



Digital technology and rights in the lives of children with disabilities

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Abstract

Children with disabilities, especially those from the Global North, often figure into public discourse as beneficiaries of the “digital revolution.” However, if children’s voices and experiences are generally under-considered in digital policy and rights debates, this is even more likely when it comes to disability. Against this background, this article looks at the global rights of children with disabilities in the digital age. We consider the state of digital inclusion and exclusion, as well as the intersection between children’s rights and disability rights. Moving forward, we suggest ways to reconceptualize digital and related rights inclusive of all children.

Keywords

Children, digital technology, disability, Internet, media, rights

Introduction

Individuals with disabilities make up 15% of the global population, approximately 1 billion people.¹ There are an estimated 93–150 million children with disabilities globally, of which nearly 80% live in the Global South (Global Initiative for Inclusive Information and Communication Technologies [G3ICT], 2014; World Health Organization [WHO],

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2011). Children with disabilities face challenges similar to others their age, including access to employment, education, and healthcare services, as well as opportunities to leverage media for societal participation. They are impacted, though, in vastly more complex ways. These dynamics differ across types of disabilities, including visual, hearing, speech, and mobility impairments, as well as psychosocial and intellectual disabilities. Barriers to their inclusion may be compounded by intersections with class, caste, race, ethnicity, gender, sexuality, culture, religion, and geography.

The lives of children with disabilities, and their claims to human rights (Ermi, 2011; Third, 2015), unfold across intertwined digital and physical domains. This poses two initial challenges for rights fulfillment. First, while technologies, especially digital ones, are essential for many people with disabilities to gain key literacies and fully participate in their societies, they remain out of reach for most. Although two-thirds of the world's nearly 3 billion Internet users are from the "developing world" (International Telecommunications Union [ITU], 2015), it is estimated that only 5–15% of children and adults in Global South countries who require assistive technologies for societal participation have basic access to them, let alone the resources to support those practices (WHO, 2010). Despite these patterns, people with disabilities, but especially children from developed countries, typically figure into public discourse as exemplary beneficiaries of the "digital revolution" (Alper, 2014).

Second, we know very little about digital citizenship (Mossberger et al., 2007)—encompassing critical thinking, ethical discussion, and decision-making—for children with disabilities, and even less about what the conditions for such citizenship look like (Goggin, in press). Children are a generally marginalized group compared to adults, who assume the role of universal actors in rights discourses within academia and policy making (Pugh, 2014). If children's voices and experiences are minimally considered in rights debates in the digital age, there is even less attention when it comes to children with disabilities and their use of media for digital and cultural citizenship (Mallett and Runswick-Cole, 2014; Third et al., 2014).

In response to these challenges, this article focuses on the global rights of children with disabilities in the digital age, and the stakes of maintaining the status quo. We consider *children* and *individuals with disabilities* as overlapping categories—not least because of the rights conceptualized and set down in both the United Nations Convention on the Rights of the Child (UN CRC; United Nations [UN], 1989) and the UN Convention on the Rights of Persons with Disabilities (UN CRPD; UN, 2006).

In 1989, the UN CRC became the first human rights treaty to include a dedicated article referring to the rights of persons with disabilities (Article 23). The non-discrimination provision of the UN CRC (Article 2) also included children with disabilities. Despite these pioneering steps, the "rights of the disabled child are given only limited recognition" in the UN CRC because it "adopts a model of disability, where the emphasis is on non-discrimination, rather than inclusion" (Freeman, 2000: 282). Article 23 was drafted with a "focus on the special needs of children with disabilities," rather than removing the "barriers impeding the realization of rights" (Lansdown, 2014: 98).

