Universal Access and Its Asymmetries

The Untold Story of the Last 200 Years

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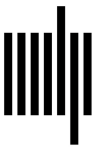

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THE INTERNET

Hush-A-Phone, a funnel-shaped telephone attachment invented in 1921, guided the air propagating the user's voice into the receiver. Three decades later, with more than 100,000 pieces sold, AT&T forbade its use. When Hush-A-Phone Corporation filed a complaint with the Federal Communications Commission (FCC), it ruled in AT&T's favor, identifying the plastic contraption as an "unauthorized foreign attachment" (Brock 1981; Zittrain 2008). However, in 1956, the DC Circuit Court of Appeals ruled against the FCC, opening up the telecommunications arena for innovation.

This court ruling later guided the FCC's 1968 decision on Carterfone, another telephone accessory of sorts—a coupling device that facilitated conversation between one party on a telephone and the other on a two-way radio, making the connection acoustically rather than electrically. Yet AT&T prohibited its use on the ground that the acoustic connection infringed on its system. The FCC ruled against AT&T and decided to allow not only Carterfone, but also electrically connected devices, so long as they did not cause harm to the telephone system, opening the gates for innovations such as the answering machine, the fax machine, and the cordless phone. The great, transformational innovation was the dial-up modem, which enabled computer networking over telephone lines. The rest is history (Brock 1981; Zittrain 2008).

EXPANSION OF THE INTERNET

Stalwarts of the Internet Society[1] mark their telling of the internet's history with milestones such as the following:

- Leonard Kleinrock's publication, in 1961, of his first paper on packet switching[2]
- J. C. R. Licklider's articulation, in 1962, of his vision of the Galactic Network, a worldwide network of interconnected computers
- The deployment of the Defense Advanced Research Projects Agency (DARPA), in 1969, of the first links of the ARPANET
- The National Science Foundation's funding of a national backbone network for the internet, in the 1980s, and the subsequent expansion of access to universities, research institutions, and the private sector
- The Clinton-Gore administration's commercialization, in the 1990s, of the internet,[3] and its global expansion, in the 2000s (Leiner et al. 1997)

In a similar vein, Thomas Hughes describes the development of the internet as "a memorable, salient example of the manner in which ARPA, using a light touch, funded and managed the rapid development of high-risk-high-payoff computer projects" (Hughes 1998, 255). He talks of a high-tech culture—nonhierarchical, meritocratic, and multidisciplinary—with proclivities for modularity, interconnectivity, and transformational change. In highlighting ARPA's "light-touch" approach, Hughes emphasizes the role of "managerial prowess," which, he believes, largely explains American dominance in the high-tech realm (Hughes 1998, 5).

In actuality, such accounts are limited, since the internet was a product of a much broader social churn. As Flichy (2007) tells us, "When we leave 'the short-term dimension' of technical development, that is, a specific project, and consider a more long-term dimension such as electrical light and power, high-speed trains, internet, and so forth, we encounter more than simply a project or common intention; what we witness is a collective vision or *imaginaire*" (4, italics in original). In other words, the internet *imaginaire* extended beyond project managers, academics, government officials, and entrepreneurs. For instance, Hu (2015) shows how artists and activists contributed to the conceptualization and development of early networks. Among other things, *Radical Software*, a newsletter of a group of activist engineers, carried network designs eerily similar to ARPANET's, and the

Truckstop Network—"a countrywide network of truck stops for 'media nomads'"—anticipated today's participatory culture (28). More broadly, Hu (2015) argues that the internet was not just a creation of DARPA, but the product of a time when "the center was not holding," as Joan Didion (1990, 84) famously noted.

Whatever version of history one holds, it is undeniable that the biggest turning point was the commercialization of the internet. It took the internet beyond the rarified world of defense research agencies, universities, and research institutions and thrust it into the tumult of the marketplace. The internet spread across the US and the world beyond, with all manner of entrepreneurs, hackers, and activists opening up new ways of doing things. In short, commercialization radically changed the scale and scope of the internet.

INEQUITIES AND INEQUITIES THAT MATTER

Broadly, our understanding of "access" has undergone three major changes over the years, which are as follows.

