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Future Talk: Accounting for the Technological and Other Future Discourses in Daily Life

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Popular visions of futurity largely focus on one kind of future—that of technology. In this article, I consider how these conceptions and their implications are not fully grasped without accounting for nontechnical futures as well. Drawing on qualitative research with parents of children with developmental disabilities, centering on discussions of their child's media and technology use, I introduce "future talk" as a conceptual framework for identifying how discourses of the future and of technology co-constitute one another to bring about particular future orientations. Four discourses of future talk were found: individual, societal, technological, and "nonfuture" projections. In short, individuals not only orient themselves to technological futures, but also orient technology to their personal understandings of the future. I close with a discussion of how "future talk" might be used by communication scholars to map how ordinary conversations about the future manifest in everyday life.

Keywords: children, disability, future, parenting, technology

Popular visions of the future tend to focus on technology, particularly invention and innovation (Montfort, 2017). Futures borne of electronic, digital, and algorithmic systems historically have been made easier for the public to imagine concretely through physical installations in world's fairs, science fiction, and product demo videos (Wark, 2016). These material and literary visions take heed of technologist Alan Kay's famous adage that "the best way to predict the future is to invent it" (Wise, 1982, p. 6). Technology is not only outsized in the future, but the future is also outsized in technological discourse. Within pop technology writing, for instance, "The Future" often requires the gravity of capitalization (Ito & Howe, 2016; Lanier, 2013; O'Reilly, 2017).

The future, however, is also quite ordinary and mundane; in the future, you will reach the end of this article (hopefully). But before then, I will argue that imagining the future is not only or even

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primarily a question of technology, but of technology's relationship to nondigital renderings of the future. As with lay theories of media effects (Seiter, 1999), ordinary projections and speculations about the future of technology and technological development are tied to social position and societal institutions (Appadurai, 2013). How individuals externalize the future can be studied empirically through inductive research on the meanings that individuals and groups give to future events, concepts, and terminology (Adam, 2011; Bourdieu, 1964; Mische, 2009).

I engage in such an empirical project by drawing on three years of qualitative research with parents of U.S. children ages 3–10 with developmental disabilities in Los Angeles and Boston. This work focuses on parents' views, beliefs, and attitudes towards their child's use of media and technology specific to the abilities and needs of their disabled child. Parents' conceptions of the technological future, including their child's future use of wearable devices such as Google Glass and the importance of technology in the child's future employment, could not be understood without additionally accounting for parents' ideas about nontechnical futures, spanning concerns about their own mortality and their belief (or disbelief) in the inevitability of social progress benefitting people with disabilities.

I introduce "future talk" as a conceptual framework for identifying how different discourses of the future and of technology co-constitute one another to bring about particular future orientations. Similar processes have been captured through sociological concepts such as "progress narratives," "future-oriented narratives," "projective grammars," and "modes of future-coordination" (Kinsley, 2010; Mische, 2014; Tavory & Eliasoph, 2013). Those conceptions of the future tend to primarily operate as societal mythologies circulated by political actors, such as how the biotech industry offers a "promissory economy" predicated on the speculative value of biological knowledge (Tutton, 2011, p. 411). "Future talk," as spoken by my participants, was casual, conversational, and not necessarily coherent or complete.

To advance a conceptualization of future talk, I begin by briefly summarizing future themes in scholarship on technology, disability, and parenting—three sometimes-overlapping areas of future theorizing that cut thematically across the lives of my interlocutors. Next, I detail four discourses of future talk grounded in my analysis: individual, societal, and technological, and a complete or partial rejection of future (nonfuture) projections. When asked about "the future," what parents reported sometimes pertained to technology, but other times not at all. Moving forward, discourses of future talk might be used by scholars of communication technology and society interested in how technologies bring about certain societal futures, and how social actors shape the future through the design, development, and use of information and communication technologies.

Talking About the Future Across Fields

Mische (2014) proposes empirically studying future projections within "'sites of hyper-projectivity,' that is, arenas of heightened, future-oriented public debate about contending futures, such as those taking place in communities, social movements, and policy arenas" (p. 438). Parents of children with disabilities talking about technology, among other topics, serve as a localized site of hyper-projectivity for private deliberation about the future in its various forms. Although technology features prominently in future discourses, disability and parenting also offer important alternative perspectives on the social, cultural, and political aspects of the future. Taken together, the literature below puts into relief what is at stake when we talk about the future, whose futures are centered, and in what manner through forecasts, projections, and plans.

Technology

Technology is a defining characteristic of futuristic imagery and writing (Baym, 2015; Sturken, Thomas, & Ball-Rokeach, 2004). One of the more striking invocations is the state of "future shock," conceived by Toffler (1970) as a disabling affliction caused by rapid technological change in a short amount of time, resulting in individuals becoming disconnected and stressed. Various tools and techniques, including predictive analytics and statistical projections, were advanced in the latter half of the 20th century to prepare and defend powerful entities against particular futures. Scenario planning, for instance, developed by the U.S. military and military-funded research groups like RAND (Kahn & Weiner, 1967), is regularly deployed in business to "future-proof" corporate profitability strategies.