Adopted in December 2006, the UN CRPD explicitly acknowledges and expands on the UN CRC "by articulating a comprehensive catalog of human rights obligations within the circumstances of a particular group, here, people with disabilities" (Stein and Lord, 2009: 24). The initial draft text of the UN CRPD included a specific article on children

with disabilities, modeled on UN CRC Article 23; however, it became evident that this would not offer sufficient protection. Accordingly, amendments were proposed to

... ensure that children with disabilities enjoy all rights and freedoms on an equal basis with other children ... [and] to reaffirm the general principles of the CRC and ensure that these principles were recognized as applying to the implementation of other rights in the CRPD. (Lansdown, 2014: 99)

Many government delegations resisted the inclusion of children in the UN CRPD over the concern that including them would set a precedent for other groups and potentially undermine the convention (Lansdown, 2014). Ultimately, non-governmental organization (NGO) lobbying managed to achieve both a standalone article on children with disabilities (Article 7), the mainstreaming of children's rights via specific amendments (Schulze, 2010), and the inclusion of a number of child-specific issues such as birth registration, the right of children to family life rather than placement in institutions, and the right to play (Lansdown, 2014).

As this brief discussion highlights, there are important differences between the UN CRC and UN CRPD. The UN CRC puts the rights of the child on the agenda with a pioneering article on children with disability. However, its focus is constrained by a non-discrimination perspective instead of an inclusive one. By contrast, the UN CRPD takes a broader perspective on equality and justice. Yet, it took a considerable struggle to ensure that specific issues in the lives of children, and the challenges in heeding their voices and resourcing their rights, were incorporated in the UN CRPD.

Against this backdrop, the next section outlines how *normative frameworks* fundamentally shape legal and policy agendas on children's digital rights regarding the Internet, mobile media, and associated technologies. Following this, we explore the state of *digital inclusion and exclusion* when it comes to children with various disabilities, especially in the Global South. We then look at the intersection between *children's rights* and *disability rights*, and their relevance to the digital age. How might the new kinds of digital-related rights enunciated in the UN CRPD (Goggin, 2015) offer a powerful cross-fertilization with children's rights in the UN CRC? Last, we conclude by suggesting ways to reconceptualize rights in the digital age inclusive of all children.

Normative frameworks

As we proceed, we draw attention to tensions between universal rights and the specific digital and social contexts that shape the lives of all children, and especially those living with a disability. There is no universality to the "average" child, the "normal" person, or "ordinary" uses of new technologies. This poses a significant obstacle to broad implementation of policy and legal frameworks.

Childhood

The emerging literature on the cultural underpinnings of disability and society shows the importance of childhood as a repository for ideologies of disability. Dominant models of

childhood tend to be chronological and constructed in relation to adults. In the UN CRC, for instance, a child is defined as “every human being below the age of eighteen years unless under the law applicable to the child, majority is attained earlier” (Article 1). The question of when “majority” is attained raises the issue that childhood does not solely turn on age but depends on contextual factors such as criminal responsibility, contractual agreement, and consent.

Children’s growth is also often conceptualized in Piagetian stages of development, whereby children with disabilities, as “atypically developing,” do not necessarily follow the same linear trajectories as those who are “typically developing.” Researchers, including disability scholars, have critiqued these models as infantilizing children with disabilities as they become older (Goodley, 2014). As yet, there are few systematic studies of disabled childhoods (Curran and Runswick-Cole, 2013). Critical work on disability has much to add to research on childhood, especially its communicative and digitally mediated dimensions (Alper, 2014, 2017).

Disability

At this point, it is helpful to establish what we mean by children with disabilities, and how disability might be understood. Article 1 of the UN CRPD (2006) defines “children with disabilities” as those up to the age of 18 who have “long-term physical, mental, intellectual, or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.” The UN CRPD takes a social model approach to disability, which considers individuals with disabilities disempowered not by the biological fact of their disability, but by the interactions between their daily existence and a world largely hostile and inaccessible to them.

