

## The Curb-Cut Effect and the Perils of Accessibility without Disability

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The *curb-cut effect* is an oft-observed phenomenon that occurs when technology designed to dismantle barriers to the accessibility of society for disabled people affords positive benefits—positive externalities or spillovers in economic terms<sup>1</sup>—for nondisabled people.<sup>2</sup> However, this chapter argues that unduly focusing on those benefits risks subordinating the needs and interests of disabled people in the development and application of disability and communications law aimed at technology accessibility in cyberlaw contexts.

Given the long-running discourse on the spatiality of cyberspace and its relationship to physical space,<sup>3</sup> it should come as no surprise that a critical phenomenon at the intersection of cyberlaw and disability law—the curb-cut effect—has its roots in the built world’s rhetoric and technology. Indeed, the titular curb-cut effect is observed with the built-world technology of literal “curb cuts”—ramps “cut” into (or built up to) curbs on sidewalks and other walkways<sup>4</sup> that grew to prominence in part after a group of UC-Berkeley student wheelchair users who called themselves the “Rolling Quads” snuck out at night with attendants and literally mixed their own concrete to build ramps.<sup>5</sup> Physical curb cuts are nominally intended to ensure that disabled people who use wheelchairs, scooters, walkers, or other mobility devices can safely navigate to and from a walkway, avoid the danger of traveling in the street, where they risk being struck by cars, and access homes, public accommodations, and other buildings that must be accessed from the walkway. Yet physical curb cuts can be used to beneficial effect by nondisabled people pushing strollers, hand trucks, or grocery carts, or pulling luggage, runners, cyclists, skateboarders, roller-bladers, people who do not identify as disabled but have temporary injuries that require the use of mobility devices, and people

using other wheeled tools and conveyances to easily transit to and from walkways that might otherwise be difficult or impossible to navigate.

More generally, then, the curb-cut effect has come to be known as the positive spillover that occurs for society (or some members thereof) when accessibility-oriented technology designed for disabled people benefits nondisabled people for purposes other than accessibility. Examples from the built world abound—for example, replacing or supplementing steps with ramps, adding elevators, widening entrances and doorways, clearing floor paths, and so forth, all confer similarly pluralistic navigational benefits to nondisabled people.

In cyberspatial discourse, the built-world rhetoric of curb cuts has transitioned to a shorthand for accessible affordances of virtual spaces, such as the inclusion of closed captions and image descriptions, the construction of web architecture to be compatible with screen readers, and software configuration settings to provide legible contrast for color-blind users. More generally, it includes the deployment of a wide range of technologies and techniques in and adjacent to virtual spaces to ensure their accessibility and usability by disabled users and compatibility with the assistive technology they use.

As curb cuts become virtual, the curb cut effect's built-world origins likewise have given way to an increasingly prominent role in cyberspatial contexts, as the first section of this chapter details. And, as the second section explains, the curb-cut effect is often cited as a benefit or even a justification for innovation in assistive technology and disability law and policy.

But as the third section argues, the Effect's repeated invocation over the past several decades has resulted in erasure, to varying extents, of disabled people from innovation and disability law and policy, with serious harms to disabled people and their civil and human rights to accessibility. This chapter closes by endorsing, highlighting, and building on the work of disability and design scholars who have raised concerns about the potential harms of the curb-cut effect—the benefits of spillovers notwithstanding—and concludes that law and policy efforts at the intersection of disability and technology should be wary of invoking or relying on the effect.

#### THE CURB-CUT EFFECT, TECHNOLOGY, AND UNIVERSAL DESIGN

The curb-cut effect is especially widely observed in information and communications technology.<sup>6</sup> Famous early examples chronicled by Steve Jacobs include the typewriter—initially designed for blind writers; the telephone—initially designed as part of Alexander Graham Bell's work with deaf people and evolved as part of Bell Labs' work on a suite of sound technology including the hearing aid; teletypewriters (TTYs), real-time communications devices that paved the way for

both ARPANET, the predecessor to the internet, and modern instant messaging technology; and many more.

An oft-cited modern example is closed captioning—designed to convey spoken dialogue on video programming for deaf and hard of hearing viewers, but also used to improve access in bars, restaurants, hospitals, and other public or quasi-public places where social norms around noise prevent anyone from hearing a television’s audio or require it to be muted. Another is optical character recognition, initially designed to help transform books for blind and other print-disabled readers but later applied in a wide range of business and other contexts.