EXPANSION OF THE INTERNET: ACCESS AS PHYSICAL CONNECTIVITY

Until 1994, the US Census Bureau and the FCC collected data on telephone penetration, but not on computers and modems. Then, as the National Telecommunications and Information Administration (NTIA) explains in the introductory discussion in its first *Falling Through the Net* report, it realized: "While a standard telephone line can be an individual's pathway to the riches of the Information Age, a personal computer and modem are rapidly becoming the keys to the vault" (NTIA 1995, 2). Subsequently, the NTIA paid the Census Bureau for including computer and modem ownership questions in its thrice-yearly Current Population Survey. Talking about the "have nots" and "information disadvantaged," based on the survey data, the report showed that these people were disproportionately in rural areas, inner cities, and minority populations. In general, it also indicated that the less educated were less likely to have telephones, computers, and modems. The second NTIA *Falling Through*

the Net report, issued in 1999, talked in terms of the "digital divide" (NTIA 1999).

The *Falling Through the Net* reports set the proverbial table for digital divide research. Subsequently, researchers studied many dimensions of the digital divide, especially race, gender, urban versus rural, age, education, and income. Studies on race and the digital divide showed that minorities were on its wrong side (e.g., Fairlie 2014; Hoffman and Novak 1998; Ono and Zavodny 2002). In the case of gender, researchers found that while the gap persisted, it was narrowing (Dholakia 2006; Losh 2003). On the other hand, in the case of urban-rural disparity, the researchers found that the gap persisted, and it was not likely to narrow (Strover 2001, 2003). Studies on the elderly also showed a divide and spotlighted barriers to internet use (see Xie 2003 for a review). With regard to the last two factors, education and income, researchers examined them as part of analyses of a specific population or comprehensive studies of the digital divide (e.g., Bucy 2000; Lenhart and Horrigan 2003; Robinson, DiMaggio, and Hargittai 2003). In general, researchers painstakingly recorded inequities that gave rise to the digital divide. Moreover, they were of one mind that these inequities mattered. The dispute was on what to do about them—specifically, the need and justification for public policy intervention.

Dismissing calls for policy intervention as "ideological manipulation," the opponents argued that over time, markets universalize products and services as technological advances, economies of scale, and competition bring down prices. In effect, they say that the so-called digital divide is a transitory phenomenon (Compaine 1986, 2001b; see Lentz 2000 for a survey of skeptics). In this vein, the former FCC chairman Michael Powell derided calls for policy intervention by likening digital divide to a "Mercedes divide" (Irving 2001, A30). Fundamentally, the opponents' views are undergirded by theorists such as Daniel Bell, who believed that "technology has not only raised the standard of living but it has been the chief mechanism of reducing inequality within Western Society" (Compaine 1986, 8). To substantiate their argument, opponents point to actual experience with technologies such as radio, television, and automobiles.[4] They drew two lessons from this experience:

(1) Policymakers should be mindful of the long arc of technology development, and not succumb to short-term, fashionable pressures. Given enough time,

markets bring prices down to levels within everybody's reach. In short, the policymakers should refrain from intervening prematurely.

(2) When the policymakers do intervene, they should basically "fine tune." The reality is that development dynamics great vary across technologies. The universalization of automobiles did not require a policy intervention, telephone's initial expansion was a product of competition and only later regulatory interventions were made to universalize it, broadcasting did not require direct subsidies to users and the policy interventions were programming related. In short, a blanket approach for universal access is a folly (Compaine 1986).

In sum, while everybody agreed that these inequities mattered, there were two schools of thought on what should be done about them. One advocated policy intervention, and the other called on policymakers to refrain from intervening in the markets since they universalize technologies over time. Both sides, as we will see, were partly correct.

EXPANSION OF THE INTERNET: ACCESS AS PARTICIPATION

With the internet's rapid expansion in the 2000s, its proponents' concerns about physical connectivity were alleviated. Then their attention moved to knowledge and skills that people need to use the internet, benefit from online resources, and participate in online forums. They started arguing that physical connectivity by itself does not ensure inclusion and participation (Hargittai 2002; Loader and Keeble 2004; Newhagen and Bucy 2004; Servon 2002; Stevenson 2009; van Dijk 2005). At this point, the universal access discourse shifted from connectivity to inclusion and participation.