The social model responds to a dominant medical model, which defines disability in terms of individual lack or biological deficiency.² The medical model is flawed in a number of respects, including its influence on the disproportionate investment of research funding into attempts to “cure” individuals with disabilities and its framing of disability as a “problem” and people with disabilities as vulnerable objects of pity (Davis, 2002). Vulnerability is an especially fraught term because it is often ascribed to people with disabilities in a negative and patronizing way. In response, disability scholars have critiqued and reappropriated vulnerability to highlight its applicability to everyone, while drawing attention to how vulnerability is pivotal to intimate social relations (Kim, 2014).

Consequently, there is a considerable challenge in gaining recognition of the capacities of children with disabilities for independent decision-making when their emerging autonomy is regularly undermined (Lansdown, 2014). In the United States, for instance, we see the prominent media trope of the “disabled child” as a “sweet innocent” (Norden, 1994). This theme draws on longstanding cultural representations such as Charles Dickens’ character Tiny Tim, whose harmlessness requires additional protection in the much-loved novel *A Christmas Carol* (Holmes, 2009). On the one hand, children with disabilities remain idealized, especially in charitable discourses (Fulcher, 1989). On the other, they are often constructed as a problem due to their assumed vulnerability, lack of ability, or high cost of care.

Digital technology

Scholars of children and digital media have similarly found it frustrating to redirect the research and policy gaze from oversimplified dueling discourses: the protection of innocent children from online risks and danger, or the utopian possibilities of technology for “digital natives.” For example, as Livingstone and Bulger (2014) noted, “efforts to implement the CRC in terms of provision and participation are often sidelined by the urgency that the protection agenda attracts” (p. 321). Meanwhile, governmental assumptions about information and communication technology (ICT) often assume a “competent and responsible ‘user’ for whom providing access will suffice” (Livingstone and Bulger, 2014: 317).

In relation to children with disabilities, the task of scholars is harder still. Digital technologies offer children with disabilities tools and platforms for belonging and cultural exchange hitherto denied. Yet children with disabilities, like adults with disabilities, typically face various societal and cultural barriers to participation that bear on their rights (Ellcessor, 2016). When it comes to communication, we find systematic inaccessibility across digital media (Ellis and Goggin, 2015; Ellis and Kent, 2011). This is not simply an issue of addressing accessibility in a narrow sense. Rather, the ecosystems, economies, platforms, formats, and the very nature of communication are often entwined in the social shaping of disability and digital media (Alper, 2017; Ellcessor, 2016; Goggin and Newell, 2003). There is a radical character to the socio-technical constitution of digital technology that disability entails, so the perspective of children with disabilities appropriating, engaging with, and reconfiguring the Internet, social media, and other facets of media and communication is especially rich.

Being incapable of participating fully in everyday life is one of the most common stereotypes of people with disabilities (Haller, 2010). Ideas of citizenship, to take one important area of digital participation, have often been hostile to or constructed in opposition to impairment and disability (Simplican, 2015). A narrow, citizenship-based approach to disability activism can reinforce a system that creates the normative subject as non-disabled (as well as White and male), instead of imagining a different kind of society that values and appreciates disabled bodies and minds (Kafer, 2013). In response, some scholars draw on disability to inform new notions of citizenship altogether (see, for example, Beckett, 2006).

There is little scholarship on how children with disabilities experience and construct their own cultural citizenship in relation to dominant ableist ones (Borsay and Dale, 2012), especially in light of their experiences with digital technologies, further reinforcing the “democratic disconnect” (Collins, 2015). Disability, however, has the potential to reorient normative emphases in children’s rights discourse to be more child-centric for all, not just those with disabilities. This includes rethinking the taken-for-granted concepts of normalcy, ability, and vulnerability that govern discussions of balancing risk and opportunity online, and opportunities to develop resiliency. Such consideration of participation and citizenship points to the crucial need to engage with disability cultures (Erni, 2011).