The curb-cut effect is not always purely utilitarian, and often materializes in cultural and aesthetic contexts.<sup>7</sup> In another modern example, the popular Netflix show *Bridgerton* contains graphic audio descriptions of sex scenes widely enjoyed by nondisabled “superfans” of the show in what the Wall Street Journal describes as a “saucier” version of the curb-cut effect.<sup>8</sup>

The curb-cut effect has also come to be closely associated with the “Universal Design” movement. Generally speaking, Universal Design converts the descriptive observation of the curb-cut effect into a normative edict: technology should be designed to be accessible and usable by disabled and nondisabled people alike—“the broadest possible range of users.”<sup>9</sup> A “blue ribbon” report prepared by a panel of advocates, technologists, and industry members in 1994 boldly declared that “Universal Design Is The Solution” to the problematic barriers to technology access faced by disabled people.<sup>10</sup>

#### THE CURB-CUT EFFECT IN THE LAWS OF THE BUILT WORLD AND CYBERSPACE

The appeal of the innovation spillovers of the curb-cut effect has become so well-trod over time that it is often invoked in law as a justification for legal and policy interventions to improve accessibility for disabled people. For example, the Department of Justice waxed specifically about the curb-cut effect in justifying the benefits of its regulations implementing Title II of the Americans with Disabilities Act, which bars discrimination on the basis of disability in state and local government services:

*Use benefits accruing to persons without disabilities.* . . . Even though the requirements were not designed to benefit persons without disabilities, any time savings or easier access to a facility experienced by persons without disabilities are also benefits that should properly be attributed to that change in accessibility . . . and ideally, all should be part of the calculus of the benefits to society of the rule.<sup>11</sup>

The curb-cut effect likewise played a large role in early discourse around the application of disability law. In one foundational example, Paul Schroeder of the American Council of the Blind, testifying at a hearing in the lead-up to the

Telecommunications Act of 1996, urged Congress to “ensure that electronic curb cuts are built into the information highway” and described technology accessibility mandates as an “important first step toward universal design”—an approach he described as making technology “equally accessible to and usable by the vast majority of individuals, including people with disabilities.”<sup>12</sup>

Though telecommunications law is often missing from cyberlaw discussions, the curb-cut effect has featured prominently in the vein of telecommunications law and policy directed at the accessibility communications and video technology. While many of these examples predate the internet, I join authors including Karen Peltz Strauss in emphasizing the critical foundation role of telecommunications law in ensuring the accessibility of the internet technologies more traditionally associated with cyberlaw.<sup>13</sup>

For example, advocacy in the lead-up to the closed captioning provisions of the Television Decoder Circuitry Act of 1990 (TDCA)<sup>14</sup> specifically focused on the benefits of closed caption as a tool to improve literacy, including reading comprehension, language retention, and word retention.<sup>15</sup> In the final version of the TDCA, Congress explicitly alluded to the curb-cut effect, including specific findings that “closed captioned television can assist both hearing and hearing-impaired children with reading and other learning skills among adults” and “assist those among our Nation’s large immigrant population who are learning English as a second language with language comprehension.”<sup>16</sup>

In more modern contexts, the FCC has also deployed this rhetoric to support internet accessibility measures. When the FCC extended the ’96 Act’s closed captioning requirements to internet-delivered programming under the Twenty-First Century Communications and Video Accessibility Act, Commission Mignon Clyburn declared that “when captioning becomes a part of universal design, everyone wins,” noting that in the context of captions in education, “hearing students see how words are spelled, and the visual text reinforces the message that they hear,” that “all of this helps them learn how to read and write.”<sup>17</sup>

Though an exhaustive survey is beyond the scope of this chapter, these examples illustrate how the curb-cut effect—as well as Universal Design and other integralist notions—has been an implicit or explicit basis for a degree of both accessibility-focused technological activity and law and policy developments aimed at improving the accessibility of technology.

## THE PERILS OF THE CURB-CUT EFFECT

While the curb-cut effect has, as a result, helped bolster a range of well-intended and sometimes essential accessibility efforts, disability and design scholars including Liz Jackson<sup>18</sup> and Alex Haagaard<sup>19</sup> have begun to question its invocation. The Effect’s addictive quality, both to policymakers and technologists, is one that risks substantial harms to disabled people by systematically losing the disability forest

for the accessibility trees, subordinating (albeit unintentionally) disabled people to nondisabled people—addressing the interests and needs of disabled people only to extent their interests converge.<sup>20</sup> The harms of unjustly relegating the interests of disabled people to the often-narrow bounds of this convergence—however inadvertent—is a series of denials of quality, individualized accommodations, marginalization of disabled designers, unavailability and unaffordability of accessible products for disabled users, and the fluid invocation and revocation of disabled users in narratives about policy, law, and innovation without their consent or consultation.

