

## 4 Evaluating Children's Media

Commercial culture plays a significant role in Western parenting and childhood (Seiter 1995; Pugh 2009). Families of children with disabilities represent a small but growing market within the children's media industry over the last fifteen years (Canedy 1997). The products directed at parents of children with disabilities are marketed as having educational, entertainment, and therapeutic value. Consider a few recent examples: the *Toys "R" Us Toy Guide for Differently-Abled Kids*; the Common Sense Media advice brochure *Power Up! Apps for Kids with Special Needs and Learning Differences*; and "autism-friendly" or "sensory-friendly" musical performances on Broadway along with monthly movies offered by AMC Theatres. Many of these products are available online, which can be helpful for families that find it challenging to travel to a physical toy store. These organizations and companies present parents of children with disabilities (at least those who can afford to partake) with a wider array of media and technology choices than ever before.

While there are any number of blogs and Pinterest pages that offer product suggestions, my focus in this chapter is not on making specific recommendations, since what media are "best" depends on each child. Rather, I take a step back and discuss

the state of this media landscape as well as issues that parents of youth with specific disabilities may encounter in selecting digital media for their child and managing their child's engagement with media. First, I provide a brief overview of the existing research on how youth with ADHD and autism are using media in their day-to-day lives. Second, I delve into the issue of what makes children's media "age appropriate." Third, I look at how determining "quality" media content for youth (both with and without disabilities) should also take into account how youth with disabilities are represented in (and missing from) popular media. Lastly, I raise issues surrounding the accessibility of information and communication technologies that are popular among children and families, like YouTube. Beyond taking children's preferences and needs into account, I argue that what media makes a best "fit" for a particular child with a disability also involves critical awareness of the limits of existing standards, content, and platforms.

### **Differences across Disabilities**

Youth naturally vary in their media use patterns. Children's individual needs and personal preferences influence their technology choices, habits, and routines. With regard to differences in children's media use across disabilities, a good deal of research is outdated (Gadow and Sprafkin 1993). Over just the past five years, there has been growth in scholarship on information and communication technologies use among children with intellectual disabilities (Bunning, Heath, and Minnion 2009; Mazurek et al. 2012; Palmer et al. 2012; Näslund and Gardelli 2013), Down syndrome (Al Otaiba et al. 2009; Feng et al. 2008, 2010; Oates et al. 2011), and physical disabilities (Lidström, Ahlsten, and

Hemmingsson 2011; Maher, Kernot, and Olds 2013). The following section summarizes published research on how children with ADHD and autistic children in particular use new media and technology in their everyday lives.

### **ADHD**

There have been a number of studies that report on the relationship between playing video games and diagnoses of ADHD. This research tends to make broad claims for such small sample sizes. For example, Philip Chan and Terry Rabinowitz (2006) found a “significant association” between playing console or online video games for more than one hour a day and “intense symptoms of ADHD” among adolescents. Nevertheless, among a sample of seventy-two ninth- and tenth-grade students, their study only included two children (both males) actually diagnosed with either attention deficit disorder or ADHD. Studies that make claims about the relationship between video game play and youth with ADHD frequently operationalize “attention problems” by screening children using ADHD symptom self-report scales or through teacher reports, not through confirmed diagnoses (see, for example, Gentile et al. 2012; Swing et al. 2010).

While research on the effects of video games is headline grabbing, it can detract from more positive findings about the media use of children diagnosed with ADHD. Parents of preschool- and elementary-school-age children with ADHD, for instance, are more likely than parents of children without ADHD to report that their child is involved in activities associated with television programs, such as playing television-related games, pretending to be television characters, and talking about television (Acevedo-Polakovich, Lorch, and Milich 2007). These findings suggest underexplored opportunities for children's literacy development

through remixing and experimenting with media elements (Dyson 1997; Kinder 1991).

### **Autism**

There has been a recent proliferation of mainstream mobile device applications available in the Google Play and Apple iTunes App Store promoted as being designed to support learning among autistic youth (Kientz et al. 2013; Shane et al. 2012). Part of this trend stems from published research and anecdotal commentary over the past two decades suggesting many autistic people have strong visual-spatial skills (see, for instance, Grandin 1996; Quill 1997). It is unclear how these skills relate to autistic children's media habits. For example, parents report that their autistic children have strong skills in navigating interfaces for controlling media selections, particularly forwarding and rewinding videos (Nally, Houlton, and Ralph 2000; Shane and Albert 2008).

The explanation for these preferences and behaviors is not apparent, but there are a number of possible directions. Children may appreciate the chance to demonstrate self-sufficiency through making media choices and view their technical skills as a sort of personal "superpower" (Ajala 2014). Some autistic children may find that viewing and reviewing animated content is a pleasurable as well as calming form of visual self-stimulation (Shane and Albert 2008). Repeated viewing can also allow for a sense of sameness that some autistic youth report finding satisfying in software programs (Williams et al. 2002).