Scholars of cultural anthropology, sociology, and science and technology studies (STS) have also traced how social and cultural expectations and anticipations come to be incorporated into technology development research (Konrad, van Lente, Groves, & Selin, 2016; Latour, 1993) and emerging communication technologies (Kinsley, 2010; Liao, 2018), as well as prioritize certain ways of knowing in relation to technology (Escobar, 1995). Concepts generated through this work such as "sociotechnical" and "techno-social" aim to integrate these two aspects of human life and describe processes and artifacts that endeavor to produce changes in human behavior and relationships (Bijker & Law, 1992; Mackenzie & Wajcman, 1999).

At the dawn of ubiquitous computing in the 1970s, the sociotechnical future was prominently conjured through prototypes and simulations for the home and workplace. Playing off of Kay's adage that "the best way to predict the future is to invent it" (Wise, 1982, p. 6), Dourish and Bell (2011) describe the ethos at the time at major research center Xerox PARC as "the best way to understand the future is to do your best to create a local approximation and try to use it day to day" (p. 12). They refer to this sort of work as "time-machine research"—not that Xerox PARC technologists were trying to build their own such contraption, but rather divine the future by practicing the routinization of ubiquitous computing in daily life. In short, the co-constitution of social factors and technological forces serve to both actively promote and prevent certain futures from becoming material realities.

Disability

While Kay's famous maxim concerns the value of technology, a quote attributed to sci-fi author William Gibson (1999) raises the question of whose futures are valued. "The future is already here," notes Gibson, "it's just not very evenly distributed." One way to interpret this phrase is to equate the future with technology, differential access to the Internet, and uneven power relations embedded in technological infrastructures (Dourish & Bell, 2011). Individuals with disabilities figure quite prominently into stories about the redistribution of the future, though not necessarily of power, through technologies such as prosthetics, robots, and artificial intelligence (Goggin & Newell, 2003; Pinchevski & Peters, 2016). Such narratives tend to omit how the livelihood of individuals with disabilities may depend on continued support and acceptance of emerging technology (Bennett, 2017) and how technology can exacerbate preexisting inequalities for those with disabilities (Alper, 2017).

The unevenly distributed social, cultural, and political futures of those with disabilities, and across different disabilities, is contested. Policy and medical interventions have greatly improved quality and length of life for those who otherwise may not have survived a century earlier (e.g., preterm babies, injured veterans), but they may also promote "diminished futurity" (Ginsburg & Rapp, 2017, p. 47) through health, housing, and labor policies that accelerate the isolation, anguish, and death of people with disabilities. Controversial biotechnologies such as gene therapy additionally draw on future imaginaries that often involve "curing" disability.

As such, critical disability studies scholar Kafer (2013) notes that the future is popularly imagined as a time in which disability either does not exist, or it is assumed that a future lived with disability is not worth living all. "In public dialogue," Dorwart (2018) argues, "and in our cultural imagination, there is often a 'before' and an 'after' to life with a disability, but not a satisfactory 'now'" (para. 13). Disability features conspicuously in cyborg visions of technologically enhanced futures, whereas people with disabilities themselves are largely erased from future projections of societal participation.

Parenting

The futures of parents of children with disabilities are bound up in complex ways with those of their children, and with their own identities as caregivers, parents, and people (Petriwskyj, Adkins, & Franz, 2017). Wong and Heriot (2007) refer to both the hope and fear that a parent of a child with a disability might feel for the future of their child as "vicarious futurity" (p. 1833). According to Singh (2016), "biographical shifts experienced by parents not only require reimagining a different future for their children, but also shifts for themselves in what it means to be a parent now and in the future" (p. 1117). Such shifts include intentions to have additional children and planning for a child's financial and residential security after a parent's death. Not all parents do, or are in the same position to, make such projections. That likelihood is shaped by financial challenges, available caregivers, and the quality and quantity of state resources available in any given location over a disabled individual's lifespan (Burke, Arnold, & Owen, 2018; Singh, 2016).

Parenting, in general, is an inherently future-oriented project; parents experiment with multiple futures in a sort of cognitive laboratory about who their child is and who they might grow up to be. At a time when anxieties about safety, security, and scarcity permeate our culture, parents (and principally mothers) are expected to worry about how best to optimize development opportunities and risks for their child (Warner, 2005). Though parents are presumed to play a significant role in determining their children's futures, placing them "behind" or "ahead" on a developmental timeline, children also reciprocally shape their parents' future development, known as the transactional model of human development (Sameroff, 2009).