### ACCESSIBILITY AND QUALITY

One critical area where valorization of the curb-cut effect can disserve disabled people is in fostering misperceptions about the quality of technology actually required to break down accessibility barriers, and leading to nominal improvements that don't adequately serve the needs of disabled people. As Haagaard notes, "when designs that were meant to serve disabled people become 'for everyone,' disabled people and their specific needs as users often end up getting erased."<sup>21</sup>

In one foundational example, Haagaard analyzes the built-world technology of actual curb cuts, noting that most nondisabled people taking advantage of curb cuts simply need a sloped surface, not "too steep . . . and free from large cracks, holes, or dramatically uneven tiles."<sup>22</sup> But wheelchair users, Haagaard explains, need a range of additional features, such as a level transition and no gaps between the bottom of a curb cut.<sup>23</sup>

Shifting to a cyberlaw context, Haagaard's example rhymes with the delay faced by the deaf and hard of hearing community in seeking rules improvements to the quality of closed captions for video programming. After the initial implementation of closed captions in the late 1990s and early 2000s, they were regularly beset with inaccuracies, missing portions, long delays, and other features that limited to some degree their utility to people actually relying on them to convey the ground truth of video programming content.<sup>24</sup>

Quality issues can go beyond the basic fitness for purpose of accessibility measures in cyberspace to implicate broader issues of erasure. For example, Thomas Reid notes that audio description—the insertion of aural descriptive narratives about visual components of video during pauses in the soundtrack—frequently omits visible details about the race, ethnicity, and skin color of on-screen characters unless they are deemed by the describer to be sufficiently integral to the plot of a program to warrant specific mention.<sup>25</sup> This literal imposition of "color blindness," as Reid describes it, harms blind viewers by denying them access to the implicit racial dimensions of content while simultaneously erasing the identity of on-screen actors in a way that exacerbates long-running efforts to ensure representation in film and television.<sup>26</sup> Yet leading guidance on audio description quality subordinates blind audiences' interest in knowing the visual characteristics

of on-screen actors to the interests of content creators, emphasizing that “content creators have the discretion and final authority over the content of audio description . . . consistent with the First Amendment” and suggesting that individual characteristics of on-screen actors, including skin color (and visible disabilities), need be described only “as relevant to the content” and need not “be described in each and every circumstance.”<sup>27</sup>

More generally, implicit in Haagaard’s analysis is that the proliferation of accessible technology via innovation and disability law and policy often follows initial enthusiasm for universally designed features with implementation and enforcement fatigue or even skepticism that leave details critical to disabled people unaddressed because no justifying benefit to nondisabled people is driving momentum forward. These themes are especially likely to materialize in cyberspatial contexts where generativity facilitates initially enthusiastic development of nominally accessible technologies that falls by the wayside as the difficulty of improving its quality increases and the perceived spillovers decrease.

One response to this critique is that it positions the perfect as the enemy of the good. Indeed, the quality of technology does not always reduce to a binary question of accessible or not. The foregoing examples illustrate that quality often implicates questions of degree and line-drawing about what, exactly, adequacy entails. And as Elizabeth Emens has persuasively argued, there is critical normative and practical import to integralist notions of highlighting benefits of accessibility to nondisabled people.<sup>28</sup> Nevertheless, even in situations where spillovers bring accessibility forward to some degree, the limits of those improvements not only may fall short of serving the needs of disabled people, but politically and legally constrain the prospects of making necessary improvements that can’t be justified by reference to spillovers.

#### DENIAL OF ACCOMMODATION

Emphasis on the curb-cut effect can have more binary, existential effects beyond quality. These effects can become particularly pronounced in scenarios where measures to overcome technological inaccessibility must become more individualized, customized, and justified by reference to anti-subordination goals, rather than Universal Design.

