Do, and should, they

- invite youth to use digital media for the sake of engaging in the digital environment—or to provide a route for them to change some other domain that affects their lives?
- reach out to new groups who may be disaffected or alienated—or provide opportunities for those who are already motivated?
- enable youth to realize their present rights and responsibilities—or help them develop the skills they will need as citizens in the future?
- connect youth to one another as a peer-to-peer activity—or facilitate connections between youth and adults, with adults (including elites) responding to and acting on youth contributions in a timely, constructive, and sustained manner?
- provide resources by which youth can generate their own agendas and pursue their own interests—or by which they can achieve pre-given adult goals or messages?

A similarly challenging set of questions may be asked of digital learning, centered on the question, What are digital learning projects designed to enable the learning of?

- Are these new ways to learn traditional curriculum materials—or new knowledge and skills?
- Is the use of digital technology designed to help the less successful or less advantaged youth—or will the already privileged succeed better here too?
- Should the knowledge produced by creative digital activities be assessed in new ways—or with the tried-and-true means of assessing standardized knowledge developed under the traditional curriculum?
- Should researchers struggle to establish the benefits of using technology in the traditional curriculum—or in relation to more innovative curricula?
- Does society really expect schools to radically transform their teaching styles and structures

to accommodate the radical potential of digital media—or do many parents, employers, and policymakers really just want technology to solve present problems with as little disruption as possible?

Addressing such critical questions should advance the research agenda beyond any straightforward celebration of youthful agency while also requiring a deeper analysis of the role of the institutions and structures that shape children's lives—state, school, family, market. This raises a final and more fundamental set of critical questions, those that "situate technology within the underlying unequal power relationships that exist in society" (Warschauer 2003, p. 209). As they go beyond identifying and explaining the place of digital media within an account of social change, critical scholars must also ask whether such changes are or could be democratic, even emancipatory, or, alternatively, whether they primarily reinforce and extend the interests of established power, state or commercial, rather than the interests of young people or the wider public.

Reflections on Critical Scholarship

For those of us working in this emerging multidisciplinary field who began as audience researchers, the direction this article has taken may seem ironic. In the face of a seemingly unholy alliance between political economists and popular prejudice, audience researchers sought to defend television viewers against the attack that they were mindless and unthinking, lacking in the reflexivity or critical literacies exemplified by scholars and critics. Informed by a particular mix of semiotic, cultural, and reception theories, this hermeneutic turn was motivated by a commitment to recognize the value of ordinary experience; to hear from marginalized voices, especially women's; and to inquire into rather than make assumptions about the processes by which social realities are constructed and reproduced.

This research paid off: audiences were shown to confound the authority of supposed textual givens by creating distinctive and multiple interpretations unanticipated by producers but meaningful within their lifeworlds, even enacting individual or collective resistance through routine acts of tactical evasion.

One might say, how much easier to make this case today, when our respondents no longer sit still and silent, demanding all our efforts to interpret their

apparently blank gaze as thoughtful and engaged. Now they click and type, moving around and adding to the text on the screen in a way that we can record. Their thoughts and engagement are clearly evident, and researchers should seek to capture and interpret this as before (Livingstone 2004). But today research faces a different but equally unholy alliance, still involving popular prejudice but now linked not to mass society critics but to network society's optimists, cheered on by technologists, futurologists, controlling states, and commercial imperatives. What were once interstitial activities under the radar are now center stage in state policy, targeted by innovative educational and participatory technology provision. Once-marginal fan activities are fueling big profits. And the self-paced trajectory of the individual learner, as well as the radical peer-to-peer interaction of alternative activists, is being built into the agenda of state and commerce.

This is not to advocate a radical position or automatically to reject visions of technologically mediated participation any more than audience researchers thought the political economists, and the critical theorists before them, were wrong. Rather, as independent scholars, we should devote a good part of our critical and empirical energies to testing these dominant claims, pondering awkward findings, examining assumptions, and imagining alternatives. Academics should seek a contrary position. In the face of a dominant digital native rhetoric, this requires us to contradict the earlier argument of audience research. Instead of celebrating young people's creativity or sophistication—though undoubtedly this is significant—we ought to be observing when and how young people lack the skills required to bend technologies to their own ends or struggle to protect their privacy from intrusive others—both because this also exists and because only in this way can research argue for the provision of resources for children and young people. If they truly were "digital natives," they could get on perfectly well by themselves.