Parental concerns about future risks often crystalize around technology, including feelings of anguish that a child's experience growing up with media will be vastly different (and worse) than a parent's own childhood (Blum-Ross, 2015; Clark, 2013). Access to opportunities such as computer coding classes are promoted as "make or break" for children's employment prospects and workforce preparation (Livingstone, 2002). Wealthier parents with more financial, social, and cultural resources tend to be more successful at supporting their child's future achievement through technology use at home (Seiter, 2008). Though such "concerted cultivation" efforts (Lareau, 2003, p. 2) are now reportedly more culturally pervasive (Livingstone & Blum-Ross, 2018), children from working-class families still have difficulty gaining the same degree of value recognized by schools and employers as middle- and upper-class children. Families from minoritized backgrounds are more often at odds with the dominant culture in navigating advantageous pathways for their child via digital media (Alper, Katz, & Clark, 2016).

Across these topics, future themes and their emergence in the everyday present a twofold opportunity. First, there is a gap in empirical research bridging the areas above—on the role of media and technology, with its future-saturated discourse, in how parents of children with disabilities imagine their and their child's futures, including that of the digital future. Second, there is a need to decenter technology in theoretical work on communication and society pertaining to many meanings of "the future" that weave throughout daily life.

Present Methods for Studying Future Talk

This article emerges from a larger project on the role of media and technology in the lives of children with developmental disabilities (Alper, 2017, 2018). One limitation of this work is that parents of disabled children, even those who themselves identify as having a disability, are not representative of all perspectives on disability and the future, which by necessity centers the self-narrated and self-determined futures of individuals with disabilities (Kafer, 2013). Parents' concern about the externalized futures of their children, however, indirectly shapes the caregiving choices that they make and the opportunities for self-advancement presented to their child.

I conducted one wave of this research in Los Angeles from 2012 to 2014, and another in Boston from 2016 to 2017. In the first wave, subjects consisted of parents of children with developmental disabilities (e.g., autism, cerebral palsy) ages 3–10 years, and the second wave was limited to parents of children ages 3–8 years who were on the autism spectrum.[2] Twenty-two families from the first and second waves are discussed here (see Table 1). The Institutional Review Boards at the University of Southern California and Northeastern University approved the studies. I conducted fieldwork, sometimes

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[2] There are mixed opinions within and outside the autism community on preferred language for autism (Brown, 2011). The term "autistic person" (identity-first language) is generally preferred by autism self-advocates over "person with autism" (person-first language), which parents and medical professionals tend to favor (Kenny et al., 2016). Although there is great debate and no universal consensus, I have chosen to use identity-first language in this article.

in collaboration with a graduate and undergraduate research assistant. Data collection methods included parent interviews at home, joint interviews with parents and children, and observations of the child engaging in a favored media activity at home. All encounters were audio recorded transcribed, and most were documented with photographs and supplemented with memos written by me and my research assistants immediately following each visit. This article draws primarily on interview material and memos.

Table 1. Descriptive Data of Selected Child Participants.

Child Name	Age	Gender	Race/ Ethnicity	Diagnosis	Parent/s Name	Age/s	Yearly Household Income
Abbey	4	Girl	White/Non-Hispanic	Autism	Molly	24	$25,000–$50,000
Alessandra	3	Girl	White/ Hispanic, Spanish, or Latino	Autism	Camilla	37	$25,000–$50,000
Anthony	5	Boy	Black or African American	Autism, asthma	Danae	36	Less than $25,000
Beatriz	10	Girl	White/ Hispanic, Spanish, or Latino	Cerebral palsy, epilepsy	David	N/A	$25,000–$50,000
Chris	4	Boy	Mixed (White/Non-Hispanic, Asian)	Autism	Phil	38	$100,000 or more
Danny	6	Boy	White/ Non-Hispanic	Autism, epilepsy	Peter	N/A	$100,000 or more
Emma	3	Girl	White/ Non-Hispanic	Autism	Nikki	40	$100,000 or more
Eric	6	Boy	White/ Non-Hispanic	Rare chromosome disorder	Anne	N/A	$100,000 or more
Isaac	8	Boy	White/ Non-Hispanic	Autism	Sara	N/A	$100,000 or more
Jeremiah	8	Boy	White/ Non-Hispanic	Autism, Asperger's syndrome	Natasha	35	$100,000 or more
Karim	8	Boy	Algerian American	Autism, PDD–NOS	Nour	44	$25,000–$50,000
Lucas	5	Boy	White/ Non-Hispanic	Asperger's syndrome	Melissa	42	$100,000 or more

Max	5	Boy	Mixed (White/Non-Hispanic, Asian)	Autism	Norah	41	$100,000 or more
Moira	10	Girl	White/ Non-Hispanic	Autism, childhood apraxia of speech	Vanessa	N/A	$50,000–$100,000
Oscar	3	Boy	White/ Non-Hispanic	Autism	Abe, Leslie	47, 43	$100,000 or more
Patrick	4	Boy	White/ Non-Hispanic	Autism	Jessie	39	$50,000–$100,000
Robert	5	Boy	Mixed (Black or African American, Asian)	Autism, ADHD	Gail	38	$50,000–$100,000
Saaida	8	Girl	Bengali	Autism	Hamza	38	Less than $25,000
Skyler	6	Boy	White/ Non-Hispanic	Autism, ADHD	Naomi	47	$100,000 or more
Spencer	4	Boy	Black or African American	Autism, pediatric autoimmune neuropsychiatric disorder	Rosie	45	$50,000–$100,000
Stephanie	10	Girl	White/ Hispanic, Spanish, or Latino	Autism	Nelson	N/A	$25,000–$50,000
Zahra	4	Girl	Azerbaijan American	Autism	Reina	32	Less than $25,000

Note: All names have been changed as to preserve the anonymity of participants.