Haagaard has taxonomized accessibility barriers and measures spatially into (1) physical barriers, such as curbs, and measures such as ramps to overcome them; (2) sensory barriers, such as aural and visual formats, and measures such as closed captions to overcome them; (3) cognitive/psychological/cultural barriers such as complexity and measures such as plain language translations to overcome them; and (4) temporal barriers that prevent people from individually participating in activities at particular places and times, and measures such as flexible asynchronicity to overcome them.<sup>29</sup> Haagaard explains that institutions

are far more likely to support measures to overcome and correct physical and sensory barriers; less likely to support measures to overcome cognitive/psychological/cultural barriers; and even less likely to support measures to overcome temporal barriers.<sup>30</sup>

It is no surprise, then, in Haagaard's taxonomy, that measures to address physical and sensory barriers that can be deployed in a relatively turnkey, universalized fashion with positive spillovers for nondisabled people are more likely to be supported—in the cyberspatial context, the deployment of closed captions or compliance with basic standards for web development, for example. It is likewise no surprise that institutions are less likely to support cognitive/psychological/cultural and temporal measures that must be individually customized or allow flexibility for smaller groups' or individuals' needs, and thus are less likely to yield obvious positive spillovers for nondisabled people.

On the spectrum of this taxonomy, commitment to accessibility declines as disabled people increasingly emerge from a generic backdrop of a hypothetical, heterogenous crowd who all might benefit from generic accessibility interventions and increasingly confront the institution with their individual disabilities and needs and identify barriers that are more specific to them.<sup>31</sup> What results is a decidedly nonuniversal commitment to accessibility, materializing in institutions undertaking accessibility efforts that maintain barriers to disabled people when removing them does not serve the institution's nondisabled constituencies.

#### DENIAL OF CREDIT AND SUPPLY-SIDE DESIGN

Basic dysfunctionality of technology for disabled people is not the only problem that flows from the curb cut effect's (and Universal Design's) risk of erasure—it cuts through policy to the broader innovation policy of cyberspace—with ableist (and often sexist and other discriminatory) results.

In the built world, Liz Jackson has detailed how universal design often reframes disabled people as “‘inspiration’ rather than active participants,” writing their “integral [role in] design processes” out of historical narratives.<sup>32</sup> Jackson chronicles the example of OXO's universally designed housewares, some of which were conceived by Betsey Farber as hacks to make her kitchen tools easier to use with arthritis, but which were popularly credited to, as she described it, “the brilliance and kindness of [her husband] who made these tools for his poor crippled wife so she can function in the kitchen.”<sup>33</sup> Jackson highlights examples of erasure in cyberspace, such as Wayne Westerman, an electrical engineer with repetitive stress syndrome that developed touch-screen technologies foundational to modern smartphones and tablets, including the iPhone.<sup>34</sup>

This erasure is likely to materialize in cyberspace as well. For example, discourse about digital innovation is likely to disregard or minimize the contributions of disabled people because of what feminist scholar Laura Forlano has described as

disabled designers,' hackers,' and makers' (though they may not identify as such) complex "socio-technical engagement" with their own bodies.<sup>35</sup>

Jackson notes that the "unique experiences and insights" of disabled people "enable [them] to see what's available to make things accessible," but that their "contributions are often overshadowed or misrepresented" in favor of "a story with a savior as its protagonist."<sup>36</sup> Jackson suggests that properly attributing credit for their contributions is critical to "attract disabled people to design" in the first instance.<sup>37</sup> Chris Buccafusco relatedly notes that this credit is broadly important to the success of supply-side innovation policies, such as patent law, in spurring accessibility by establishing "signaling value" for disabled designers, both for purchasers of their products and themselves.<sup>38</sup> More broadly, Jackson and Haagaard identify how these dynamics can "flatten" and erase disabled cultures and histories, often in ways that especially harm people with invisible disabilities, and intellectual and developmental disabilities, and Black and indigenous disabled people.<sup>39</sup>

#### DENIAL OF DISTRIBUTION AND SUPPLY-SIDE USE

These supply-side problems of the curb-cut effect can affect disabled people not only as innovators, but as consumers of technology.

In one foundational example, Jackson and Jai Verdi describe the long-running phenomenon of "adaptive clothing" designed for—and often claimed to be designed in collaboration with—disabled users.<sup>40</sup> These designs include, for example, featured double fabric under the arms for users of crutches, stylish bags to store hearing aid batteries, undergarments with Velcro closures, and other designs.<sup>41</sup> But as these designs became appropriated by large clothing labels, marketing narratives began erasing disabled people out of their roles as designers of and users of "adaptive clothing," and of their inspiration for the designs, for which clothing labels often claimed to be the originator.