To justify the resources required, the proponents broadly highlighted two benefits. One, digital skills enhance democratic participation, a long-running concern given declining civic engagement and voting turnout. Two, they enable disadvantaged individuals to secure jobs and also, correspondingly, expand the labor pool for an information technology (IT)–intensive economy. In actuality, the economy also needed digitally skilled consumers, with e-commerce on the rise.

Skeptics of technology-based solutions to social problems pointed to America's long history of "ascriptive hierarchy—social exclusion on the basis of foreordained characteristics such as race, gender, and ethnicity (Mossberger, Tolbert, and McNeal 2008, 7). They said that the digital divide is basically a reproduction of long-entrenched inequities in the online domain (Margolis and Resnick 2000; Xenos and Moy 2007). Yet,

ultimately, even they ended up calling for policy intervention for universal access because it advances educational opportunity, which they believed was critical for leveling the economic playing field (Mossberger, Tolbert, and McNeal 2008).

In reality, as we will see, the internet's expansion is a product of a far more complex logic than the exclusionary logic of ascriptive hierarchies or the inclusionary logic of equity-oriented digital divide policies.

EXPANSION OF THE INTERNET: ACCESS AS CONTRIBUTION

Broadly, in the pre-internet era, a rather clear division of labor existed in the production, transmission, and consumption of media content: producers (film and TV studios, writers, journalists, and musicians, among others) developed creative output, delivery channels (film distributors, broadcasters, and cable systems, among others) distributed it, and the general public consumed it. Today, in our world of smartphones and internet uploads, the entire process is scrambled. Now, for the first time in human history, ordinary people can produce content and also reach mass audiences at very low cost—enabling crowdsourcing (Shirky 2008), sharing economy (Benkler 2006), and co-operativism (Conaty and Bollier 2014).

Even in this low threshold condition, we find echoes of the digital divide. Researchers report gender divide in contributions to Wikipedia (Cohen 2011; Hargittai and Shaw 2015). In the case of crowdsourced online cartographic resources like OpenStreetMap and Google Map Maker[5], researchers report gender divide and also urban-rural divide in participation and contributions (Hecht and Stephens 2016; Johnson 2016; Stephens 2013). More broadly, based on data from seventeen Pew Internet & American Life Project national surveys taken between 2000 and 2008, Schradie (2011, 151) found that while user-generated content of all types has grown rapidly, the poor and the working class have created such content at a slower rate than rest of the population—creating a "production divide."

To gain a fuller understanding of the digital divide, we must also consider the other side of user-generated content production. The digital environment supposedly operates according to the logic that "the more we put in the more we get out"—our summation of Mark Zuckerberg's point of view (Zuckerberg 2012). Ekbia (2016), following Terranova (2000),

counteracts with the logic: "The network gets from you much more than you get from the network" (172). The profits generated by social media companies are evidence of this—such profits are totally dependent on the presence of people on their networks and the content they create. In effect, universal access expands the pool of people whose data and content social media companies can harvest.

We hear echoes of these discourses, albeit at times faintly, in the chapters of this book on other systems. This is not surprising, as the internet is protean, complex, and multidimensional. Physical connectivity was also an issue in the case of the postal system, electricity, and telephony. Participation was also an issue in the case of education and public libraries. Contribution, however, was an issue only in the case of broadcasting, though at a different level. While universal access efforts for broadcasting promote diversity of sources of content production at the regional and organization levels, the issue for internet policies is diversity at the level of the individual. Yet the experience with broadcasting prompts us to pause and reflect on our approach for the internet. For instance, in the literature, researchers talk of the development of the digital divide in terms of levels—first-level, second-level, and third-level (e.g., Hargittai 2002; Min 2010; Scheerder, van Deursen, and van Dijk 2017). However, as we see in chapter 7, on broadcasting, which is an outlier, issues related to content production are very different than those related to physical connectivity and participation. This suggests that we are misguided in treating contribution as the "next" (i.e., third) level of digital divide and, more generally, thinking of universal internet access in terms of levels.