One parent's invocation of the future during the last interview of the first wave of research left a lasting impression on the overall project. Vanessa was discussing her daughter Moira's father, and how his challenges with substance abuse resulted in Vanessa receiving full legal and physical custody. Of Moira's father, Vanessa stated, "He certainly isn't thinking of her future." Later in the interview, I followed up by asking Vanessa, "Do you think much about Moira five years from now, 10 years from now?" "That's all I think about," Vanessa replied matter-of-factly. According to the interview transcript, my immediate response was, "I guess that's the thing. I haven't asked anyone that question explicitly. Now it makes me realize that I have to go back and look at people talking about it."

Being explicit with Vanessa was highly productive, as it led to asking parents in the second wave an open-ended question about the future ("When I've talked to parents, 'the future' comes up a lot. In what ways do you think about the future?"). After entering all memos and transcripts into MAXQDA, I exercised a purposeful and compatible combination of coding methods (Saldaña, 2013) to analyze interviews and observations from both waves of research and to develop grounded theory (Charmaz, 1983). I employed in vivo coding (Glaser & Strauss, 1967) to identify future talk using all temporal terms used by participants—"future," "in the future," "one day," "someday," "eventually," "older," "in the coming years"—plus more process-oriented phrases about the future—our "goal," "hope," "planning," going in a "direction," to be "picturing" the future, "imagine," "thinking" we will. Provisional coding (Dey, 1993) allowed for the determination of initial categories, such as the child's future employment and independent living, that were identified through memo writing.

Future Talk

The analysis produced four discourses of future talk: individual, societal, and technological futures, as well as nonfuture projections. Though the first three were largely affirmative in their future orientation, the last amounted to strategic avoidance of certain types of future planning. Conceptions of technological futures were co-constituted by the other discourses. Participants did not map neatly onto one type of future talk; rather, they engaged in multiple conversations about the future in relation to shifting contexts and life circumstances.

Individual Futures

In one sense, parents employed future talk on an individual level, specifically about their and their child's futures. The child was centered in discussions of their future development, documents for planning the child's education, college aspirations, and independent living as an adult. Parents were central to individual future talk through discussing their own mortality and the impact of their eventual death on their child.

Developmental Trajectory

Parents speculated about the trajectory of their child's growth in certain domains of human development. "I don't know what he's going to look like in even two years," Naomi said of her son, Skyler. "He went from completely nonverbal to speaking. Who knows where he'll be? I just have no idea." Though Rosie was confident in her son Spencer's math skills, communication ability, and sense of humor, she also reported, "I vacillate a lot on my thoughts about the future. It's at times very frightening. Cause it's like, oh my God, it takes you 30 minutes to put your socks and shoes on, on the wrong feet." To Abe, this unknown path engendered more wonder and joy than fear. "I suspect there's untapped things that are going to come to the surface eventually," he said of his son Oscar. "Who knows what he's going to be into in two years or less? But I want to keep watching him and see where he goes."

Individualized Education Program as Speculative Future

Parents discussed the near- and long-term speculative futures mapped out in their child's personalized individualized education program (IEP) document. In the U.S., the federal Individuals with Disabilities Education Act (2004) requires that public schools create an IEP for every child receiving special education services. By law, it must include information about a child's present level of academic performance, annual educational goals, services provided to a child, and how and when the school will measure a child's progress. Though a team of stakeholders writes an IEP (including teachers, specialists, and sometimes the child themselves), the school cannot begin providing special education services until the parent consents to the proposed IEP.

The document simultaneously faces the past, present, and future. One mother, Nour, stated of her son Karim that she had "a vision for him that I wrote on his IEP. . . . It's not a long-term vision. I look at it into maybe three to five years, something like that, and I update." Nikki was unsatisfied with her daughter Emma's current IEP because she felt that the document was stuck in the past. She refused to re-sign it unless it was revised because "some of the goals [the school] put were things she was already doing." Though parents of all income backgrounds use IEPs to leverage services and engage visions of the future (Blum, 2015), those with greater social and cultural capital spoke of additional documents prepared by health-care providers and clinicians as enabling them to envision and enact future educational plans. As a preemptive measure before writing her son Patrick's IEP, special educator Jessie arranged for another doctor to provide an alternative perspective on his autism diagnosis: "I wanted a better outcome for him. I got a second opinion on a future outlook and things I could do." These differential visions of the IEP as a document for mapping speculative futures are due to parents' unequal access to capital in the Bourdieuian sense (Bourdieu, 1977, 1993), including the social and cultural resources that they gain through their personal and professional networks.