Digital inclusion and exclusion

Beliefs and conceptions vary across societies about childhood, disability, and digital media. These cultural dynamics assume greater significance when we take a genuinely global perspective. In light of normative frameworks, there are some key intersections of inclusion and exclusion across digital and physical spaces that pertain to the rights of children with disabilities. As articulated by Livingstone and Bulger (2014), a major agenda item for children's rights and its research is doing justice to the full international picture, especially childhood in the Global South.

The political economy between the Global North and South invites a rethinking of disability, childhood, labor, and the relationships among them. Tensions emerge, for example, between the individual rights of those with disabilities and the collective values of belonging and caring that differ across cultural contexts. This is particularly the case in the Global South, where individual rights of children, who may labor in conditions that put them at risk of impairment, are innately tied to obligations for promoting family and community survival (Chopra, 2015; Soldatic and Meekosha, 2014). The legacies of colonialism in today's global territories shape the politics of disability, giving rise "to material conditions of life such as extreme poverty and male violence that contribute to impairment" (Chouinard, 2014: 340).

Global media policy and scholarship are only belatedly grappling with the recognition that specific, oppressive social relations of disability intimately and powerfully supported colonialism. These inequalities can also be traced through the digital media research agenda. There is little work in Anglophone literature on digital technologies outside of Global North countries. Such "internationalizing" work is imperative, given the vast, diverse, and mobile diffusion of the Internet (Donner, 2015; Ling and Horst, 2011). There is scant research on disability and digital technology in the Global South (Pal, 2015), let alone when it comes to children with disabilities.

In saying this, we acknowledge the significant, longstanding work on technology and disability conducted internationally by a range of actors including ICT and mobiles for development, assistive technology, and digital and web accessibility communities. The UN-initiated Global Initiative for Inclusive Information and Communication Technologies (G3ICT) delivers the best global picture on disability and digital technology. From a rights perspective, though, there is no full length systematic study, let alone the kind of internationally comprehensive research literature that would provide an evidence base to underpin conceptualization and implementation of digital rights for children with disabilities into the future.

In lieu of baseline measures, there are various issues suggested in available research on digital inclusion and exclusion. The first concerns *social practices with media*. Bearing in mind the population in the Global South, it is important to consider radio programs and local newspapers (increasingly hybridized with digital media) as important communication technologies for the social participation of children with disabilities and the development of traditional and information literacies (United Nations Children's Fund [UNICEF], 2013). When it comes to interpersonal communication, we also note the importance for digital media in fostering friendships for children with disabilities (Third and Richardson, 2009).

Another notable emerging area revolves around *mobility*, and the interplay between two senses of mobilities. First, mobility in a broad sense crosses many domains of life for individuals with disabilities (Imrie, 2000). Take, for example, barriers to disabled children's migration rights. Such rights are clearly accounted for in the UN CRPD (notably in Article 18, on liberty of movement and nationality), yet many countries will not permit migration of children who have complex disabilities perceived to place a costly burden on healthcare and welfare systems (Soldatic and Meekosha, 2014).

Second, these various senses of mobility intersect with the communicative mobilities of children with disabilities (Alper, 2017). The fraught dialectic of immobility and mobility has implications for communication rights (Pillay, 2013), as digital media underpins people's capacities to negotiate migration (Madianou and Miller, 2012). We know very little about how children with disabilities use technologies to cope with the experience of becoming refugees and migrants, or live as part of diasporic or globally dispersed families or communities.

There is much more to be elaborated on concerning inclusion and exclusion, especially social and mobile media practices, but hopefully this brief examination provides a concrete sense of important dynamics that shape a systematic integration of approaches to children's rights and disability rights.

