

This is a section of [doi:10.7551/mitpress/14152.001.0001](https://doi.org/10.7551/mitpress/14152.001.0001)

Kids Across the Spectrums

Growing Up Autistic in the Digital Age

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Citation:

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DOI: 10.7551/mitpress/14152.001.0001

ISBN (electronic): 9780262374002

Publisher: The MIT Press

Published: 2023

The open access edition of this book was made possible by generous funding and support from MIT Press Direct to Open



The MIT Press

5 FRIENDSHIP

Autistic brothers 10-year-old Ronan and 9-year-old Conor (White) dropped their Nintendo Switch controllers and ran over to their mom, Karrie, when the FaceTime call came in from their friend Oliver (technically, from Oliver's mom and on her iPhone). Conor dragged along a fuzzy black blanket, which Karrie said he always wore draped over his shoulders "except when he's at school or in the bath." The six inches that Ronan stood over Conor gave him enough leverage to hold the phone in one hand and gently shove his younger brother offscreen with the other. FaceTime could only track a single face at a time, and Conor was messing up the augmented reality Animoji feature that Ronan was trying to use so that it looked like it was not he who was talking on screen, but an orange cat with his voice. "I don't know if you've noticed anything different about me," Ronan announced to Oliver sarcastically, alluding to his animated appearance. Conor elbowed his way back into the frame and grabbed the phone from Ronan. "Hello, Oliver. Look at my T-Rex creature!" he exclaimed, swapping out the cat filter for a dinosaur one. In reference to his brother's on-screen appearance, Ronan joked, "This is what Conor is in real life."

Oliver had been a new kid in Ronan's class the year before and they instantly clicked. Ronan had a solid group of friends in school "that's a mix of kids who are on the spectrum and kids who are just kind of nerdy. And honestly, I'm not 100% sure which kids are which," said Karrie. When Oliver started to spend lots of time at their house (located in the wealthy, mostly White suburbs of Boston), it was not only Ronan with whom he played, but also Conor, who struggled to make friends of his own in school.

Conor preferred physical play like wrestling and playing chase, which his peers were growing out of. “My brother’s actually 9 but he acts a lot younger than he is, so he can be really crazy and annoying,” said Ronan. Conor also had trouble “letting other people into the imaginative world” he created with his action figures and ended up giving directions to others more than improvising play, Karrie said. When Ronan had friends over, he was generally good about including his younger brother in the fun—an inclusivity that was heavily facilitated by video games, which the whole group could play together in a structured manner. Gaming allowed Conor to “be involved and part of the group and have that social interaction and not feel like he can’t keep up,” explained Karrie.

When Oliver moved with his family back to Denmark, it was tough on Ronan, but devastating for Conor. During our interview, when I asked Conor if he ever played video games with his friends, he responded, “I don’t have friends. . . . I don’t want them anymore. I don’t like them because I, because I always lose friends a lot.” He spoke specifically of Oliver with the prompting of his dad, Adam, who sat nearby while Conor and I spoke: “Oliver was my, used to be my, I used to have my old friend Oliver. Now he left.” Though FaceTime enabled the brothers’ friendship with Oliver to persist, it had social and emotional limitations. For one, the boys relied on their parents to facilitate the ongoing relationship, seeing as they and Oliver were too young to own phones. “It’s not a thing that’s occurred to them yet—talking on the phone with friends,” Karrie said, so she would arrange calls with Oliver’s mom. Interestingly, Conor was also critical of using video chat to stay connected and discussed the value of tactility and in-person interaction. “Do you know why I don’t like friends?” he said, “I can’t touch friends. I can’t touch my friends. . . . I always like to touch. I always like to touch and talk to people.” Conor was frustrated by his inability to literally “reach out and touch someone” (as in AT&T’s late twentieth-century advertising slogan for long distance telephone calls), namely Oliver.

This chapter focuses on the social dynamics between autistic kids, their peers, and the popular culture, media, and technology that underpin their relationships and contemporary childhood writ large. The experiences of Conor and Ronan illustrate the heterogeneity of friendships made and lost among kids on the autism spectrum, as well as the myriad ways that media can both ease and hinder companionship between neurotypical and neurodivergent children. Per the theory of the sociotechnical shaping of sociality, technology

and society present autistic youth with a range of possibilities for forming relationships, including social media platforms and therapeutic programs for building “social skills.” In turn, young people on the spectrum remake and complicate normative assumptions about the nature of friendship in the digital age through their communicative preferences, cognitive and emotional processing, and sensory practices.

By their own account, children and adolescents on the spectrum are not completely unlike neurotypical kids in what they do interpersonally with media. When I asked 12-year-old Saylor (White, girl) if she thought being autistic made her use of social media different from that of her peers, she replied, “I don’t think the spectrum is affecting anything, to be honest. I don’t know, all my friends are basically doing the same thing, and I’m just doing the same thing.” Despite the myth of kids on the autism spectrum self-isolating with technology,¹ I found that many are savvy curators of personal media ecosystems through which they can feel comfortable reaching out and being reached out to by others. Connectivity, however, also exposes kids to social situations that have significant potential for harm and victimization: platforms provide little protection, and autistic children and adolescents can face challenges seeking help from adults. After detailing examples from the everyday lives of kids on the spectrum, I offer reflections on the nature of friendship and implications for theory, design, and practice across the social and digital spaces that autistic youth inhabit.

TECHNOLOGY USE AND MEDIATED FRIENDSHIPS AMONG AUTISTIC KIDS

I begin by providing some background on friendship development in childhood (with an emphasis on kids age 13 and younger) and the role of media and technology in the evolution of those social relationships, the strengths and challenges that youth on the spectrum have in forming such lasting bonds, competing definitions of “friendship” within the context of autism, and what is currently known about how technology poses social risks and rewards for autistic youth by increasing feelings of both belonging and exclusion.