As Verdi and Jackson explain, this period of inspiration is followed by a shift toward optimizing for the "mass appeal" of these products and erasure of the disabled user—and even the word "disabled"—from the sale of the product.<sup>42</sup> Finally, the product is made inaccessible to disabled users—priced out of reach<sup>43</sup>—or sold in limited, inaccessible venues.<sup>44</sup>

#### WRITING DISABILITY AND DISABLED PEOPLE OUT OF ACCESSIBILITY

The curb-cut effect—along with Universal Design and other techno-social-political phenomena, including the infamous "Disability Dongle"—perpetuate what Jackson, Haagaard, and Rua Williams describe as a process of "reiterating a spectral technology for a virtual or hypothetical user [with disabilities]," thereby "continually re-produc[ing] the virtual user as an idea that is consumed



and shared by nondisabled audiences online.”<sup>45</sup> Connor Scott-Gardner and Alexa Heinrich have identified examples of this phenomenon, including the coopting of alternative text fields initially designed to contain descriptions of images for screen reader users for other material, such as jokes<sup>46</sup> or copyright management information such as photo credits,<sup>47</sup> and aesthetically pleasing ramps that are not actually accessible to wheelchair users, which take the curb-cut effect so far that disabled people are ultimately removed from the calculus altogether.<sup>48</sup>

By providing a foundation for writing disabled users in and out of narratives as is convenient for broader political, policy, technical, or economic reasons, the curb-cut effect can ultimately facilitate accessibility law, policy, and innovation—in cyberspace as well as the built world—from which disabled people do not benefit (or do not benefit adequately). Put in economic terms, the curb-cut effect can ultimately result in the conversion of accessibility from the primary goal of economic and legal/policy activity—from which positive spillovers for nondisabled people flow—to a spillover itself. That is, the curb-cut effect converts accessibility into an externality of an activity whose actors are superficially interested in accessibility but which does not treat disabled people as its primary constituents, or perhaps even as constituents at all.

Finally, the curb-cut effect’s fluid insertion and removal of virtual/hypothetical disabled users from policy, law, and innovation narratives can happen over time. One particularly salient example is that of the widespread proliferation of video-conferencing—and, more generally, remote work—in the wake of the COVID-19 pandemic.<sup>49</sup> Though remote work was a frequently requested accommodation of disabled employees—for example, with mobility disabilities—prior to the pandemic, the courts and the Equal Opportunity Employment Commission routinely were skeptical and dismissive of treating remote work as a reasonable accommodation under Title I of the Americans with Disabilities Act.<sup>50</sup> The needs of disabled people simply were rejected from the narrative of in-person work.

Yet as the pandemic progressed and remote work become a regular feature of American office culture, disabled people often were written back into the narrative, as glowing commentary of the benefits for disabled people of remote work proliferated.<sup>51</sup> Accessibility literally became the spillover of a social phenomenon—for example, remote work—that disabled people had long demanded as an accommodation. At the same time, the shift to remote work created a wide range of negative externalities for accessibility, introducing new barriers for deaf and hard of hearing people, who often faced participating in meetings without captioning and sign language interpretation—a community, again, largely written out of the narrative.<sup>52</sup> And as executives have begun to pivot back to the alleged merits of in-person work, disabled people are starting to be written back out of the story.<sup>53</sup>

. . .

The curb-cut effect persists as an appealing, addictive narrative for policymakers and innovators looking to justify accessibility interventions and investments by reference to benefits beyond accessibility and to nondisabled people. But disability and design scholars rightfully suggest skepticism of deploying or relying on the effect. Policymakers and advocates should stay focused on accessibility for the sake of the civil and human rights of disabled people, and properly credit and respect their agency in narratives about accessibility, design, innovation, law, and policy.

## NOTES

The opinions expressed here are my own and do not necessarily reflect those of my clinic, clients, any institutional affiliation, or anyone else. Thanks to Liz Jackson for her extraordinary generosity with conversations that seeded and crystalized many of the insights in this chapter, and for her foundational work on the perils of the curb-cut effect and an array of related concepts at the intersection of disability, technology, and design, including with her coauthors and collaborators, Alex Haagaard, Jai Virdi, and Rua Williams, whose work I am likewise deeply grateful for. Liz and Alex, who are not institutionally affiliated, have experienced significant citational injustice toward their work. See Liz Jackson, Alex Haagaard, and Rua Williams, *Disability Dongle* (Apr. 19, 2022), <https://blog.castac.org/2022/04/disability-dongle/>. It is my great hope that this chapter both celebrates their work as scholars and draws attention to its import for cyberlaw/technology law and disability law and policy. In equal measure, my thanks to Amanda Levendowski and Meg Jones for helpful framing conversations and for the generous opportunity to participate in this volume, and to Karen Peltz Strauss, Rabea Benhalim, Kristelia Garcia, Margot Kaminski, Nadav Orian Peer, Scott Skinner-Thompson, Bernard Chao, Zahra Takshid, Viva Moffat, and Doron Dorfman for helpful feedback along the way, and to all my coauthors in this volume for their collective dedication of time and spirit. All errors and omissions are my own.