GAINS AND TRAVAILS

We will now take stock of the gains and travails for the individual and the system (table 8.1).

INDIVIDUAL

Gains The COVID-19 pandemic brought forth the benefits of internet access to the individual in a singular manner. In 2019, about 7 percent of workers in the private industry, mostly white-collar professionals, had

Table 8.1 Internet: Gains and travails

	Gains	Travails
Individual	Fuller participation in the social, economic, and democratic processes of a technologically advanced society Opportunities to reduce costs for transportation, entertainment, and services Opportunities to engage in new modalities of sharing, as well as creating and disseminating content	Cost of equipment and service Hazards of online fraud Loss of privacy; marginalized losing one of their few advantages—diffused visibility Social media activities creating a record Blurring of public-private boundary
System	The state more efficiently delivering services and also surveilling Private companies leveraging an infrastructure created with public funding to make profits Funding of a digital divide "industry"—equipment and service providers, funding agencies, nonprofits, consultancies, academic and nonacademic researchers	Institutions, both public and private, more vulnerable to hackers The power grid and other infrastructures more vulnerable to hackers Greater possibility of foreign interference in domestic affairs

opportunities for telework. In April 2020, soon after the start of the pandemic, about half of the US workforce was working from home (DeSilver 2020; Guyot and Sawhill 2020). Only individuals with internet access could do so (and it had to be of adequate quality). Individuals living in areas without stable broadband access had to go to their workplaces in order to have Zoom meetings with their colleagues, who were now working from home (Merrefield 2020).

We saw something similar with college students, who were suddenly asked to vacate campuses. While on campus, all students had access to the internet, but upon moving back home, many did not have access to stable broadband, or even any kind of broadband, for participation in Zoom class sessions. In the world of K–12 schooling, we even have a term for such inequities—the "homework gap," which became a bigger problem during the pandemic (Ali 2020). In another critical area of life—health

care—telehealth assumed a new importance during the pandemic. About 50 percent of doctors were using telehealth in April 2020, as opposed to about 18 percent in 2018 (Landi 2020). In effect, individuals needed internet access to participate in critical activities and access critical services.

Even when access is available through offline channels, online access is very often advantageous. Like other airlines, for instance, United Airlines levies no ticketing fee for online purchases, but it charges for purchases by phone ($25) and in person ($30 at a city ticket office, and $50 at the airport).[6] Furthermore, while purchasing online, one can avail oneself of many more options and access special deals. In a similar vein, while shopping in a brick-and-mortar store, it is worth one's while to check the price for the *same* item on the website of the *same* company—often the price on the website is lower, and, moreover, the brick-and-mortar store will often match it (Gerdeman 2018). Marketing literature even has a term for it—"self-matching" (Kireyev, Kumar, and Ofek 2017). Furthermore, online comments help one make better purchasing decisions, even when in a brick-and-mortar store. The tag on the shoes says "Waterproof"—but is it? Online comments of consumers who have already worn the shoes can provide critical insight on this score. Finally, businesses offer discounts, which can be significant, for online quotes, online signing, paperless billing, and other electronic interactions.

Internet access enables individuals to participate in the sharing economy. We have been seeing the emergence of informal sharing communities that exchange occasionally used items, ranging from tools to party supplies, with each other. Some of them grow into formally organized cooperatives, often with membership fees, such as "tool libraries" (Shmurak 2016). Individuals are also able to participate in online cooperative activities—writing and editing Wikipedia pages, developing open-source software, clicking on images of an asteroid to help the National Aeronautics and Space Administration (NASA) map its surface, among others (Bartels 2019). Of course, individuals can also participate in various online forums on topics ranging from pop culture to politics.

Travails To access the internet, the individual has to pay for connectivity. In 1999, the average household expenditure for internet access was $49 per year (Bureau of Labor Statistics 2012). By 2017, the average cost of a

broadband plan was $66.17 per *month* (McCarthy 2017). In 2017, households also spent an average of $94 per month on cellular phone service, another means of accessing the internet (Bureau of Labor Statistics 2019). In addition, the individual pays for devices (computers, tablets, Wi-Fi routers, etc.) and premium services (Netflix, Pandora, Spotify, etc.).