College Aspirations

The topic of college was an important part of parents' future talk. As with the rest of the population, college can enable students with developmental disabilities to learn new skills and compete later for jobs. Programs for these students at degree-granting institutions vary in both quantity and quality in the U.S. Against this backdrop, Camilla said that she expected her daughter Alessandra to go to college, "but I don't know if she is going to read in college." Leslie, who worked at an elite university, similarly spoke of adjusting expectations about the future and the possibility of college for her son Oscar. She found it to be "kind of a relief because I don't feel like we have to be in this rat race with all these parents who are like, 'I have to get my kid into the Ivy League.'"

Independent Living

Independent living and housing were also central to parents' understanding of their child's future. It was in this area that parents talked the most about their child's role in planning for the future. Said Vanessa, "Everything I do with [Moira], every interaction, everything I want to teach her is always with her later years in mind." She continued, "I have to try to teach her to be as independent as she can possibly be." Vanessa pictured her and her boyfriend one day living in a home with a separate guest house and entrance for Moira. "We want her to have as much independence from us as possible," said Vanessa. Many acknowledged that their child might not want to live with them when they are older. "No one wants to live with their parents their whole life," said Jessie. These parents did not prioritize independence for independence's sake, but rather emphasized their child's future opinions and autonomy.

Parental Mortality

Parents' concerns about their child's future was additionally bound up with difficult discussions about their own mortality and what would become of their child when they died. Single mom Jessie, for example, had made a will and "bought a life insurance policy so that, should I die, that money will go into a trust for [my son]." Rosie had recently experienced a health scare resulting in an overnight hospital stay. While away, she and her husband struggled to coordinate care for Spencer. The episode caused Rosie to reflect on what she called "the what ifs." "What if something happened with me? You know, before [Spencer's] ready," she said. Parents felt a deep sense of responsibility for their child's future without them.

Societal Futures

In addition to individual futures, two main themes emerged regarding parental understandings of society in the future: that the future for people with disabilities looked better than the past because of significant social progress, and a fearful outlook based on a lack or even reversal of legal, political, and educational progress.

Significant Progress

Some parents positively compared the future outlook of society to that of earlier decades. Upon Patrick's autism diagnosis, Jessie was encouraged by his developmental pediatrician, who told her that "things were a better outlook now than they were, say 20 years ago." Nikki felt that "people are becoming more aware" of autistic children like Emma. Parents attributed this progress to several shifts. One was revisions to the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) (American Psychiatric Association, 2013) criteria used to diagnose autism spectrum disorders and the resulting support services provided to children who might not otherwise have received them. Speaking of Oscar, Leslie noted how "20 years ago he wouldn't have had a diagnosis. It's just that the diagnostic criteria have expanded." Though Leslie was in part speaking of Oscar, she was also speaking about herself and other members of her family who were likely on the autism spectrum. Turning to her husband, Abe, she said, "Your father probably would have been diagnosed. You probably would have been diagnosed [as a child]. I might have been diagnosed; who knows?"

Many parents spoke with relief about the horrors of institutionalization being relegated to the past. Leslie recalled reading a nonfiction book in which a sister attempted to rescue her autistic brother from an institution in which he was "left to rot" from childhood through middle age. The story "made me grateful," said Leslie. "I'm like, 'Thank God we don't do this anymore and put people in institutions.'" One mother, Molly, brought up a conversation between herself and a friend with older children on the autism spectrum about what society was like when her children were young. Molly relayed, "She was like, 'Back then, everything was "institutionalize them, institutionalize them." I have three kids, all of them are on the spectrum, and two of them are institutionalized because no one could help them, and that was the only thing.'" Reflecting on that outcome, Molly stated resolutely "that will not happen" to her daughter Abbey.

Lack and Reversal of Progress

For other parents, that difficult past did not feel very distant. Nelson imagined that if he won the lottery someday, the first thing he would do is find a better school for his daughter so that he didn't "even have to consider institutionalizing. . . . I've seen horror stories, places that were shut down many, many years ago. Absolutely not." Nelson, a Latino man, was not alone in feeling some trepidation about the extent of societal gains, especially among other members of minoritized groups in the U.S. Rosie shared her present and future concerns about racism and ableism, and its impact on Spencer. "He is Black," said Rosie, "What if he has a meltdown in society? This society is very frightening right now with a Black son. It is. He has a meltdown and ends up in jail and they don't know that he has autism."