1. As Natalie Wright concisely explains, across disability communities, “some may prefer identity-first language (e.g., ‘disabled person’), or person-first language (e.g., ‘person with a disability’).” *Functional Fashions*, Milwaukee Art Museum (May 7, 2019), <https://blog.mam.org/2019/05/07/functional-fashions/>. Following Liz Jackson, Alex Haagaard, and Rua Williams, this chapter uses identity-first language consistent with usage in their scholarship (see Jackson, Haagaard, and Williams in acknowledgements at top of notes), but acknowledges the diverse range of perspectives on this topic and the preferences of others for person-first language.

2. E.g., Angela Glover Blackwell, *The Curb-Cut Effect*, STANFORD SOCIAL INNOVATION REVIEW (Winter 2017), [https://ssir.org/articles/entry/the\\_curb\\_cut\\_effect](https://ssir.org/articles/entry/the_curb_cut_effect). Elizabeth Emens has lauded the importance of and provided a rich taxonomy of spillover benefits of disability law obligations in the context of ADA workplace accommodations. See generally Elizabeth F. Emens, *Integrating Accommodation*, 156 U. PA. L. REV. 839, 840 (2008).

3. See generally Julie E. Cohen, *Cyberspace As/and Space*, 107 COLUM. L. REV. 210 (2007).

4. See generally Department of Justice, *ADA Best Practices Tool Kit for State and Local Governments*, chap. 6, <https://www.ada.gov/pcatoolkit/chap6toolkit.htm>.

5. E.g., 99% Invisible, *Curb Cuts*, <https://99percentinvisible.org/episode/curb-cuts/> (quoting and citing Deb Kaplan, Ed Roberts, and Steve Brown).

6. See generally Steve Jacobs, *Section 255 of the Telecommunications Act of 1996: Fueling the Creation of New Electronic Curb Cuts* (1999), <http://www.accessiblesociety.org/topics/technology/eleccurbcut.htm>.

7. Cf. Jasmine E. Harris, *The Aesthetics of Disability*, 119 COLUM. L. REV. 895, 896 (2019).

8. Robbie Whelan, “*Bridgerton*” Is About to Get Saucier, WALL STREET JOURNAL (Mar. 25, 2022), <https://www.wsj.com/articles/bridgerton-superfans-embrace-audio-option-that-narrates-steamy-on-screen-action-11648223396>.

9. See generally Eric Bergman, Alistair Edwards, Deborah Kaplan, Greg Lowney, T.V. Raman, and Clayton Lewis, *Universal Design: Everyone Has Special Needs*, Computer-Human Interaction (CHI) Conference (Apr. 1996), <https://dl.acm.org/doi/pdf/10.1145/257089.257893>.

10. Deborah Kaplan and John De Witt, *Telecommunications and Persons with Disabilities: Building the Framework: The Second Report of The Blue Ribbon Panel on National Telecommunications Policy*, World Institute on Disability (1994), <https://park.org/Guests/Trace/pavilion/framework1.htm>. Universal Design, and related concepts such as integralism, are often also framed in complementary—and sometimes adversarial—terms relative to the anti-subordination goals of disability law. See generally Ruth Colker, *Anti-Subordination Above All: A Disability Perspective*, 82 NOTRE DAME L. REV. 1415, 1416 (2007) (discussing the tensions and dynamics of integration and anti-subordination approaches). Liz Jackson has also critiqued the evolving concept of “inclusive design” along similar lines. @elizejackson (July 5, 2022), <https://twitter.com/elizejackson/status/1544359749709447168>. In consideration of ongoing precarity and reliability of Twitter, archives of this Tweet and others referenced in this chapter are on file with author.

11. Department of Justice, *Nondiscrimination on the Basis of Disability in State and Local Government Services*, Final Rule (Oct. 11, 2016), [https://www.ada.gov/regs2010/titleII\\_2010/titleII\\_2010\\_regulations.htm](https://www.ada.gov/regs2010/titleII_2010/titleII_2010_regulations.htm) (emphasis original).