Beyond the direct costs of internet access, the individual is exposed to the hazards of phishing, identity theft, and other types of online fraud. In 2019, the Internet Crime Complaint Center of the Federal Bureau of Investigation (FBI) received 467,361 complaints, reporting losses totaling over $3.5 billion. The top five reported complaints were related to phishing/vishing/smishing/pharming, nonpayment/nondelivery, extortion, personal data breaches, and spoofing (FBI 2020). These statistics do not include online tax fraud. In 2016, cybercriminals attempted to siphon off at least $12 billion in fraudulent tax returns and got away with at least $1.6 billion (Davidson 2018).

Another gauge of online fraud is the size of the identity theft protection services industry—there are 135 companies offering such services, with a total revenue of $2 billion (*IBISWorld* 2019). Furthermore, businesses like Facebook and Google are now providing identity services, intruding into a domain that had been the exclusive preserve of government agencies that furnish passports, driver's licenses, and other such documents (Morozov 2014).

The individual also suffers loss of privacy, as her online activities are logged by internet service providers, companies, and others. For the marginalized, the loss is doubly severe since they also lose one of the few advantages that their marginality affords—diffused visibility. They are now registered with all manner of systems and their activities logged by companies and organizations with online tracking technologies. Without media literacy, they are further disadvantaged, as they lack the awareness and knowhow to look for errors and obtain corrections in databases.

More generally, once online, the individual's life is marked by pressures that blur the boundary between public and private realms. This blurring of the public-private boundary predates the internet. Carey (1989) laments the rise of the Sunday newspaper in the late nineteenth century, which eroded the Sabbath—"a region free from the control of the state and commerce" (227). The rise of radio took the blurring of the public and private

domains to a new level, as strangers from the realm of commerce could now "talk" to people, including children, in their private spaces. The internet has taken it to yet another level—we are now to varying degrees 24/7 consumers and 24/7 workers.[7]

SYSTEM

Gains The state gains from efficiencies in administration. For instance, it costs the Internal Revenue Service (IRS) only $0.35 to process an e-filed tax return, as opposed to $2.87 for a paper return. Furthermore, e-filed returns have an error rate of less than 2.5 percent, as opposed to over 25 percent for paper returns (Mock 2015). Similarly, in the case of food stamps, which literally had been stamped paper or coupons, the state moved to electronic benefit transfer (EBT) in the 1990s, motivated by opportunities to cut administration costs and fraud. In the early years of EBT implementation, the situation with regard to administration costs was mixed, with them decreasing in some states and increasing in others, but over time, they have been reduced. EBT has also reduced fraud (Isaacs 2008; Stegman, Lobenhofer, and Quinterno 2003). Beyond efficiencies in administration, the state's capacity for surveillance has also increased with the enmeshment of the internet in everyday life (Braman 2006; ProPublica 2013; Zetter 2016).

Businesses gain from internet-enabled lower transaction costs in their everyday processes, from placement of orders to invoicing, as well as from outsourcing of processes to specialized service providers (for extensive reviews, see van Alstyne 1997 and Swanson 2020). They are able to collect consumer data at an unprecedented scale and harvest user-generated content for monetization in various forms, including videos on YouTube, travelers' comments on TripAdvisor, and personal news and memories on Facebook. Furthermore, they are able to capitalize on new configuration potentialities—new modes of connectivity that previously were not possible at scale—that are afforded by the internet in order to develop new types of business such as eBay, Uber, and Airbnb (Sawhney and Lee 2005). In these ways, businesses have capitalized on the capacities of an infrastructure created with public funding.

Universal access involves billions of dollars. For instance, in 2019, the FCC's Universal Service Fund disbursed $8.3 billion. The Universal

Service Administrative Company, the nonprofit company that administers the Universal Service Fund, itself has 570 full-time employees (Universal Service Administrative Company 2020). The recipients of these monies—telecommunications service providers, schools, libraries, rural hospitals, and others—have their own employees for universal access issues. Furthermore, contractors, equipment suppliers, consultants, and others are also involved. Academic research on the digital divide itself is a cottage industry of sorts. All in all, universal access itself has become an industry (Sawhney 2003, Stevenson 2009).