FRIENDSHIP DEVELOPMENT AND MEDIA IN CHILDHOOD

Friendship is a broad term, one that can be either meaningful or meaningless (i.e., a lifelong friend; getting a “friend request” on Facebook). It can be used to

describe any mutually beneficial relationship between peers who engage each other in positive ways that promote future interactions.² Research from the field of developmental psychology demonstrates that humans have fundamental social needs and urges from a young age.³ By around age 8, kids have made close friends outside of their immediate family, though siblings significantly contribute to social learning throughout childhood as close companions.⁴ Children vary in their temperaments for friendship, meaning that they have natural preferences for certain social configurations (e.g., one-on-one, trios, large groups of friends.)⁵ By age 4 or 5, they have experimented with social power (i.e., excluding or teasing), and test that power in school, which is also the primary site of children's friendship establishment.⁶ Popularity becomes a concern for kids starting around second grade, which can distract from the importance of building enduring friendships.⁷ With respect to gender, children in grade school generally prefer same gender play groups but have more friends of different genders outside the classroom environment.⁸

Historically, analog and digital communication technologies have played a role in children's ability to exert independence over their social lives apart from their households, be it pen pals forged through written letters sent through the mail or the desire to have a private landline telephone in one's bedroom for conversing with friends.⁹ Currently, tweens and teens build relationships in online spaces including social media (e.g., Instagram, TikTok), content-sharing sites (e.g., YouTube), messaging apps (e.g., iMessage, WhatsApp), and virtual worlds and networked games (e.g., Minecraft, *Fortnite*).¹⁰ Social media use is associated with both interpersonal benefits for adolescents (e.g., sense of belonging, social capital) and interpersonal challenges (e.g., relational aggression, perceived isolation).¹¹ The use of social media is on the rise among tweens; as of 2021, nearly one in five tweens (18% of kids ages 8–12) in the United States used social media on a daily basis, compared to 13% in 2019. Yet watching TV (65%), viewing online videos (64%), and mobile gaming (43%) dominate their free time each day.¹² Boys tend to make more friends online than girls, as regular video game play expands their social circles, and girls are more likely to text frequently and communicate with existing friends.¹³

SOCIAL STRENGTHS AND CHALLENGES OF AUTISTIC CHILDREN

In many ways, neurodivergent children's relationships and their conceptualizations of friendship are like those of their neurotypical peers. Their closest friendships are similarly made mostly at school or through family friends,

and they exhibit a preference for same-gender friends.¹⁴ Autistic kids often struggle, though, to establish and maintain stable interpersonal relationships.¹⁵ Children on the spectrum sometimes have difficulty interpreting the nonverbal cues and communicative intent of neurotypical children, regulating their emotions, and understanding often-invisible social rules of conversational and emotional reciprocity.¹⁶ Gail, for instance, described her 5-year-old son Robert (Black and Asian), as “really antisocial. . . . He’s in his own little bubble.” Some parents were far less concerned, however, about their child’s preferences for alone time, understanding it to be a form of self-preservation amid daily emotional and sensory overwhelm. Cathleen noted of her 6-year-old son Sebastian (Latino and White), “I felt sad about, ‘Oh he doesn’t have any friends,’ but I think he’s actually quite content in his own world. I think he’s happy.”

Research on peer relationships among children on the spectrum has primarily focused on White autistic children in mainstream classrooms, not on those with complex communication and intellectual disabilities and who experience compounding forms of exclusion, like 8-year-old immigrant Saaida (Asian/Bangladeshi, girl).¹⁷ Hamza recalled of his daughter, “One day I take her to the playground. She go and try to take a toy. After two or three times, the other kids just go away. They are not playing. They say, ‘What she doing?’” Such interactions lead to a cyclical denial of access to social roles. Neurotypical children can be quick to judge autistic kids as awkward and not approachable.¹⁸ They are regularly ignored by peers or nonautistic children who do not reciprocate their social advances.¹⁹ Meena, mom of 5-year-old Eashan (Asian/Indian, boy), felt that his teachers completely misread her son and his social difficulties. “They just think like he’s shy and he’s quiet. He’s not shy! No one is talking to him!” she complained.

What makes an autistic child “social” depends on individual, group, and institutional contexts. For example, Bailey, mom of 6-year-old Olivia (White, girl) was disheartened by a growing awareness that her daughter, who was in an integrated classroom, was being excluded not by her peers, but by their caregivers. “For kids whose parents know that there’s a diagnosis, they’re less likely to reach out to us for play dates,” she said. Autistic children tend to be more accepted by typically developing peers in younger grades but later move toward the periphery of social networks.²⁰ When I first met Raul (Latino, boy) at age 5, his mom, Nina, talked glowingly about the neurotypical peer buddies that his teachers had arranged for him in his inclusive classroom. Six

years later, she remarked that “his friendships at school are not as strong as they were when he was younger. . . . They’re ready to be teenagers” and Raul was not. It is not only autistic kids who need help in making friends; nonautistic children also benefit socially and emotionally from learning about how to be supportive friends to their peers on the spectrum.²¹ Autistic kids are at increased risk for bullying and cyberbullying, with victimization and its emotional burdens (i.e., depression, anxiety) further compounding difficulties with mental health and in establishing friendships.²²

Despite their challenges, kids on the spectrum strongly report desiring friends,²³ and say they are generally satisfied by their friendships,²⁴ though they vary in terms of their preferred frequency and type of social contact.²⁵ Saylor, for example, said that a good friend is “nice to other people [and] their personality isn’t just boring. They can’t be . . . like, ‘Do you want to watch the same movie over and over again?’” Nine-year-old Caleb (Black/Haitian, boy) excelled at sports and had frequent playdates with classmates. A good friend, he said, is someone who can “play games and show me stuff and they do cool stuff.” His mom, Audrey, also shared that “one of his teachers last year told me, ‘Oh he’s the mayor, everybody knows him. He’s friends with everybody.’” Autistic kids’ peer relationships can sometimes look different, however, from nonautistic children’s friendships (i.e., less emotional intimacy and affective reciprocity). For instance, Audrey said of Caleb, “It’s not like he’s friends with you and he’ll come home, be talking about you. You know, he’s friends with you, he comes home, he forgets about you.”