12. See S. 1822, *The Communications Act of 1994: Hearing Before the S. Comm. on Commerce, Science, and Transportation*, 103rd Cong. 790 (1994) (emphasis added), <http://archive.org/details/s1822communicatioounit>.

13. See generally Karen Peltz Strauss, A NEW CIVIL RIGHT (2006); Blake Reid, *Two Paths for Digital Disability Law*, 65 COMMUNICATIONS OF THE ACM 36 (May 2022), <https://cacm.acm.org/magazines/2022/5/260349-two-paths-for-digital-disability-law/fulltext>.

14. Pub. L. 101–431 § 3 (Oct. 15, 1990) (TDCA) (codified at Section 303(u) of the Communications Act of 1934 (47 U.S.C. § 303(u)).

15. See generally Strauss, *supra* note 13 at 230 (2006).

16. TDCA § 2(5)–(6).

17. *Closed Captioning of Internet Protocol-Delivered Video Programming*, Report and Order, 27 FCC Rcd. 787, 897 (2012).

18. E.g., Liz Jackson, @elizejackson (Nov. 17, 2021), <https://twitter.com/elizejackson/status/1460970716912930816> (on file with author).

19. E.g., Alex Haagaard (@alexhaagaard), Twitter thread (May 20, 2020), <https://twitter.com/alexhaagaard/status/1263216724448612353> (on file with author).

20. Cf. Derrick A. Bell, Jr., *Brown v. Board of Education and the Interest-Convergence Dilemma*, 93 HARV. L. REV. 518 (1980), <https://www.jstor.org/stable/1340546?seq=1>.

21. Haagaard, *supra* note 19.

22. *Id.*

23. *Id.*

24. The Commission adopted quality standards in 2014, though it punted a range of complex issues to a further notice of proposed rulemaking. See generally *Closed Captioning of Video Programming*, Report and Order, Declaratory Ruling, and Further Notice of Proposed Rulemaking, 29 FCC Rcd. 2221, 2291–2312, ¶¶ 121–67 (Feb. 24, 2014).

25. Thomas Reid, *In Living Color: Audio Description Looks Past People of Color*, BITCH MEDIA (Nov. 1, 2021), <https://www.bitchmedia.org/article/color-blind-audio-description-inaccessibility>.
26. *Id.*
27. Recommendation of the Federal Communications Commission Disability Advisory Committee (Oct. 14, 2020), <https://www.fcc.gov/file/19830/download>.
28. Emens, *supra* note 2 at 840.
29. Alex Haagaard, *Notes on Temporal Accessibility* (Mar. 12, 2021), <https://alexhaagaard.medium.com/notes-on-temporal-inaccessibility-28ebcdfib6d6>.
30. *Id.*
31. These confrontations may be mediated under the rubric of what Jasmine Harris has described as the complex “aesthetics of disability.” Cf. Harris, *supra* note 7.
32. Liz Jackson, *We Are the Original Lifehackers*, NEW YORK TIMES (May 30, 2018), <https://www.nytimes.com/2018/05/30/opinion/disability-design-lifehacks.html>.
33. *Id.*
34. *Id.*
35. Laura Forlano, *Hacking the Feminist Disabled Body*, JOURNAL OF PEER PRODUCTION (Mar. 2016), <http://peerproduction.net/issues/issue-8-feminism-and-unhacking-2/peer-reviewed-papers/issue-8-feminism-and-unhackingpeer-reviewed-papers-2hacking-the-feminist-disabled-body/>.
36. Jackson, *supra* note 32.
37. *Id.*
38. Christopher Buccafusco, *Disability and Design*, 95 NYU L. REV. 952, 965 (2020).
39. DSI, *Welcoming Liz Jackson and Alex Haagaard: Designers in Residence for Fall 2020* (July 30, 2020), <https://web.archive.org/web/20220712002702/https://dsi.sva.edu/blog/welcoming-liz-jackson-and-alex-haagaard-designers-in-residence/>.
40. Liz Jackson and Jaipreet Verdi, *Beyond Functional: Unraveling the Long Line of Disability Fashion*, BITCH MEDIA (Nov. 1, 2021), <https://www.bitchmedia.org/article/disability-fashion-history-access-issue>.
41. *Id.*
42. Jaipreet Verdi and Liz Jackson, *Why Won't Nike Use the Word Disabled to Promote Its New Go FlyEase Shoe?*, SLATE (Feb. 5, 2021), <https://slate.com/technology/2021/02/nike-go-flyease-shoe-disabled-design.html>; see also Brendan Dunne, *Disabled People Question Nike Over FlyEase Shoes*, COMPLEX (May 5, 2021), [https://www.complex.com/sneakers/nike-go-flyease-sneakers-for-disabled-people?utm\\_campaign=sneakerstw&utm\\_source=twitter.com&utm\\_medium=social](https://www.complex.com/sneakers/nike-go-flyease-sneakers-for-disabled-people?utm_campaign=sneakerstw&utm_source=twitter.com&utm_medium=social); Connor Scott-Gardner, @CatchTheseWords, Twitter (June 11, 2022), <https://twitter.com/catchthesewords/status/1535597029673541633> (“accessibility doesn’t have to be cool or appealing to non-disabled people for us to talk about it”) (on file with author).
43. *Id.* The problem of pricing accessible technology out of reach of its nominally intended audience is not a new one. See generally Strauss, *supra* note 13, at 217 (describing the high prices that deaf and hard of hearing viewers faced to acquire early closed caption decoders).
44. Liz Jackson and Jaipreet Verdi, *Olay's New Lid Was Made for Disabled People. Too Bad You Can't Find It in Stores*, FAST COMPANY (Nov. 15, 2021), <https://www.fastcompany.com/90696611/olays-new-lid-was-made-for-disabled-people-too-bad-you-cant-find-it-in-stores> (describing similar offerings from Olay, P&G, and LEGO).
45. Jackson, Haagaard, and Williams (see acknowledgments at top of notes).
46. This is a construct long-employed by the popular webcomic xkcd: xkcd.com (accessed June 16, 2022).
47. E.g. Alexa Heinrich, @HashtagHeyAlexa (June 4, 2022), <https://twitter.com/HashtagHeyAlexa/status/1533208238736429061> (on file with author).
48. Scott-Gardner, *supra* note 42.