Legal and political gains did not guarantee their implementation, either. One mother, Sara, complained that the therapists working with her son Isaac were not being properly trained in assistive technology. "What hope is there for these kids if the therapists that are coming out [of school] don't have access to it?" she questioned. Abe noted how when "the ADA (Americans with Disabilities Act) brought kids [with disabilities] into the schools, it was only the early 1970s." When I added that even then there were individual states with more restrictive laws on the books, Leslie replied, "That's why we're not moving to those states. That's why we're staying here [in Massachusetts]. Or in another state that has those laws. Because it's too scary now." The "now" that Leslie was referring to was two months after the election of U.S. President Donald Trump, under whose leadership she feared the rights of people with disabilities would be under siege.

Domestic concerns were also shaped by parents' ties abroad. "The future's been such a huge question lately," Naomi lamented. "Lately" referred to the days following Trump's January 2017 presidential inauguration and an election season in which he espoused nativist and xenophobic rhetoric. Naomi was a permanent resident to the U.S., and one of her children had recently asked her fearfully, "'What if Trump sends you back to Canada?'" One father, Hamza, questioned the extent to which freedoms were truly realized in the U.S. at all. Autism "needs a lot of awareness because the stigma," he said. "Here is a very free country, but when I go somewhere with [my daughter Saaida], everybody looks at me. They become silent. Everybody tries to show their sympathy, but that I don't like too much." To Hamza, this was not a significant improvement from treatment in his home country of Bangladesh, where "if you see the stigma . . . they think this is caused for the sin of [the family]." Hamza had traveled a long distance to arrive at a place that had very far to go in terms of disability acceptance.

Technological Futures

Against the backdrop of individual and societal futures, parents discussed the future impact of technology on their child's life. They mentioned technology in both positive and negative ways, and in the short and long term. Key themes included future technology innovations, technology as shaping future learning outcomes, and a child's future employment opportunities as influenced by technology.

Futures of Innovation

Many parents were certain that technology would continue to improve, and that these innovations would benefit their child. Vanessa wished there were "some sort of app that could give a person with autism prompts . . . if they're out in the community" such as traffic safety alerts. "Thankfully, we live in this time of technology that's going to facilitate that. That's already facilitating that," she remarked. Another mother, Anne, was similarly hopeful that technology would help fill communication gaps between home and school for her nonspeaking son Eric and their family. Eric was learning sign language at school, and though one of his aides visited the house once a week to demonstrate the signs to Anne and her husband (neither of whom are Deaf or Hard of Hearing), they needed more help. "Eventually," said Anne, "Google will probably have . . . you could tape him, Google Glass, watch him doing something and it will translate it." David, father of Beatriz, also viewed technological advancement as improving communication for his nonspeaking daughter: "I think in the future, probably not long, they are going to do a better job of creating apps for helping kids to communicate." Once the technology was "perfected," according to David, "then she's going to learn how to use it, and we're going to use it with her. But I really am a firm believer in that this will eventually help her."

Future Learning

Related to the earlier discussion of the future of education was a separate discourse about the role of technology in a child's future learning. Leslie noted, "I have a feeling that once [Oscar] has more access to computers and laptops and phones, he's gonna be just taking like a duck to water." Reina, mother of four-year-old Zahra, imagined that in "a couple years from now, not even middle school," mass and digital media would aid Zahra's learning, potentially more than print books. She stated, "I would like her to use media, but things that she really can learn [from], because it's easier for her to learn from [digital] media . . . than she would learn from a book." Molly made similar projections about Abbey's future learning potential based on her current interest in mobile devices:

> I think that [Abbey's] going to do great things and that technology is going to continue to help her grow because that's how she's been learning. That's what she gravitates towards. Some like books. Some like laptops, you know? Her thing is going to be either my phone or the tablet.

Although Reina and Molly were optimistic about the learning potential of new media, mothers Natasha and Melissa expressed a mix of concerns over negative aspects of new media and made attempts to mitigate any harmful influence. Said Natasha:

> It's good to see a smile on [Jeremiah's] face and the way it's made him happy and brought him interest and joy and stuff. In another way, I see almost an addiction or a point where it's hard to put that tablet down, and I wonder how much I should be concerned about that.

Melissa tried to preemptively limit her five-year-old son Lucas's access to digital media in anticipation of pervasive technology use in his future classrooms, as well as concerns about problematic media use among autistic teens:

> I really feel nervous about the iPhone and the iPad because right now I have complete control over the kids, and at some point, I won't. . . . I think once they go to school, it seems like it's part of the curriculum now, using iPad. . . . I really want them to know how to have a conversation, especially Lucas. That's my biggest fear. . . . I'm afraid of what's going to happen when he gets on the Internet or video games. You always hear about that. [Autistic kids] and video games, especially when it's their only place where they feel comfortable because they don't have to make any efforts to interact with people.