Compared to quantitative studies, there is a scarcity of qualitative research that explores how autistic youth use screen media in their everyday life (Kientz et al. 2013). Survey-based studies with parents have shown that autistic youth prefer to spend their free

time with media. This includes watching television and movies (Nally, Houlton, and Ralph 2000; Shane and Albert 2008), and in terms of content, favoring animation (including animated television programs, DVDs, software, and character Web sites) (Lahm 1996; Shane and Albert 2008). Research points to a tendency among autistic children to spend time with visual media (e.g., television and video games) more frequently (Mazurek et al. 2012; Must et al. 2014; Orsmond and Kuo 2011) and at younger ages (Chonchaiya, Nuntnarumit, and Pruksananonda 2011) compared to typically developing children. Other research suggests that autistic youth ages thirteen to seventeen tend to spend more time with television and video games, and less time with social media (e.g., email or chat) than children their age with other disabilities (speech/language impairments, learning disabilities, or intellectual disabilities) (Mazurek et al. 2012). While there are differences in terms of media use between autistic children and their peers, there are also similarities. A large survey of parents of autistic boys ages eight to eighteen, for example, indicated that these youth are just as likely as the general population of children in the United States and Europe to have access to screen-based media in their bedrooms (Engelhardt and Mazurek 2014).

The popular claim that children with autism are “naturally” drawn to technology is open to debate (Wei et al. 2013). Most research on how autistic youth engage with electronic screen media is conducted in an experimental lab setting or based on parent reports instead of direct observation (see, for example, Mineo et al. 2009). Another problem with the claim that autistic youth are “natural techies” is that it obscures the ways in which constructions of gender shape public understandings of autism and norms around technology use (Jack 2014). Girls are underdiagnosed with autism, and there is also a huge gender gap

in opportunities to gain technological expertise. Considering the ubiquity of the assertion that autistic youth have an innate attraction to technology, we know surprisingly little about how autistic youth use information and communication technologies in their lives outside school.

### **How Appropriate Is Age Appropriate?**

Assumptions about the relationship between specific disabilities and children's information and communication technologies use should also be examined against beliefs about what make certain media age appropriate for young people. Toys, television shows, and video games tend to have some indication of the age group for which the product is intended (e.g., TV-Y7 or PG-13). Age appropriate recommendations are grounded in research on typically developing young people's physical, social, emotional, cognitive, language, and motor development. For example, toys that potentially pose a choking hazard to children who explore the world by putting things in their mouths and whose wind-pipes are easily blocked are usually labeled as being for those age three and older.

Content ratings are based on certain developmental criteria that may or may not apply to a child with a disability. Media content that benefits some children of certain biological ages may not be useful to "exceptional children," or those who differ from a perceived developmental norm.<sup>1</sup> For example, Howard Shane and Patti Albert (2008) found that parents of autistic youth ages eighteen and younger indicated that the most popular television character for this population is Winnie the Pooh, and the most popular Web site is PBSkids.com. These media tend to be marketed to young audiences. What makes media

appropriate for youth with disabilities is not strictly determined by the biological age of the child. It is important to note too, though, that age appropriateness needs to be considered to some extent so as not to eliminate inclusive social opportunities with same-biological age peers (chapter 3).

Even those products specifically designed for youth with disabilities have shortcomings. Many educational apps targeting children with disabilities are of poor quality, and have not undergone research as part of their design and development. Educational software programs that might best support the academic skills of older children with learning and intellectual disabilities are often designed for much younger children, use pictures of young children, and have childish voices (Feng et al. 2010; Näslund and Gardelli 2013). Children with motor impairments who require simpler interfaces for video game play frequently have difficulty finding content that is also cognitively challenging (Pitaru 2008). While there may be more media options available to younger children with disabilities than at any other point in history, it is important to keep in mind that their media preferences will change as they grow up too.

### **Misrepresenting Disability in Children's Media**

Media content should also be evaluated for how it excludes or misrepresents disabled individuals. People with disabilities are the largest minority in the world and yet are the most under-represented in entertainment media. Out of the 796 characters regularly appearing on scripted shows on major television networks in 2013, only 8 (or 1 percent) had disabilities (GLAAD 2014). While contemporary mainstream media created for child audiences (including books, movies, and television shows)

increasingly include positive representations of disability (Haller 2010; Millett 2004), the portrayal of youth with disabilities in children's media is still disproportionately low and lacks diversity (Golos 2010; Hardin et al. 2001; Leininger et al. 2010). Emiliano Ayala (1999), for example, found that while children's literature in the twenty years following IDEA's passage portrayed a greater array of disabilities, few books contained ethnically, culturally, or linguistically diverse disabled characters.

Oversights and misrepresentations of media characters from historically underrepresented groups have implications for all children (Berry and Asamen 1993). Inaccurate, negative, and altogether-absent media portrayals of people with disabilities shape how children with and without disabilities conceptualize disability (Curwood 2013). More recently, young adult novels such as *Wonder* by R. J. Palacio and *Out of My Mind* by Sharon Draper have addressed the complex dynamics of inclusive education and depicted young people with disabilities as directly confronting antisocial discrimination (Wheeler 2013). Beyond representation, it is crucial for children of all abilities to see rich, complex characters not defined solely by their disability and included as a natural part of society.