Consider this cautionary tale. Nearly 20 years ago, Pat Aufderheide was lead author on a report for the National Leadership Conference on Media Literacy that generated a definition of media literacy—namely, that it refers to the ability "to access, analyze, evaluate and communicate messages in a variety of forms" (Aufderheide 1993)—that has since been widely adopted. More recently, the United Kingdom's communications regulator took up the definition

when required by law to promote media literacy, though the ambitions of Aufderheide et al. were watered down and redirected (Ofcom 2004):

> So media literacy is a range of skills including the ability to access, analyse, evaluate and produce communications in a variety of forms. Or put simply, the ability to operate the technology to find what you are looking for, to understand that material, to have an opinion about it and where necessary to respond to it. With these skills people will be able to exercise greater choice and be able better to protect themselves and their families from harmful or offensive materials. (Ofcom 2004, p. 4)

As Britain's then minister of state for culture, media, and sport, Tessa Jowell, said in explaining to the *Daily Mail* (January 21, 2004, p. 23) why media literacy had come onto the policy agenda, "If people can take greater personal responsibility for what they watch and listen to, that will in itself lessen the need for regulatory intervention." Thus, a policy of empowerment, as ambitiously construed by academics, is reworked within a neoliberal framework as devolving the responsibility for risk management long held by states onto individuals in order that markets can be liberalized and barriers to global trade removed (on the individualization of risk, see Beck 1986/2005). But for those less able or less well resourced to undertake this responsibility, the result is instead a skills burden for many parents, teachers, and children.

On the agenda is not just digital literacy but literacy in many guises—financial literacy, scientific literacy, emotional literacy, political literacy, theological literacy, ethical literacy, environmental literacy, information literacy, health literacy (Livingstone 2008a). Media and digital literacy thus have perhaps surprising parallels with such questions as, is the deregulation of financial services solely to blame for causing the financial crisis, or should individuals with failed pension plans also bear some responsibility, because they lacked financial literacy? And, should states pay for the healthcare of smokers and drinkers, or should smokers and drinkers bear some blame for their lack of health literacy? In Europe, the recently approved Digital Agenda reiterates the importance of digital literacy, particularly in the context of learning, but the overall stress of the agenda is placed on information and communications technologies as "a crucial driver of growth and jobs":

"[T]o be effective a smart, sustainable growth strategy must also be inclusive so that all Europeans are given the opportunities and skills to participate fully in an Internet-enabled Society" (EU Telecoms and Information Society Ministers 2010, p. 1).

In the context of such debates, academics should think carefully about the consequences of their involvement. McChesney argues that a focus on media literacy distracts cultural critics from questions of power, because critics should be asking less what people do with the technology than "who will control the technology and for what purpose" (McChesney 1996, p. 100). Can researchers advocate support for digital or media literacy among youth without also supporting the neoliberal push to deregulate? Given the unequal consequences of such deregulation, should they emphasize that the glass is half empty rather than half full and argue that youth may not be as sophisticated as popularly supposed and thus need public resources and interventions? Or can researchers be clever in capitalizing on the fact that, temporarily at least, critical and state priorities are aligned?

Conclusions

In reflecting on the emerging research on digital media learning and participation, this article suggests that researchers should ask three kinds of critical questions. First, the empirical. What is really going on? Do we really face a generation transformed, one that thinks in new ways and is more different from previous generations than it is internally divergent? The available evidence seems to provide more support for the gradualists who identify evolutionary, not revolutionary, change, who emphasize the reconfiguration of identities more than their transformation, who find that remixes and remediations of familiar activities are perhaps occurring on a new scale and are conducted with a new ease but are not wholly new kinds of activity, who see refashioned styles of learning and participating but perhaps not or not yet new forms of relationship or institution.

Second, the explanatory critique. Having observed the ongoing changes, we need a critical lens to account for them, one that avoids the temptations of technological determinism pressed on us by policymakers and the public. Seen from a broader perspective, today's youth appear to be the target of widespread criticism, constraint, and anxiety. They are, in many ways, a generation under extraordinary

scrutiny and even attack. So, although much remains to be gained from a close observation of the interaction between textual and technological affordances and youthful agency, we must also cast our gaze wider to encompass the structures that not only contextualize the shaping and uses of digital media but also condition children's lives more fundamentally. Mass media researchers will recognize the analogue of the text-reader metaphor because this, too, was powerful in revealing interpretative activity and divergence where none before had been recognized but was poor at locating meanings in context or in recognizing social determinations to complement textual ones. Just as the ethnographic turn took audience research away, perhaps too far away, from the person in front of the screen, researchers ought to stand back and ask what else is going on—in children's lives, in education, in politics—beyond the intervention of the digital.

Third, the political or ideological. Whereas media scholars—and perhaps those in education, political science, youth culture, and social studies of technology—once knew where their critical credentials lay, these now seem less clear. Intriguingly, many researchers are now advocating a turn to the normative, or what Nyre (2009), quoting McLuhan, calls the shift of academic interest from the Ivory Tower to the Control Tower. So what is the academic's role in the new alliances being formed? What are our critical and reflexive commitments? Often, scholars have thought themselves better suited to disrupting than building, so where is this new normativity taking us as we seek to reshape rather than undermine? Many in this emerging field are experimenting with practical or policy-oriented interventions that promise to advance rather than merely comment on processes of change. The critical potential of such policy engagement seems especially promising insofar as these interventions challenge the directions favored by dominant interests, commercial or state, and open up ways for more young people to do what they could not do before and even for adults to respond to them in ways they have not tried before. But in taking such paths, we should remain wary, ensuring that we act as each others' toughest critics before our ideas are presented to, and perhaps co-opted by, a wider public debate.

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