Recalling Rosie and Jessie's discussion of preparing their child for their death, Peter also discussed the decision for his son Danny to use an iPad as an assistive communication technology with his teachers and therapists as opposed to a different electronic system, and how that choice was strongly influenced by thoughts of his own future passing. "We're going to die one day," Peter said, speaking of himself and his wife. "When that happens, I need whoever is dealing with my kid to be able to deal with my kid. [The iPad] has a much better chance than a [Dyna]Vox, or a talker." Peter imagined a scenario in which, in the absence of himself and his wife, Danny's ability to communicate depended on others' comfort with his speech-generating device and their greater familiarity with Apple products than with specialized assistive technologies.

Future Employment

A child's independent skills with technology allowed some parents to envision a pathway for their child's future employment, both in terms of job training via technology and work in the technology sector. Speaking for himself and his wife, Phil spoke of how technology was central to understanding his son Chris's future: "To see him moving things or to flip the iPad around, when we saw that, our future view for Chris went up." Securing employment was one aspect of Phil's "future view" for Chris, including the possibility of food service work. He noted how Chris's dexterity with the iPad could hypothetically be helpful in this regard: "If I work as a cashier at McDonald's . . . I need to operate the pad of an iPad. If I can operate that, then I'm good to go."

Besides working-class jobs that required basic technology skills, other parents spoke of their child's future as one involving high-tech work. "There's no question where this kid is going," said Norah of her son Max. "This kid is going to math, computers. We have these snap circuit things, he's all over it." Speaking about her son, Robert, Gail noted, "As far as technology wise, I feel like he loves it so much, maybe that's something that he could excel at and work in that kind of industry." Natasha's son, Jeremiah, was currently taking online coding classes geared towards kids, and she felt that the program was influencing how Jeremiah himself saw his career prospects: "A year or two ago he said he wanted to work for Minecraft. . . I think this learning how to program was making him feel like he was working toward that object."

Nonfuture Projections

Several parents notably distanced themselves from making future projections, especially idealized versions. When it came to her son's future media and technology use, Melissa was trying to focus more on the present than this digital future, as she shared, "I'll take it one step at a time. When we get to a point where it will be something that I have to face, then I'll learn about all the good and the bad at that time." For some, not thinking about the future involved consciously focusing on the present or reflecting on the immediate past. With Nikki, this focus on the present was due to recent positive changes in Emma's social, emotional, and communication skills and a fear of reversal of that progress. Said Nikki, "We're just in the moment right now, because [Emma] has made such great gains in a short amount of time. We're very, very fortunate, but we're also cautious to know that she could still regress at any time." Molly expressed a similar perspective: "I try not to think that far ahead because the unknown stresses everyone out. Right now, we're really focusing on now, and [Abbey] has improved so much within this last year."

Religion can play a significant role in how some parents understand the future as compared to the present. Nour, for example, explained that her faith informed her ideas about the future and her lack of full control over it. "I am also a Muslim," she said, "so I believe that there are certain things that we can control and certain things that are predetermined." This faith heavily shaped her understanding of her son Karim's future trajectory, as she reflected, "I do have an absolute faith in God that Karim will keep progressing, and he has been keeping progressing."

Some parents made distinctions between thinking about the future, making future plans, and executing on those plans. Hamza, for example, was in the country on a temporary postgraduate student visa. When I asked how far ahead, if at all, he planned for Saaida's services and schooling, he replied, "I actually have not planned, no." That kind of planning, he said, was best left to her teachers and therapists: "I don't know how to treat. How they tell me to treat Saaida, that I'm following. I don't have a specific plan." He was strategizing, though, about how to prolong his stay in the U.S. and delay a return to his home country of Bangladesh: "If I go back there, then again her condition would be deteriorated. I'm now thinking how I can stay here four, five years. There's my planning."

For Danae, making plans for her son's future would happen in the future, but not now. "I didn't plan nothing yet because he just going to start kindergarten," she said. "Then once he start kindergarten, then I'll start planning." School would be the start of planning, according to Danae, and since her son Anthony was *pre*-school (as in nursery school), it was before the time to plan. Danae herself had not completed any schooling beyond high school, and she lacked the social, cultural, and economic capital required of parents for making such detailed projections. The ability to make and act on future plans was not something all parents could attempt to control, particularly considering factors such as their immigration status and socioeconomic background.

Discussion and Future Directions

In this article, I have employed ethnographic-inspired methods and grounded theory to illustrate how individuals' aspirations, ideals, and fears about the future are rarely if ever just about technology, despite the centrality of the technological in popular conceptions of "the future." By focusing on the intersections of disability and parenting, this research joins a growing body of work in critical disability media studies (Ellcessor & Kirkpatrick, 2017) and feminist disability studies (Singh, 2016), widening the space where media, communication, and STS scholars can work through limiting and narrow articulations of the future in technology and society.

I have introduced "future talk" to describe everyday imaginaries of the future that exist in relation to other future discourses, heeding the call among cultural sociologists to study the "possibly contradictory and surprising ways" (Mische, 2009, p. 702) in which future projections influence social interaction. Linear progress stories often occlude multiple visions of the future (Tsing, 2015) and trajectories shaped by unexpected contingencies (Strauss, 1993). As the above analysis illustrates, it is nearly impossible to isolate the individual, social, and technological from any one person's reflections on "the future" as well as the nonfuture.