Parents and siblings of autistic kids regularly facilitate social access and provide practical support in maintaining friendships, like Conor’s family, as well as help children cope with victimization.²⁶ This can offer some, but not complete, psychological protection from negative outcomes like loneliness.²⁷ Autistic children’s friendships are additionally shaped globally by cultural differences in interpersonal relationship norms (e.g., expectations for social harmony in East Asian countries) as well as intersections of race, socioeconomic status, and neighborhood (e.g., public school classroom composition in the United States).²⁸ For example, Kimberly, mom of 8-year-old Amaya (Black, Latina, and White; girl), said that her daughter “doesn’t have any friends,” but that the free gatherings offered by a local autism resource center mostly serving low-income autistic children of color were important “especially if you don’t have friends. The only way, if they have parties, [Amaya] looks forward to that.”

MEDICAL AND SOCIAL MODELS OF AUTISTIC FRIENDSHIP

Given that difficulties in making friends is named as part of the autism diagnostic criteria in the DSM, it is worth noting how few studies there are on autistic children's friendships relative to other expressions of autism (e.g., language difficulties).²⁹ Childhood friendship itself has a clinical definition within the Autism Diagnostic Interview-Revised assessment, a standardized tool used to diagnose autism. The relationship has to be between kids approximately the same age, the activities that they do together have to be varied and take place outside of prearranged groups, and there has to be reciprocity and mutual responsiveness in the relationship.³⁰ To scaffold this model of friendship, autistic children are regularly enrolled in social skills groups and programs that support "social thinking."³¹

Some parents spoke enthusiastically of such programs. For instance, Jessie said that in the group of her then 6-year-old son Patrick (White), which included two other autistic kids, "they play board games or do things with the iPad where they each select. I think that's been a huge, a huge factor in his socialization." Though these programs can increase knowledge of social rules, several ethical and empirical critiques have also been raised by disability and education scholars.³² Social skills interventions that largely focus on teaching normative social behaviors to autistic kids (e.g., making eye contact, initiating greetings) may work to inhibit authentic expression, normalize adult surveillance, and increase stigma.³³ Acquired skills also may not transfer outside of the pseudo-naturalistic therapeutic environment, as the "bottom up," organic nuances of conversation are generally overlooked within curricula in favor of more "top down," predetermined communicative repertoires.³⁴

The contemporary framing of autistic children's social development as deviant coincides with a late modern societal shift that emphasizes personal choice in selecting with whom we socialize and rewards individual likeability and self-disclosure.³⁵ Some clinicians and educators have looked to build curated social spaces in which autistic kids' belonging is not solely tied to personal characteristics. Adolescents on the spectrum report preferring taking part in social skills groups with self-selecting peers who have similar interests (also known as "affinity spaces"),³⁶ as opposed to programs that focus centrally on teaching social norms.³⁷ Countering deficit-oriented views of autistic sociality, many adults on the spectrum contend that there is value in social spaces that are predominantly for neurodivergent people or that center

“autistic friendship,” relationships built on modes of interaction and communication that come more naturally to them.³⁸ For example, Casey’s mom, Jennifer, also an autistic person, said that she feels “a lot more comfortable talking with other autistic people generally speaking.” The fact that she is “very direct [is] not necessarily a deficit. . . . It’s just, you know, neurotypical people talk in a certain way and autistic people talk another way.”

NAVIGATING AUTISM, MEDIA, AND YOUTH FRIENDSHIP

Mass media and communication technology can allow such alternative forms of friendship to flourish, though online environments are far from a social utopia for kids on the spectrum.³⁹ There is a direct and indirect relationship between the participation of autistic youth in physical social spaces and their use of media and technology. For instance, autistic children ages 3–11 who are excluded from in-person play by other kids are more likely to occupy their time with media (especially on weekends), an exclusion which is additionally compounded by structural barriers such as a lack of affordable and accessible leisure and recreational activities.⁴⁰ Online gaming spaces like Autcraft, an autism-focused Minecraft server, can offer a safe, social community for autistic children. Supporting their relationship building, though, also requires intense parental investments of time, money, and technical knowledge.⁴¹ Online spaces are additionally important because they may be one of the few arenas where autistic youth do not have a constant adult presence, particularly those with one-on-one aides for their entire school day, which may be detrimental to their forming friendships.⁴²

A very important part of childhood is having common experiences to talk about with friends. Among youth, knowledge of mass media, technology, and popular culture serves as a form of social currency as well as a means of social distinction (i.e., cool, uncool).⁴³ Due to their often-deep investment in media culture (e.g., bands, anime),⁴⁴ kids on the spectrum may look online and offline (i.e., at recess, on TikTok) to clear symbols of shared affinities with other youth as a means of more confidently initiating spontaneous social interactions.⁴⁵ For instance, Jamie recalled of her 10-year-old son Levi (Latino and White, boy), “I’ll see him on the playground and he’ll see a kid with a Spiderman shirt and . . . he’ll be like, ‘Oh you like Spiderman? Let’s play Spiderman.’”

Among autistic adolescents, social media use is associated with high self-reported friendship quality.⁴⁶ It is unclear what aspect of social media

might be associated with strong friendships for this population (e.g., messaging, likes). Also uncertain is the directionality and causality of this association (i.e., if social media improves autistic kids' friendships or if those with strong friendships use more social media).⁴⁷ Adolescents on the spectrum report finding texting etiquette challenging, such as initiating and responding to messages.⁴⁸ Guidebooks to navigating social interaction for adolescent autistic audiences (some written by autistic adults) address anxieties that kids might have about social conduct online and how to identify different types of online friends. For example, *The Asperkid's (Secret) Book of Social Rules* distinguishes between "possible friendship" ("someone who 'liked' you on Facebook or decided to follow your blog") and "evolving friendship" ("this is someone you could text or email/Facebook to see what they're up to or tell them about something funny that happened.")⁴⁹ As social media platforms rapidly change and new ones develop, though, this advice can quickly become obsolete and outdated.

How adolescents on the spectrum engage with technology for social purposes parallels and deviates from media use and peer engagement among typically developing kids in multiple ways. Like boys who are nonautistic, autistic boys report that video gaming is the media activity they engage in most frequently with friends and that this play largely strengthens their friendships.⁵⁰ Girls on the autism spectrum and nonautistic girls both acknowledge that while online friends are easier to make, such friendships have risks and limitations, and in-person socializing can lead to more authentic, affective connections.⁵¹ However, autistic adolescents reportedly use social media more for entertainment than for friendship building.⁵² No studies to date have focused on autistic children age 13 and under with diverse backgrounds and abilities, their understandings of friendship, and the role that different media forms (i.e., mass, digital, social, interactive) play in their experience of peer relationships and social interactions.