Children's rights and disability rights

Various scholars, policy makers, and activists have been working to reformulate children's rights for the digital age, as evidenced by this groundbreaking special issue of *New Media & Society*. Livingstone and Bulger (2014: 320) noted that while the UN CRC was "formulated in the pre-digital age," it was extended to cover children's media use with the 2009 Oslo challenge, and still affords a powerful platform for understanding, construing, and implementing children's rights in contemporary digital environments. By contrast, the UN CRPD could be said to be "born digital." Many of its provisions relate to and specify digital technologies as key aspects of realizing the rights of people with disabilities. In particular, it can be argued that the UN CRPD advances the conceptualization of communication and media rights for people with disabilities, and in doing so, prompts us to rethink communication and media rights in general (Goggin, 2015). It should be noted that there are also important aspects of the disability experience that the UN CRPD does not encompass, such as public attitudes toward disability (Kanter, 2015).

Despite these imperfections, a foundational and practical step for tackling children and disability rights, especially in the digital age, is to combine and integrate the UN CRC and UN CRPD (see, for example, Willem, 2012). We are not aware that this has been done in relation to media and communication rights, and it lies outside our scope here. As a heuristic exercise, though, we identify overlapping themes in selected articles of the UN CRC and UN CRPD with relevance to disabled children's rights and digital media, drawing on the criteria of rights protection, provision, and participation outlined by Livingstone and O'Neill (2014). Below, we review four key thematic overlaps: mediated sexual health; online safety, security, and privacy; education and technology; and decision-making in digital policy.

Mediated sexual health

Rights pertaining to sex and sexual health are featured in both the UN CRC and UN CRPD. The UN CRC offers protection against all forms of abuse and neglect (Article 19), including sexual exploitation and sexual abuse (Article 34), and other forms of exploitation prejudicial to a child's welfare (Article 36). The UN CRPD includes articles on freedom from exploitation, violence, and abuse within and outside the home (Article 16), and rights to age-appropriate reproductive and family planning education for people with disabilities (Article 23).

While countries and cultures differ widely in their approaches to sex, it is generally agreed that digital media play an increasingly important role in sexual development among children, teenagers, and young adults (Saleh et al., 2014). Children with disabilities are generally perceived as more vulnerable to sexual risk, but they have the right to develop their own capacity for expressions of love and sexuality (Elman, 2014).

As with all young people, children with disabilities also have a right to protection from sexual abuse and exploitation. They are three to four times more likely to experience physical and sexual violence and neglect than children without disabilities, and girls with intellectual or developmental disabilities are at particularly high risk of cyber solicitation (Normand and Sallafranque-St-Louis, 2015). There needs to be better ways for children with disabilities to report online abuse without putting themselves in greater danger, and to better access health services, including accessible information about sexual health that additionally accounts for differences in gender and sexuality among those with disabilities (Curtiss and Ebata, 2016).

Online safety, security, and privacy

Another way in which the digital intersects with the conventions is the online safety, security, and privacy of children with disabilities. The UN CRC makes explicit and implicit mention of rights related to privacy and identity, such as protection from material injury to well-being (Article 17e), interference or attacks on privacy and reputation (Article 16), and the right to identity preservation (Article 8). Similarly, the UN CRPD maintains protection of the privacy of people with disabilities on an equal basis with others (Article 22). Yet disability is not often factored into efforts to construct safe domains for children. "Child-friendly spaces," including playgrounds and online communities, are not particularly welcoming for children with disabilities or built with their physical, developmental, intellectual, socio-emotional, and sensory needs in mind.

Bullying is an acutely pressing concern. While young people with Asperger's syndrome are commonly depicted in the popular press as Internet victimizers, children and adolescents with disabilities report higher levels of cyber victimization than those without disabilities (Didden et al., 2009), which is consistent with research on traditional bullying (Chatzitheochari et al., 2015; Department of Health & Human Services [DHHS], 2016). Reading social cues and social interaction can be challenging for anyone who participates in social networking sites, and this is especially true for children with attention deficit hyperactivity disorder (ADHD) and those on the autism spectrum. There needs to be greater attention paid to how cyber victimization differs among

children with disabilities by gender, how safety norms evolve in the online communities and virtual worlds these children frequent, and how laws protecting people with disabilities from harassment and victimization can better reflect their continual and active negotiation of safety in dynamic social spaces (Heiman and Olenik-Shemesh, 2015; Ringland et al., 2015).