49. See generally Arlene S. Kanter, *Remote Work and the Future of Disability Accommodations*, 107 CORNELL L. REV. 1927 (2022); Blake E. Reid, Christian Vogler, and Zainab Alkebsi, *Telehealth and Telework Accessibility in a Pandemic-Induced Virtual World*, COLO. L. REV. FORUM (Nov. 9, 2020), <https://lawreview.colorado.edu/digital/telehealth-and-telework-accessibility-in-a-pandemic-induced-virtual-world/>.

50. See generally Kate Strickland, *Remote Work as a Reasonable Accommodation: Implications from the COVID-19 Pandemic*, HARVARD CIVIL RIGHTS-CIVIL LIBERTIES REVIEW (Nov. 4, 2021). Though this example focuses on remote work, similar examples abound in virtual education, telehealth, and other contexts. See, e.g., Reid, Vogler, and Alkebsi, *supra* note 49.

51. E.g., Marcy Klipfel, *How the New Normal of Remote Work Evens the Playing Field for Workers with Disabilities*, FORBES (Dec. 28, 2020), <https://www.forbes.com/sites/forbeshumanresourcescouncil/2021/12/28/how-the-new-normal-of-remote-work-evens-the-playing-field-for-workers-with-disabilities/>; Nicolle Liu, *Neurodiverse Candidates Find Niche in Remote Cybersecurity Jobs*, WALL STREET JOURNAL (Apr. 13, 2022), <https://www.wsj.com/articles/neurodiverse-candidates-find-niche-in-remote-cybersecurity-jobs-11649842380>.

52. See Reid, Vogler, and Alkebsi, *supra* note 49.

53. E.g., Aria Bendix, *Musk Is Pushing Staff Back to the Office, but the Research Is Only Partly on His Side*, NBC NEWS (June 8, 2022), <https://www.nbcnews.com/news/us-news/elon-musk-staff-back-office-research-mixed-rcna32136>. Doron Dorfman describes how suspicion of remote work has arisen during the progression of the pandemic as a version of what he calls “the disability con.” Doron Dorfman, *Pandemic ‘Disability Cons’*, 49 JOURNAL OF LAW, MEDICINE & ETHICS 401 (2021). Jasmine Harris more optimistically argues that the shift toward remote work will require employers to change their approach to accommodations. See Erin Prater, *Long COVID Is a New Disability Affecting Millions of Workers—and a ‘Moment of Essential Innovation’ for Employers, One Lawyer Contends*, FORTUNE (June 5, 2022), <https://fortune.com/well/2022/06/05/long-covid-new-disability-moment-essential-innovation-for-employers-lawyer-contends/>.