Travails Beyond public relations disasters, data breaches also cost businesses financially—over $8 million on average. Small businesses are the most frequently affected (constituting 60 percent of victims), and the hospitals are the worst affected (Ponemon Institute and IBM Security 2020; Puranik 2019; Walker 2019). The cost of cyber/data breach insurance provides another window into the travails of data breaches. For instance, in rounded numbers, a hospital pays a $250,000 annual premium for $10 million worth of coverage, a university foundation pays $17,000 for $2 million of coverage, and a vacation rental pays $1,000 for $1 million of coverage (Marciano 2020).

The electricity distribution system's vulnerability to hacking became salient when Ukraine's grid suffered an attack in 2015. For the US, protection against such a cyberattack is particularly challenging for a number of reasons. First, its power system is a complex assemblage of 3,300 utilities working together to provide electricity over thousands of miles of transmission and distribution lines. Second, the US is a highly networked nation, with millions of smart devices that are potential gateways for determined attackers. Third, it relies on privately owned electric utilities, which shy away from making investments in cybersecurity technologies given their business model (Knake 2017; Smith and Barry 2019). More broadly, private corporations play a major role in the US, owning about 85 percent of critical infrastructure assets, and the government has had difficulties in incentivizing them to invest in cybersecurity (Etzioni 2011; Gordon, Loeb, Lucyshyn, and Zhou 2015).

The possibility of foreign interference in domestic affairs has greatly increased, both in intensity and scope. For instance, the roots of Russian disinformation go back to the Soviet Union. Joseph Stalin himself coined

the term *dezinformatsiya*—strategy directed at disorganizing in stealth an opponent's information capability. Soviets sought to somehow fool the mainstream media into disseminating disinformation, starting with an obscure news outlet and then working up to major ones. In a particularly notable case, in the early 1980s, a small pro-Soviet newspaper in India carried an article saying that the Pentagon in the US had created the AIDS virus. Subsequently, citing this article, a Soviet weekly published its own story on this, and eventually a British tabloid ran the story on its front page. Thereafter, major newspapers in over fifty countries picked up the story (Bailey 1987; Taylor 2016).

In other words, the recent Russian interference in the American political process is not novel. The impulse has been around for a while—but what has changed is that the internet has, on the one hand, allowed its intensification, and, on the other, provided direct access to individual Americans. In today's media ecology, RT (formerly Russia Today) TV provides fodder for Twitter, Facebook, and other social media stories and in turn serves as an outlet for spurious so-called fake news bubbling up in social media, and every now and then, this process widens to loop in other news outlets, often major ones.

CONNECTIVITY AND ALSO ITS NATURE

The internet is now woven into the fabric of society, and, consequently, it has become enmeshed in the everyday life of the individual. For the individual, the draws of the internet are clear and alluring, but its pitfalls, while generally known, lack clarity, given the complexity and opacity of the commercial relations that undergird its myriad services.[8] In our analytical terms, the individual's experience of the gains is vivid and the individual's understanding of the travails vague. In such a context, it is difficult for the individual to assess the situation, weigh the trade-offs, and navigate the gains and travails of internet access.[9]

On social media, one reconnects with old classmates and starts exchanging messages, posting old photos, and cracking jokes. A classmate posts an old photo, which one wishes she had not. Soon an individual starts seeing regular snippets of his life broadcast, often for all to see. While individuals are generally aware that their postings are curated presentations of

self to others in an arena that allows a high level of control, one forgets and slips into envy, which is real, even if the imagery that provoked it is not. Further, a person can become very conscious of the "likes," "follows," and other social affirmations that posts receive or do not receive. In addition, there are advertisements, increasingly tailored ones, and prompts to connect with someone who has "502 friends." Individuals are constantly tempted into the tangle of this weave, promising amusement, humor, voyeurism, reactivation of memories, and other benefits. On disconcerting occasions, when an individual considers "getting off the grid," the costs weigh on the mind—such a person will be left out of social get-togethers, among other things. While all this is true of sociality in general, on the internet there is an intensification of its allures and demands.