Greater monitoring and surveillance of disabled children's social interactions with their peers and family members is not the solution either. The privacy risks of data collection, location tracking, and cloud computing are rapidly evolving. Wearable technologies such as Google Glass, for instance, with the capability to track the location of autistic children with a propensity to wander, provide real-time assistance, monitor moods, and can potentially prevent unforeseen harm. Yet, the institutions charged with overseeing the public and semi-public information collected by these systems are themselves subject to little regulatory supervision or training in effective digital data management (Kirkham and Greenhalgh, 2015).

Education and technology

The 1948 Universal Declaration of Human Rights includes the right to education, which is greatly expanded in relation to disability in the UN CRPD and children in the UN CRC. The conventions offer provisions to support recreation and leisure that are accessible (Article 30, UN CRPD) and age-appropriate (Article 31, UN CRC), and an education that will support the development of full potential in a free society (Article 28, UN CRC; Article 24, UN CRPD). The UN CRPD also details that such recreation and leisure incorporate access to cultural materials, television, and film (Article 30), opening a door for digital accessibility to be understood as an imperative.

Contemporary barriers to learning, and to the use of media and technology in instruction, exist at all levels for disabled children from primary school through undergraduate and graduate studies. Only 10% of all children with disabilities globally are in school, and only half who begin end up completing their primary education (United Nations Educational, Scientific, and Cultural Organization [UNESCO], 2007, 2014). In higher education, the disparity in STEM (science, technology, engineering and math) majors is particularly pronounced for students with disabilities, which impacts their employment opportunity in these economically lucrative fields (Moon et al., 2012).

Technology does not easily solve these problems in education and, in fact, begets new challenges for literacy, collaboration, and cognition. For example, while MOOCs (Massive Open Online Courses) and e-books can offer more customized experiences for a wider range of learners, advocates for deaf and blind students in the United States have filed various lawsuits against universities receiving federal funding for violating the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973. Violations can occur when universities fail to provide closed captioning along with online lecture materials and deploy reading technologies with deeply flawed text-to-speech capabilities (Blanck, 2014). Efforts to uphold education rights and deliver educational technology for children with disabilities, as well as tools that support a diversity of learning styles and individual needs, must take into account relevant languages, difficulties of access, and conditions of disadvantage.

Decision-making in digital policy

Genuine meaningful participation has been tough to make an enduring reality in digital policy-making (Goggin, 2015). The UN CRC calls for considering children's best interests in actions regarding them (Article 3), and both the UN CRC and UN CRPD make mention of the rights of children and people with disabilities, respectively, to be consulted and actively engaged in decision-making processes about policies and programs that directly concern them (Article 12, UN CRC; Clause o., Preamble, UN CRPD).

In recent years, youth and digital media scholars have posed new dimensions of cultural participation necessary to extend to children (Jenkins et al., 2015). Adding participation for children with disabilities into the mix opens up exciting new vistas, but also requires significant transformation (Navarro, 2014). This includes consulting them on matters of education, research, and ICT governance that shape their rights. A threshold concern is that if we consider new kinds of publics and architectures for communication (Papacharissi, 2014), there are important issues of free speech in democratic forums, notably the accessibility and affordances of social media spaces for public debates in which young people engage.

Globally, disability activists have been challenging government, corporations, and others involved in digital technology for at least 30 years to tackle policy inaccessibility for people with disabilities (Blanck, 2014; Goggin and Newell, 2003). Different governments and agencies have developed good practice around accessible formats or making regulatory hearings and inquiries accessible to people with disabilities. There is a long way to go on disability in general, not least because advocacy and lobby groups, and specialist research and policy organizations on disability, are under-resourced. General advocacy and consumer groups also often lack an understanding or include people with disabilities, let alone children with disabilities.