I discovered a productive friction between the various future discourses, at times overlapping and in other instances diverging. Parents like Nikki, Nour, and Molly explicitly said they did not or tried not to think about the future, when in fact they did upon analysis of their transcripts. Even when discussing technology, parents such as Anne did so in relation to the future language that they had on hand, a vocabulary that was more about them, their child, or society in a broad sense than "the future of technology" in an expert or industrial sense. Though this article emerges from a broader study that centers technology rituals, it simultaneously decenters technology by approaching the future as a social and material force (Appadurai, 2013).

In regard to empirical work on the future of parenting, disability, and technology, this study confirms and expands upon limited prior findings. In their ethnographic work with parents of young children, Livingstone and Blum-Ross (2018) identified two contrasting narratives about the digital future: romantic and instrumental. In the former, technology affords opportunities for the child's self-actualization, whereas in the latter, it offers advancement. They additionally identify a narrative around precarity, in which technology is necessary for meeting the demands of a socially and economically unstable world. This is reflected in their interview with the mother of a girl on the autism spectrum who mirrors Phil, Norah, Gail, and Natasha in discussing the hope that technology will enable more accessible, enjoyable, and meaningful employment for her child in the coming years. The expanded focus on this population in my study highlights how future talk may be rooted in a child's needs that exist now and those that might be addressed later through technological means that afford greater access to a fulfilling life.

This study also introduces new directions for research on young people with disabilities and the digital future. One such area is the growth of hiring programs in North America and Europe focused on recruiting autistic young adults into the technology sector (Cook, 2012). What future imaginaries do these programs draw on, and what kinds of futures might they both enable and limit? Such programs should unpack and address the strengths in recruiting a culturally diverse disabled workforce of differing gender identities and class backgrounds. For children on the autism spectrum like Saaida, Karim, and Anthony—who do not reflect the U.S. high-tech workforce majority by virtue of their gender, race, ethnicity, class, and immigration status—what place do they have in the "future of work"? Subsequent research might explore how employers address the unique challenges that persons who bring these additional assets might face in the processes of employment procurement and workforce management.

Discourses of future talk can also fundamentally inform research on technology, society, and both imagined and realized futures by mapping how individuals orient themselves to the technological future, as well as orient technology to their individual futures. First, how do people prepare for the many directions their lives may take, and what do they understand the role of technology to be in navigating that uncertain path? In the cases presented here, preparing for the unpredictability of a child's development, planning for a child's transition into adulthood, and awaiting technology that could inevitably aid or thwart those plans all shape how parents of disabled youth conceive of the digital future. It is also striking that few parents discussed their child's role in planning for their own future, but that may be partially explained by the young age of the child participants.

How do people's perspectives on social progress—whether or not conditions exist for people to reach their full potential, and if those conditions are improving, deteriorating, or staying the same—shape imagined future uses of technology and future functions of technology in society? Parents' conceptions of the digital future were bound to disability issues, such as special education, and population-level issues, such as immigration, that affect people with disabilities, reflecting Kafer's (2013) notion of disability as intrinsically defined by political contexts and relational connections. When it came to technology, parents were less concerned with how technology would fix or erase their child's disability and more focused on how technology might advance accommodations and supports for their child, adhering more to a social model of disability than a medicalized one.

What choices do people make in their daily lives when they consider technological change to be inevitable and beyond their control, leading to both positive and negative outcomes? Peter, for instance, imagined the iPad as his son's means of communication after his future passing, and Melissa anticipated needing to be vigilant about monitoring Lucas's media and technology use. But it is impossible to know what technologies will even exist in those futures, reflecting an underlying tension between technological determinism and planned obsolescence. Technology will always make an impact, but the specific devices themselves are not designed or intended to be around long.

And lastly, if we reposition ourselves to live in the "satisfactory 'now'" (Dorwart, 2018) instead of being overly focused on the future, what new imaginaries are generated for technology, society, and their interrelation? The data presented here speak to a very human need to find a way to live with the present while either anticipating or bracketing what technology, and the future, might hold. The reasons for some parents' partial and complete rejections of future thinking, and the nature of this distancing, were highly varied. With Nour, for instance, focusing on the "now" was a sort of spiritual discipline. Others were less oriented towards achieving satisfaction in the now and more on a pragmatic approach that aimed to address and manage challenges as they occur, as well as to appreciate the unexpected joys in life.

These complex and dynamic relationships must be accounted for in future imaginaries, for not every personal or political vision must be a vision of the future (Edelman, 2004), including visions of technology. Future projections made through technology can often uphold the status quo to deleterious effects. Focusing on the future does not absolve technologists from present responsibilities and past accountabilities that affect the “future of” life beyond technology. In closing, future talk can be employed by scholars of communication technology to map how discussions of the future manifest in everyday life, both together with and apart from technology.

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