NAVIGATING AUTISM, FRIENDSHIP, AND DIGITAL CHILDHOODS

The following analysis does not reveal a universal theory of autism, media, and youth friendship but rather four key themes: (1) media as social *scaffolding*, (2) autistic children's *agency* in using media for social purposes, (3) navigating online *safety* in social interactions, and (4) *contextual factors* impacting the centrality of peer relationships in their social uses of media.

SCAFFOLDING

Media and technology serve in various ways as an on-ramp to online and offline social participation for kids on the spectrum. Watching YouTube videos and engaging in different forms of digital writing allow for a kind of scaffolded, or supported, sociality, removed from the immediacy of live interaction, that enables practice with modes of social address.

SOCIAL SCRIPTING FROM MEDIA Several children adopted the speech and phrasing of media characters, celebrities, and other online personalities to help them engage with their peers, play pretend, and take on imagined personas. For example, Olivia's mom, Bailey, credited the Disney Junior animated show *Jake and the Neverland Pirates* (a spinoff of the film *Peter Pan*) for providing Olivia with concrete social language that she could memorize (a cognitive strength of hers) and deploy in novel peer interactions. Bailey offered one such example, a time when Olivia came across a boy with a skateboard, to whom she said, "Look, a skateboard. Cool, sweet, awesome. Let's take a ride," a line that she had heard on the show. "How really she learned a lot of her social norms in the beginning was from watching these videos, from picking up on the conversation skills of these kids interacting together, and then flushing them into her conversations," Bailey said.

Kids on the spectrum also used online video to converse with on-screen personas, known in media psychology as "parasocial interactions."⁵³ Rosie, mom of 4-year-old Spencer (Black, boy) described how YouTube facilitated his "pretend play—which he supposedly doesn't have," she said, alluding to clinical judgements of her son's sociability. Spencer mimicked and remixed play that he observed from a toy unboxing video on YouTube for a Melissa & Doug-brand dollhouse with tiny doorbells, a toy which he himself owned. Spencer had turned the dollhouse upside down, found the toy name on the label, and then typed it into YouTube. The video included an adult man (whose face never appears on-screen) using his hands to puppeteer four figurines who ring the doorbells on the playhouse. Spencer came up with his own language to self-narrate the video. Said Rosie, "He's like, 'Come on friends.' Then he goes, 'Well, let's see who's behind door number one.'" YouTube also enabled autistic kids to watch social action up close yet from a distance, leading some to develop feelings of intimacy, friendship, and identification with media personae, or "parasocial relationships."⁵⁴ Natasha, mom of 8-year-old Jeremiah (White, boy), hypothesized that watching videos of YouTubers

playing games together allowed her son to observe social interaction and learn about conflict resolution. “The social piece is appealing to him for some reason,” she said, “I think it’s a safe way to watch people interact and learn how to interact with friends, and not be doing it yourself.”

Twelve-year-old Brendan (White, boy) showed me videos from one of his favorite gamers on YouTube, Markiplier, who currently has over 30 million channel subscribers. We watched one video that Brendan had viewed many times before, in which Markiplier played a horror-adventure game called *Little Nightmares*. Brendan enabled the video’s captions so that he could read aloud what Markiplier was saying, as well as simulate conversation with the YouTuber. “I don’t know where I am now,” Markiplier said in reference to his in-game location, to which Brendan replied with friendly familiarity, “You never know where you are, Mark.” Brendan interestingly remarked that he appreciated the attention Markiplier paid to his captions (“This guy edits them, so it looks nice,” he said). YouTube was not the only digital media that enabled Brendan to play along without playing. He also enjoyed spending time on the gaming website Roblox, and I observed him adopting the game narration style of Markiplier while he played on a server called “Reason 2 Die.” After his own avatar met his demise, Brendan watched the game in “spectate survivors” mode and made humorous comments on the game much like Markiplier would. Parasocial interactions and relationships, along with media scripts, enabled autistic kids to play with sociality using existing cultural material.

BUILDING ONLINE SOCIAL SKILLS WHILE OFFLINE Digital but nonnetworked media could also offer a sandbox for autistic kids to practice online communication with peers before they were fully ready to have their own connected devices. First-grader Olivia, who lived in a wealthy Boston suburb in which a number of her peers already had personal mobile devices, became curious about texting through her exposure to popular culture as well as her personal observations, such as text messages popping up on her mom’s cell phone. An emoji pattern covered her school backpack, and she was anticipating the imminent release of *The Emoji Movie*. For her upcoming seventh birthday then, it was not entirely unexpected that Olivia requested “a real phone with a real plan” as a present, as Bailey said. Giving Olivia a fully functional smartphone was out of the question—not only because of her age, but also due to concerns about her social vulnerabilities. Bailey

shared one such example: “There’s a boy in school who offered her tickets to [the amusement park] LEGOLAND. He’s like, ‘I’ll give you three tickets if you don’t talk for the rest of the day.’ She came home and she was over the moon because she thought she was going to get three tickets to LEGOLAND” for having remained silent.

Instead of a smartphone, Bailey offered to get Olivia a “diary computer,” or an iPad with a keyboard case. “She likes to just type and write stories, so we discussed that we would do a diary computer,” said Bailey. When I spoke to Olivia though, she seemed less interested in the nonsocial functions of the tablet and more intrigued by the idea of messaging friends, perhaps through Apple’s preinstalled iMessage app. “One of my friends has a diary computer so I can text them on the computer,” said Olivia. “Do you know that you can’t text on a computer, honey?” Bailey responded. I asked Olivia what she would like to type on her diary computer, and she replied, ““Would you like to come out for pizza?” Yeah. That’s what I would like to do with my friends. It’s called texting back. Texting means you can like text your person and then they text you back.” When I visited a few weeks later after her birthday, Olivia had indeed received a diary computer—along with her mom’s old, disconnected iPhone 4. And while Bailey had encouraged Olivia to write “diary” stories on the Notes app on the iPad, Olivia was more eager to use the tablet to watch *Monster High* videos on YouTube Kids. Children on the autism spectrum may be excited to chat with friends outside of school by using technology, but parental concerns about the ease with which they might be connected loom large, with parents like Bailey trying to find a middle ground.