Conclusion

There is tremendous potential to advance the rights of children with disabilities at the intersection of the UN CRC and UN CRPD, two milestones in the history of human rights. The UN CRC was conceived and adopted at the cusp of the mass Internet, and the UN CRPD came later amid a deeper field of digital technology across most domains of global societies. With the UN CRPD, the rights of people with disabilities to information, communication, and media were given recognition in exciting new ways; this includes children with disabilities, but the implications remain to be thought out and secured. Thus, these entwined international treaties provide a useful platform for dealing with the profound challenges children with disabilities face in gaining visibility and rights.

When it comes to the now essential area of digital media and technology, the rights of children with disabilities are thoroughly overlooked, despite the fact that their concerns are deeply tied to structural issues of racism, colonialism, misogyny, and xenophobia. These interconnected systems of privilege and oppression require an intersectional approach and recognition of the different differences that any one child represents (Alper et al., 2016). It could be said that the child living with a disability is always already intersectional, especially in the rich, yet often problematic, relationship with the digital.

In this article, we have argued for the need to reconceptualize the rights of children with disabilities by building on the important advances of children's rights scholarship and initiatives in digital policy. The first requirement for how this could, and should, be extended is to understand how disability is experienced and conceptualized. This complicates and enriches what we know and assume about the nature of media, its uses, and application to human rights. To speak of children with disabilities in any meaningful way is to further question normative assumptions about who consumes, critiques, circulates, and creates media. The second requirement is to bring together rights frameworks belonging to children's rights and disability rights, respectively. Here, too, disability rights have much to contribute to discussions and activation of children's rights, and vice versa.

The UN CRC and UN CRPD each embody important policy approaches, research, and measures, but these are not as yet brought together effectively. With this fruitful intersection in mind, some elements of a global agenda for the rights of children living with disability in the digital age include the following:

- Greater need for baseline data on the digital media uses and practices of children with disabilities, and inclusion in studies and data collection on digital media use among children.
- Acknowledgment that digital media can make life easier and more pleasurable but can also introduce new inaccessible spaces for children with disabilities.
- Potential risks that a focus on rights in the digital domain reinforces the able-bodied child as the norm, and the importance of creating spaces and opportunities where children with disabilities can be heard.
- Need to balance rights to protection with rights of children with disabilities to exercise appropriate levels of agency, autonomy, and control.
- Research that takes account of children's concerns as well as adults, addressing the complex issues of how to conceive and undertake participatory research.
- Framing and designing research methods (such as online surveys and face-to-face interviews) for accessibility and participation, allowing for multiple communication methods.
- Guarantees that consultation, governance, and participation in policy and design are "friendly" to children with disabilities, and adopt best practices from both children's media policy and from the disability field.
- Expansion of public programs addressing the digital and social rights of children with disabilities (including digital citizenship and information literacy initiatives), promoting their systematic evaluation and discussion of effectiveness.

In conclusion, children with disabilities have found it difficult to realize their rights in the digital age, as have their societies. There has been a growing sense of the need to carefully consider and weigh real issues of vulnerability, support, and safety against the long overdue rights of children that might flourish with digital cultures and technologies. This remains greatly contested, but also needs to be extended to include children with disabilities as a heterogeneous population. As these efforts proceed, we are mindful that our moves and others' moves to advance their rights should be cognizant and grounded in the social worlds in which disability and people with disabilities arise and live.

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Notes

1. Throughout this article, we tend to use the term “people” (or “children” or “youth”) with disabilities. Preference and usage in relation to disability terminology varies across the world (see, for instance, Grue, 2015); above all, everyone should be called and named in their preferred form.
2. Alternative conceptions of disability include the biopsychosocial model, which examines the impact of biological, emotional, and environmental factors on health, well-being, and societal participation (Engel, 1977), and the political/relational model of disability, which interrogates the politics of disablement and collective action through the lens of feminist and queer studies (Kafer, 2013).

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