While ordinary people are caught in this web, loosely aware of the travails, the elites are calibrating their own engagement in a deliberate manner. Ironically, the very people responsible for social media place limits on their children's engagement with them. Steve Jobs did not let his children use iPads; Bill Gates gave his children cell phones only when they turned 14; Evan Williams, cofounder of Twitter, gave his children hard-copy books in lieu of electronic tablets; Evan Spiegel, the chief executive officer of Snapchat, limited his children to 1.5 hours of screen time per week (Akhtar and Ward 2020; Bilton 2014; Bradshaw 2018; Rudgard 2018). In fact, Chris Anderson, the chief executive officer of 3D Robotics, talking about his five children, aged six to seventeen, said:

> My kids accuse me and my wife of being fascists and overly concerned about tech, and they say that none of their friends have the same rules. That's because we have seen the dangers of technology firsthand. I've seen it in myself, I don't want to see that happen to my kids (Bilton 2014, n.p.).

Furthermore, they engage in resistance, digital retreat, disconnection, and media abstention. They have summer camps, literally, for themselves. For instance, Digital Detox LLC offers Camp Grounded: Summer Camps for Adults, characterized on its website as follows:

> Campers from over 30 states and 8+ countries have traded in their computers, cell phones, emails, Instagrams, clocks, schedules, work-jargon and networking for an off-the-grid weekend of pure unadulterated fun. Together we create a community where money and titles are worth little . . . and individuality, self-expression, friendship, memories and the great outdoors are valued most. Ages

range from 18–75 . . . offers 50+ Playshops & Activities . . . Counselors and more. Just like the summer camp you remember from childhood, but for adults.[10]

Interestingly, in the discourse on universal access, disconnection and nonuse are seen as a "problem" that needs to be "solved," an abnormality, a pathology—"a deficit on the part of the individual concerned" (Selwyn 2003, 106). Ironically, in their embrace of resistance, the elites have, at least for themselves, recast disconnection and nonuse as a virtue. But what about the populations served by universal access programs?

Universal access programs focus on connectivity. Through the evolution of universal access programs, from physical connection and participation to content contribution, policymakers and researchers have taken internet connectivity to be inherently good. But we have seen in this discussion that connectivity is good and bad—complexly so.

Certainly, universal access programs should continue to provide connectivity. The internet has become a consumption norm, which Preston and Flynn (2000) explain to be the bare essentials required by the poorest citizen to function effectively in society. Revisiting the seminal writings of Adam Smith, they show that consumption norms are a function of the wealth and sociomaterial characteristics of a society, as opposed to some absolute standard. For instance, even the rich in ancient Greece did not wear shoes, something essential for even poor workers in our society. In modern society, the internet is a consumption norm. Indeed, even the elites who are committed to resistance and disconnection do not give up connectivity altogether—they do so only for short periods.

Similarly, instead of simply taking connectivity to be inherently good, universal access programs need to also factor in the complexities of connectivity. In our analytical terms, not only the gains but also the travails of connectivity should be considered. Nonusers, especially those who can afford connectivity, are the difficult parts of the intellectual system that informs universal access. We have been explaining them away as pathological. Instead of discounting them, if we center-stage these nonusers and see the world from their standpoint, we start to see the complexities of connectivity.

The reality is that connection has its problems, and so does disconnection. Our blind spot has been that in our preoccupation with

connectivity, we have not considered the question: What should be the *nature* of connectivity?[11]

We will engage with this question in some depth in the next chapter. At this point, to register its significance, we revisit two commonplaces in the domain of universal access. One, we routinely use frequency of use as a metric for measuring the digital divide.[12] Is high frequency of use a good thing? Should policies be directed at increasing frequency of use? What about the travails of high frequency of use? On the design front, systems are designed and celebrated for making the internet frictionless. Is that a good thing, or should we insert deliberate speed bumps that prompt moments of pause before we make decisions/nondecisions in our world of instant gratification?

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