AGENCY

Far from being passive actors, many young people on the spectrum make active choices about the media they use, how and when they use it socially, and in what circumstances. Autistic kids deploy technology to build interpersonal and group relationships that center on a shared passion, hobby, or interest related to media, as well as to create physical and psychological distance from an upsetting social situation.

TECHNOLOGY AS SOCIAL RESPITE Autistic children inhabit social spaces in which they have relatively little control and environments that can overwhelm their sensory systems. Personal devices like tablet computers allow kids on the spectrum to be copresent with others while minimizing the

effects of distressing stimuli around them.⁵⁵ For example, Raina, mom of 4-year-old Zahra (Azerbaijani, girl), said that her daughter “always wanted to play with kids, but she was scared or uncomfortable. So, she would just permit herself with watching videos, iPad, or playing a game.” Zahra had grown more relaxed around other children over the past year and had less sensory sensitivity to their cries and screams, to the point that “she’s very friendly. I would say too friendly,” said Raina, “If there are other kids, she doesn’t even need [media] anymore.” However, April, mom of 5-year-old Sofia (Latina, girl), did not see media and sociality as necessarily mutually exclusive. She reflected on the idea that “they always say like the kids with autism don’t really want to be around people, but [Sofia] always wants to be where everyone’s at.” Her tablet allowed her some power over of her immediate social space. “Like if she’s able to, she’ll sit here and browse her iPad and just be near you, which is her way of being involved,” April said. To the outside observer, Sofia’s way might not look social, but to her family, it was easily interpretable.

FRIENDSHIP THROUGH MEDIA PLAY AND PRODUCTION Adolescents on the spectrum talked about bonding with other kids through their shared interests in talking about, playing with, and producing media. When friends came over to hang out with 11-year-old Rosalita (White, girl), “We do like a video together and take pictures,” she said, using her iPad or Instax instant camera. Similarly, for Cody and Jeremiah, video games helped structure peer relationships and interactions. “Sanjay plays Minecraft,” 9-year-old Cody (White, boy) told me, “He’s a friend in my class. The day I told him about that if you are trying to activate a rail and you go over it in a mincart, the mincart rattles and you fall out—he apparently discovered that, too.” As for Jeremiah, “Those games help [him and his friends] find something to do” afterschool together, said his mom, Natasha, “They allow him to have a common language and be social.” Jeremiah had grown especially close with another boy on the spectrum in his class who shared his love of Minecraft. Whereas neurotypical kids in the class preferred having three- or four-hour playdates, Jeremiah and the boy were well-matched in that neither could handle socializing in person for more than one and a half or two hours at a time. Natasha explained that Jeremiah and the boy initially spent their time together watching Minecraft videos on YouTube, “picking which ones to watch [and] talking about them after. They’ve evolved as we’ve done more play dates. Now they’ve started to play games themselves together.”

Virtual and in-person clubs and groups, organized around specific media genres and franchises, also allowed autistic tweens to regularly connect with peers who had similar interests, and under social conditions that they did not find overly taxing.⁵⁶ When 13-year-old Adrian (White, boy) was bouncing between schools during a turbulent period in his life, his mom, Brianna, said that “Minecraft helped him get together with people . . . he wasn’t seeing at school on a daily basis.” He was also involved in a Scratch computer programming club at the local Boys and Girls Club. “As long as your kid doesn’t get beaten up in the other areas [of the club], the tech room is pretty cool,” Brianna said sardonically, alluding to Adrian’s struggles with bullying. Beyond digital media, organized tabletop and card games also kept Adrian regularly connected with other kids. “I have this thing called Pokémon League every Saturday,” he said, which was a small group of teens that gathered weekly at a local gaming store to compete in a turn-based combat game with Pokémon trading cards. In general, Adrian reported that “honestly, I don’t actually usually have many friends. I’m much more of an introvert.” For his recent *Dungeons & Dragons* (D&D)-themed birthday party, he had six friends over to play the video game *Super Smash Bros*. “But other than that, I rarely have enough friends over for there to actually be like, uh, fun having ‘screen time’ and stuff,” Adrian said, slightly mocking adult-driven terminology for young people’s media use.

Ronan also played *D&D*, getting together with friends to play in an organized group every other Sunday, in addition to attending a live-action role playing class (LARP) each Saturday. When I asked Ronan what he liked about playing *D&D* with his friends, he joked, “You can’t really single-handedly take down like a million monsters when they all have to make attacks against you. [You’re] the only thing out there for them to attack if there’s no friends.” In his LARP class, Ronan enjoyed being part of a group while developing his own character, Dark Ronan, who is “descended from Gandalf the Grey” from *The Lord of the Rings* and “wears a random cloak with fur that my mom made me,” he said. Though his LARPing group was not specifically for kids on the spectrum, his mom, Karrie, thought that the company that ran it had created a really accommodating space for autistic kids. “They have certain sections of the gym [you can] go if you just need a time out and you don’t want anyone to mess with you for a little bit and you can take a little sensory break,” she said. Kids on the spectrum made decisions and expressed

their desires to be social on their own terms, with media enabling varying degrees of togetherness with individuals physically near and far from them.

SECURITY

Preadolescent kids on the spectrum are coming of age in a networked environment with, unfortunately, endless potential for their social vulnerabilities to be taken advantage of by cruel actors and for their data to be exploited by companies for profit.⁵⁷ Several autistic kids learned these lessons the hard way, some were challenged by the nuances of online visibility management, and a few were developing their own strategies for coping with cyberbullying.

CYBERBULLYING AND ONLINE ANTAGONISM Video games are a major site of networked aggression where autistic kids are frequently targeted.⁵⁸ Brendan, for example, talked about feeling harassed and misunderstood by anonymous players while on the online gaming platform Roblox. When I asked him if there was anything that he did not like about electronics, he reported, “People who think I’m a hacker just because my Roblox username is all numbers.” Because of his suspicious username, Brendan was regularly kicked off Roblox servers by players typing “Kick due to name” into the chat, a directive to the game’s moderators. This expulsion made Brendan “sad, because I’m not a hacker!” although he was usually able to rejoin the game. He spoke about developing a kind of resiliency in response to his frustrations (“I’ll just [rejoin] over and over until they realize I can keep doing this all day”) and finding comfort in the consequences for harassment on Roblox (“They’ll lose five things for every time they kick me, so they’re just wasting things. Trust me, it’s kind of nice to see that they’re actually punishing themselves for hurting someone, for what they’re not.”)