### **Inaccessible by Design**

Young people and their caregivers can only judge and evaluate media content that is made available to them. Inaccessible platforms, applications, and Web sites strongly discourage individuals with disabilities from cultural as well as societal participation (Ellis and Kent 2010; Goggin and Newell 2003). Rapid iterations and frequent changes to existing digital media products and services can have unintended impacts on user accessibility (Goggin



2008). Pitaru (2008, 75) demonstrated that upgrades to video games were sources of anxiety among youth with disabilities, who worried about such “improvements” negatively impacting accessibility. When upgraded operating systems and platforms do not support existing software, new compatible software is only available to children if software companies decide to release such versions. Buying entirely new software can be cost prohibitive for parents and schools. Even with adaptive input devices and controllers, most mainstream video games are inaccessible in a number of ways for youth with physical, sensory, and cognitive disabilities (Yuan, Folmer, and Harris 2011). Difficulties navigating inaccessible digital media can deter spontaneous, independent play among youth with disabilities as well as collaborative play with parents, siblings, and friends.

In addition to gaming, online video is another medium that can pose a challenge to youth with disabilities. Online video is made more accessible for deaf and hard-of-hearing individuals through closed-captioning, an alternative textual language translation of a video's primary audio language. Hearing users can also benefit from closed-captioning, such as when watching television in a loud gym or bar. Research has shown that for typically developing beginning readers, closed-captioning can be an effective form of literacy support (Linebarger, Piotrowski, and Greenwood 2009). Closed-captioning can also streamline translation for online video content into multiple languages. This is particularly vital for YouTube, where 80 percent of the views come from outside the United States (Ellis 2013).

Closed-captioning can be generally helpful in a number of ways for people with and without disabilities—at least when it works. YouTube's auto-captioning is notoriously poor, and offers no way for deaf and hard-of-hearing YouTube users to search

exclusively for videos with proper captioning (Lockrey 2013). The US Twenty-First Century Communications and Video Accessibility Act mandated that as of October 2013, all new video programming shown on the Internet, after being broadcast on television, must have captions. But the act excluded video programming exclusively distributed via the Internet (e.g., YouTube and Vimeo videos). To fill in the gaps, a number of volunteer-driven crowdsourcing technologies such as Amara.org have emerged to improve captioning and video descriptions at little or no cost to content creators and distributors (Ellcessor 2010)

These efforts have met with resistance from industry forces, however, which contend that the creation or improvement of captioning without the express permission of a video's copyright holder violates the Digital Millennium Copyright Act (Telecommunications for the Deaf and Hard of Hearing, Inc. 2011). Though the Federal Communications Commission (2013) expects content distributors, publishers, and owners to voluntarily caption online video clips, there are no guarantees that this will actually happen in the near future. In fact, in February 2014, California's Ninth Circuit Court of Appeals ruled that CNN (and its parent company, Time Warner) be allowed to forego video captioning when delivering and reporting the news on its Web sites. The court ruled on the grounds that the potential delays and costs of captioning would impinge on CNN's free speech rights (Gardner 2014). While California's Disabled Persons Act entitles citizens to "full and equal access" to public spaces, it has yet to be determined if Web sites legally count as places of "general accommodation." Such a ruling would impact the extent to which deaf and hard-of-hearing youth can take part in online activities.

How digital tools and online spaces are designed and built at least in part determines who can and cannot participate in our networked society. This is not to say that assistive hardware

and software are inherently beneficial to young people. Assistive technologies that improve access to new media can also be socially stigmatizing as well as symbolize dependency and weakness, and thus ultimately youth may avoid them (Wielandt et al. 2006). This is particularly true of adolescents and teenagers with disabilities desiring to “fit in” with their peers. For example, Sylvia Söderström and Borgunn Ytterhus (2010) found in interviews with partially sighted youth in Norway that they avoided using a screen reader to access the Web and play computer games because they associated the tool with standing out—an identity deviant from their peer culture. Meanwhile, in the same study, blind youth valued text-to-speech software that made “ordinary” technologies like mobile phones accessible and allowed them to maintain their privacy while communicating with friends. The extent to which accessibility options are rejected or embraced by youth with different disabilities is shaped by a number of factors, including how visibly the technology marks youth as “different” and how necessary it is to participating in peer communities.

### Summary

Children have unique preferences and needs, and these are important to take into account when analyzing the wide range of media and technology that exists for children with disabilities to use. Besides these individual factors, though, young people, parents, and caregivers should be aware of more systematic issues that shape how content is made available to children, which media and technology are suggested to parents of children with disabilities, and why the characters in popular media are constructed in certain ways. It is not clear-cut what makes media appropriate or inappropriate for children of different ages, especially when taking into account youth with disabilities.

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# Digital Youth with Disabilities

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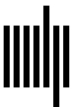
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