Unlike the aggression against Brendan, which was carried out by strangers in a video game, the antagonism toward Saylor was enacted by girls she knew from school and whose torment spanned online and offline spaces. Girls on the spectrum regularly report anxiety over social disapproval.⁵⁹ Back in sixth grade, Saylor had difficulty distinguishing between “somebody who would accept her or somebody who would pretend to be her friend but [was] not really looking out for her,” said her mom, Maggie. Saylor talked about how her relationship with these girls “was kind of confusing” in terms of how they treated her in person and on social media: “On my old Instagram,

these girls who bullied me, they called me fat and stuff. . . . The day before they said that we were like friends because they said that I could try on some of their clothes at their house because [they said] my clothes were awful [and] because we're about the same size." These same girls later told Saylor that she should post on Snapchat about wanting to take her own life, which Saylor then posted out of peer pressure. Another mother saw the message on her child's Snapchat and contacted Maggie, who "went into crisis mode." The incident led to Saylor attending "counseling steadily to just sort of have that place to talk about all these different issues," Maggie reported.

By age 12, Saylor could reflect on her experiences with bullying and talk about them as part of her past as well as within the current context of pervasive toxicity online. Like other preteens, she was aware of the overt dangers of having an online presence and had used the affordances of social media to engage in impression management, curate her self-presentation, and recognize the influence of social norms on her posts.⁶⁰ "The year I got bullied," she said, "I always got picked on for having really bad Instagram photos. . . . I was like 9 and I didn't know. I just wanted to be cool and stuff." She subsequently changed some of her privacy settings, creating more intimate audiences through private Snapchat stories as well as separate 'finsta' (private) and 'rinsta' (public) Instagram accounts. Saylor explained that she did not post "awkward" photos on her nonprivate Snapchat story anymore "because if everyone just sees a weird picture of me then everyone's gonna screenshot it—which actually did happen when I was little, but I think they forget about that now." With the help of her family, her local community, and licensed therapists, Saylor was able to create some psychological distance from her challenges with cyberbullying, but the process was ongoing, as was the evolution of social media platforms with which she and her peers engaged.

MAKING ONLINE "FRIENDS" Besides targeted attacks from known and unknown actors, children on the spectrum also navigate relationship building online with people from school and from parts unknown, particularly through video games. Roblox was central to these discussions, considering both its popularity and its role as a social networking platform for kids under 13.⁶¹ For example, Brendan's mom, Marcia, recalled a time in which her son wrote "can we be friends?" into the chat on Roblox, which surprised her. "Even though he wants friends," she said, "he doesn't know how to probably maintain those relationships." She worried about Brendan not

being able to pick up on another person's bad intentions, "not only from the outside world . . . but also children from school" with whom Brendan sometimes played. She was also nervous about others online interpreting Brendan's sometimes "goofy or annoying" behavior as aggressive and reacting as such, which she knew happened to him at school.

"Friendship" took on multiple meanings across the digital platforms used by autistic brothers Matt and Bryan (ages 9 and 7, White, boys). I sat with them as they showed me their favorite Roblox games and noticed that Matt had a long list of 200 Roblox-designated "friends" along with 165 messages from said individuals. "It's kind of like texting," he said, as he picked one person from his friends list and typed, "sup." I asked the brothers how you become friends with someone on Roblox. "You just friend them! And wait for them to accept it. If they accept it then, then it's a new friend," said Bryan. Unlike in-person situations, the clearly marked indicator of a friend request took the guesswork out of approaching and determining if someone was receptive to interaction. "You can play what they're playing, but if it says they're offline then you can't," said Bryan. When I asked him if he always accepted friend requests on Roblox, his response reflected a broader interest in internet celebrity. "Yeah, because we're YouTubers," he said, in reference to the videos that he and Matt sometimes posted to the site, "and the YouTuber rule [is] if you get famous, lots of people are going to friend you." Bryan, like many children today, wanted to be "YouTube famous"; however, he also said, "but most people don't watch" our videos.

Bryan and Matt's parents, Pedro and Beca, recent immigrants to the United States from Brazil, had different reactions to their sons' forays into networked social interaction. Pedro thought that maintaining an online presence was important for the boys' future social advancement, and that practice navigating these spaces was valuable, even if it involved upsetting experiences. "I've been raising them in a world that friends are online friends," Pedro said, "You have to teach to prepare for a different world." After an incident in which Matt was very upset by being verbally harassed over a headset by a teenage player on PlayStation 4, and another in which Bryan told a stranger on Roblox that he was 6 years old, Pedro tried to impart an ethos of personal responsibility for privacy and safety to his sons. He recalled telling them that online, "nobody is your friend. . . . You don't share your name, your age, your school." With respect to online antagonism, Pedro told them that "you have to learn how to ignore these people."

Beca was more fearful that the boys did not have the capacity to exhibit such control or display critical awareness due to the intersection of their autism and their age. Of Matt, she noted that he “doesn’t know when people want him to stop, or people are not comfortable with something.” It was especially difficult for Beca to set clear rules regarding online exchanges and relationships, considering that her sons interacted with both friends from school and total strangers on Roblox. “There’s a few kids from the school, actually, that they add each other,” said Beca, “So I try to . . . make it very clear that if [Matt] says ‘Oh, I have 200 friends,’ that’s not friendship; that’s just random people that you add.”

Saylor had herself made online friends and thought about the risks of interacting with unknown people on the internet. “I have internet friends,” Saylor said, “I have one that’s nice and so we met on Roblox, even though it’s kind of weird to meet friends on Roblox, but she just needed some friends.” She discussed the importance of verifying the girl’s identity, noting, “we’ve FaceTimed like on Snapchat and I know what she looks like and she’s very funny. I don’t really trust her 100 percent because like, I don’t know her, but we still talk and stuff and play Roblox.” Other friends, Saylor reported, had engaged in far riskier social interactions on Roblox, such as playing a game that simulated going on dates and having a romantic relationship with players of unknown ages (“I’m just like, how do you not know about stranger danger?! You can date someone that’s like 83 and you’ll be like, ‘Oh, you’re so cute,’” Saylor remarked). In all, some autistic kids had difficulty determining the appropriateness of contacting and being contacted by anonymous video game players, while others were savvier in their understanding of the potential consequences for safety, security, and privacy beyond the game.

CONTEXTUAL FACTORS

Lastly, the social relationships that kids on the spectrum do or do not develop around media or through technology have to do with far more than the choices they actively make or even the specific devices and platforms they have access to. The extent to which a given child may be seen by others as “friendly” or approachable in the United States is heavily shaped by societal factors like racism, and this is especially true for autistic youth in online and offline spaces. Family members (i.e., siblings, parents) additionally play another important contextual role in how they model and introduce the social uses of media and technology to autistic kids.

RACE Caleb went to an elementary school in Boston attended mostly by White children. There were different public safety considerations in his friends' neighborhoods and in his own, which had a high crime rate. When Caleb went over to play at the home of one White school friend on the spectrum, Audrey said that "[the] mom lets them outside on the street. . . . I'm worried about that. Their street is very quiet. I don't care; I'm not letting Caleb outside by himself." In addition to gaps in safety, Audrey was also keenly aware of how her Black autistic son with ADHD was vulnerable to being read by others as aggressive and violent, which could directly impact interactions with powerful institutions like the police. For example, Audrey did not want Caleb listening to rap songs with lyrics about guns and murder that he might be overheard repeating. She explained that "being Black, you have to know your boundaries," describing the material and symbolic impacts of racism. "If you want to become President Obama, you have to be clean because if he wasn't clean, he wouldn't have been president. So, this," she said, referring to her rules about rap music, "is where you start making sure you're clean."

At the same time that Audrey was concerned about how Caleb would navigate a racial hierarchy that privileged White individuals in society, she had been avoiding talking to Caleb explicitly about race. She worried that he might have a hard time interpreting and relaying the social nuances of racism. Audrey was especially concerned that Caleb might talk to his White friends about race relations in a way that would prove alienating. "Things about being Black, about violence, I don't want to explain to him in details because I don't want him to go to school and try to explain it and for other kids to see him in a whole different way," said Audrey. Structural racism pervaded many aspects of Caleb's life, shaping his friendships, media consumption, and their complex entwinement with his autism.

FAMILY CO-USE The immediate social environment around a child at home also influenced their use of technology with friends. In addition to one sibling expanding another's social network, as with Conor and Ronan, parents and other adult family members could support an autistic child's engagement with media as a means of connecting with peers. Norah, for example, thought that the frequent media co-use that she and her family engaged in with her 5-year-old son Max (Asian and White, boy), an only child, directly contributed to his extraversion with peers and his social uses of media with them.

“For him and autism,” Norah said of Max, media has “been a way for him to connect with other people.” She, her husband, and their extended family all enjoyed watching TV and playing iPad games with him as a way of understanding his interests. Max, in turn, modeled his family members’ enthusiasm with his peers. For instance, Norah said, “We’ll get [to swim class] early or something and somebody is playing [a mobile game]. He’s like, ‘What are you doing? Can I watch?’” Norah hypothesized that her and her family “just made him that way by being very social at home and just always always socializing like 24/7.”

For less well-resourced families, however, such joint media engagement was not possible, nor was highly social peer interaction an end goal. Nour regretted the fact that she herself was not a gamer and felt some guilt that she was not able to support 8-year-old Karim’s (Middle Eastern/Algerian, boy) media use in a way that might have led to friendships. “Unfortunately, I am not a person who is technology oriented,” she said, “so I did not push for any video games. . . . But I realize that if I had, that would create a connection because I’ve seen his friends, all of them playing Roblox, Minecraft.” Using media socially with family members may not have necessarily led to peer relationships but was still a valid form of social interaction. Twelve-year-old Diego (White, boy) was a frequent user of social technologies. Said his mom, Francesca, “He’s interested in messaging. He takes selfies. . . . I mean he’s doing all of the social things. He gets the social.” But Diego’s online conversations were exclusively with family members, like sending his mom emoji and Skyping with his grandparents in Europe—people who were patient, consistent, and always available to Diego. As for using media with classmates, “He doesn’t really have peer friends,” Francesca said, but family fulfilled Diego’s desires for mediated social interaction.

REFLECTIONS ON FRIENDSHIP

Autistic kids are kids, and like all kids, they have fundamental needs for feeling known to others and in the world. The interpersonal relationships that they forge can look like those of neurotypical children and yet may be quite different in other respects. Media and technology provide them with what nonautistic youth also seek, like community among those with similar interests and practical coordination of offline plans. Autistic children’s desires for mediated friendship may also conflict, though, with what

is expected of contemporary online sociality, such as carefully calibrated self-disclosure.⁶² Understanding autistic kids' mediated peer relationships—through the lenses of scaffolding, agency, safety, and contextual factors—allows us to reframe dominant considerations of technology, society, and what it means to be social. After all, social media use is not analogous to online social interaction. Empirically speaking, platforms like Facebook, Instagram, and Twitter are primarily used for browsing and broadcasting, and most “social interactions” happen outside of social media (defined as mutual acknowledgment by both partners of a shared relationship, conversational exchange, and focused attention).⁶³ Social media is not really all that social, and “nonsocial” media like video game play and online video consumption may cultivate richer relationships, especially for people on the spectrum.⁶⁴

In their 2019 meta-analysis of qualitative studies of autistic adolescents' self-described experiences of peer relationships (ages 10–19), clinical psychologist Lily Cresswell and colleagues identified four key themes generated by youth on the spectrum: *understanding friendship* (i.e., describing friendship and its important qualities), *having and wanting friends* (i.e., desiring friendship and reputation concerns), *challenges of peer relationships* (i.e., making friends, peer rejection and victimization), and *overcoming challenges* (i.e., responding to bullies, support from others). I found that media and technology cut across these areas, including Jeremiah's observations of YouTubers' relationships, Olivia's wanting to ask classmates out to pizza with her “diary computer,” Bryan and Matt's difficulties with evaluating trustworthy friendships on Roblox, and Saylor's carving out of a space for positivity on her Snapchat and Instagram accounts after negative peer experiences online. With regard to autistic kids, it is especially important to understand social differences in their usage across types of media content and technology; demographic differences by age, gender, race, and class; and variations in communication skills and intellectual disability with respect to how media meets their social needs.

This analysis lends itself to several implications for parents, clinicians, policy makers, and other stakeholders in autistic children's social engagement with media and technology. First, there is significant value in kids on the spectrum being able to play and learn about interpersonal interactions and relationships online without all of the risks that come with being fully or publicly networked. For example, Autcraft has allowed autistic

adolescents to practice and define sociality in a way that allows them to have more control over what and how they share their feelings, views, and ideas with others.⁶⁵ The term “walled garden” has been used by digital learning and education scholars, generally in a negative way, to refer to online spaces for kids that significantly bound their ability to connect with outside contacts as well as limit their potential interactions within.⁶⁶ There are good reasons for kids to be protected before they can responsibly explore the world outside the garden, times when the boundaries are too limiting and paternalistic, and instances when the artifice of the walls forces kids into finding ingenious ways to leap over them. Despite not being fully realized, Olivia’s “diary computer” is a good example of a walled garden that might scaffold autistic children’s entry into the broader online world as a form of social rehearsal while still being very much “real” to them.

Such places might even give autistic adolescents opportunities to reflect on what education scholar Katie Davis terms “spheres of obligation” for presenting oneself online (i.e., you, your interpersonal connections, online social norms, broader cultural norms).⁶⁷ Older adolescents on the spectrum may be able to critically reflect on online risks and employ strategies to keep themselves safe, such as accepting friend requests only from people they know.⁶⁸ Nonautistic parents and professionals potentially underestimate autistic adolescent users’ social media competence, as youth on the spectrum may be more vulnerable online but also more risk averse than nonautistic adolescents.⁶⁹ Different social media platforms have different social rules that are constantly changing, and it is not always clear to autistic kids when those norms have been transgressed. Parents need help with creative ideas for easing their preadolescent children into the complexity of networked interpersonal communication through small steps, especially with tools that are free or low-cost, protect young people’s data privacy, and do not require significant technical knowledge for caregivers to guide their child.⁷⁰

Next, the reductive binary of children’s technology usage as either social (and active and productive) or antisocial (and passive and consumptive) centers neurotypical children’s friendships and relational norms.⁷¹ Kids on the spectrum may be repeatedly watching YouTube videos, for example, that provide them instructive examples of social situations, like Olivia memorizing scripted lines from *Jake and the Neverland Pirates*. Solitary media time can be important to their personal and social growth, including the

copresent use of technology with others in close proximity sans interaction,⁷² as with Sofia. Neurotypical parents' ideas about appropriate online and offline friendships (e.g., texting friends to maintain a close relationship) might not sync up with the degree of social gratification that some youth on the spectrum desire.⁷³ Parents limiting video game play among autistic kids for valid reasons (e.g., to shield from them harassment) may also inadvertently be cutting them off from important social connections.

Lastly, certain customizable features of interactive technology could better facilitate social relationships for kids on the spectrum if integrated more fully into the platforms that kids use the most.⁷⁴ Digital ethnographer Kathryn Ringland, for example, has highlighted various affordances of Minecraft that take unnecessary social pressure off autistic kids in the virtual space, options that a child would not have on an in-person play date (e.g., using the "teleport" function to leave an uncomfortable interaction in-game).⁷⁵ She and her colleagues also developed an iPad game focused on supporting collaboration among autistic children and identified three levels of social relationship (without adult intervention) that new media could scaffold. First, design features that allow for joining in can support membership or participation in a group. Second, coordination features in an app's design can facilitate the partnership of people working toward a shared goal. And lastly, features that enable commentary on a shared experience can bolster the development of friendships around mutual interests and affinities.⁷⁶ These may be good design practices for all children's digital play, but especially useful for those on the spectrum.

Reflecting on childhood friendship, autistic author Naoki Higashida writes that children on the spectrum do not have to be social in expressly neurotypical ways. "Whether or not we have lots of friends, every single one of us is the main protagonist of our own existence," he writes. "Having no friends is nothing to be ashamed of. Let's all follow and be true to our singular path through life."⁷⁷ Media and communication technologies provide more ways than ever for kids on the spectrum to start, maintain, and dissolve friendships. As with neurotypical children, some autistic kids have concerns about fitting in with peers and belonging online, while others prefer the social companionship of media personae who cultivate intimate relationships with their audiences. Friendships enabled by digital media can both offer relief for and add stress to the lives of autistic kids, especially

for those already predisposed to anxiety, depression, and other mental health issues. The solutions to their challenges cannot solely be technological in nature, as the mediated friendships of autistic kids are forged against the backdrop of offline spaces in which their specific interpersonal needs are not always fully accepted and met. The next chapter focuses on some of those needs, specifically their unique modes of sensory processing and the role of media in making their immediate physical environments more or less accommodating.

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The MIT Press would like to thank the anonymous peer reviewers who provided comments on drafts of this book. The generous work of academic experts is essential for establishing the authority and quality of our publications. We acknowledge with gratitude the contributions of these otherwise uncredited readers.

This book was set in Stone Serif and Stone Sans by Westchester Publishing Services, Danbury, CT.

Library of Congress Cataloging-in-Publication Data

Names: Alper, Meryl, author.

Title: Kids across the spectrums : growing up autistic in the digital age / Meryl Alper.

Description: Cambridge, Massachusetts : The MIT Press, [2023] | Includes bibliographical references and index.

Identifiers: LCCN 2022033238 (print) | LCCN 2022033239 (ebook) | ISBN 9780262545365 (paperback) | ISBN 9780262373999 (epub) | ISBN 9780262374002 (pdf)

Subjects: LCSH: Mass media and youth. | Technology and youth. | Autistic children. | Youth with disabilities.

Classification: LCC HQ799.2.M352 A47 2023 (print) | LCC HQ799.2.M352 (ebook) | DDC 302.23083—dc23/eng/20221212

LC record available at <https://lcn.loc.gov/2022033238>

LC ebook record available at <https://lcn.loc.gov/2022033239>