

Sara Kazemi
CST 300
October 13, 2018

The Ethics Behind Bridging the Digital Divide

Systems of social stratification describe the emergent phenomenon inherent in all societies, illustrating the separation between the rich and the poor, the privileged and the disadvantaged, and the haves and the have-nots. Similarly, the digital divide differentiates the “information haves” from the “information have-nots” (Compaine, 2001). The phrase “digital divide” was first coined by former president of the Markle Foundation, Lloyd Morrisett, in the late 1990s when the utility of the Internet was being realized (Hoffman, Novak, & Schlosser, 2001). However, evidence of the digital divide goes as far back as 1983, when it was revealed that there was a disproportionate amount of wealthy schools furnished with personal computers when compared to schools serving the socioeconomically disadvantaged (Compaine, 2001).

This correlation continued as the Internet arrived to school sites. In 1997, only 15 percent of all schools were Internet-connected, and access was strongly correlated with the average income and level of education the school served (Hoffman et al, 2001). During this time, Internet policymakers—politicians and government entities—saw the Internet as an opportunity to broaden participation in democratic discourse and to include the diverse views of society (Kennard, 2001; Carvin, Conte, & Gilbert, 2001). President Clinton saw this merit as a driving force for his initiative to bring Internet accessibility to every school and, eventually, every home (Carvil et al, 2001; Hoffman et al, 2001). The Clinton administration also envisioned the emergence of a global democracy and urged other politicians and international government groups to cooperatively build an international information infrastructure (Compaine & Weinraub, 2001).

Today it seems that the digital divide has narrowed significantly with 89% of all Americans having at least occasional access to the Internet or a smartphone (Poushter, Bishop, & Chwe, 2018). However, several rural and urban communities remain unconnected or under-connected with sluggish and unreliable Internet services (Ulloa, 2017). In addition to this, there remains a largely economic disparity between the Internet accessibility in developed and developing nations (Poushter, Bishop, & Chwe, 2018). This is because building infrastructure is expensive and typically requires the installation of costly fiber optic cables that serve as high-capacity “Internet backbones” (Mitchell, 2018). Additional costs, beyond labor, include the purchase and installation of switches, routers, and transmission software (Vanberg, 2009). Before making this investment, an Internet Service Provider (ISP) determines how efficiently installation costs can be recovered while keeping subscription costs affordable and competitive; this prediction model is based on the affluence of an area because it is correlated with the number of potential subscribers (Van Grove, 2017).

Internet Service Providers, as businesses and major stakeholders in the Internet, value revenue. The desire for commercial success largely determines the geographic availability of the Internet. However, there are a few corporate leaders that want to invest in underserved areas, even if it comes with risk and expense. For instance, Greg Wyler, CEO of OneWeb, claims that it is important to change peoples’ lives by giving them access to each other and to information (Scoles, 2018). Through OneWeb, he aims to launch a “constellation” of 900 microsatellites to provide affordable high-speed Internet globally (Airbus, n.d.). Similarly, Elon Musk, through SpaceX, aims to launch his own constellation of 12,000 satellites—Starlink—and has begun doing so with the help of Google’s \$900 million investment (Scoles, 2018). Alphabet, Google’s

parent company, has followed suit with Project Loon, a balloon-powered wireless network broadcasting system that flies high up in the stratosphere (Teller, 2018).

As efforts spread to bring the Internet, not only to urban and rural communities in the United States (Ulloa, 2017), but to remote communities across the world—such as the Aboriginal region of central Australia (Rennie & Tunkaporta, 2016) and sub-Saharan Africa (Crabtree, 2018; Dahir, 2018)—Internet policymakers must consider the end user. Internet users are perhaps the most diverse group of stakeholders because they encompass the world's societies, cultures, and economies. The Internet Society, a global community advocating for “a better Internet,” serves as a voice for all people (2016). Kathryn Brown, former President and CEO, has asserted that “issues such as blocking of content, privacy, mass surveillance, cybercrime, hacking, and fake news are all contributing to what is now a growing global erosion of trust amongst users” (Internet Society, 2016). What can be gleaned from this analysis is that, in general, users value open access to reliable information in a manner that preserves safety and privacy.

However, non-Western users have additional societal and cultural values that may be threatened by a highly Western-dominated Internet (Lor & Britz, 2004). While the West saw the Internet as a way of expanding democratic discourse, some government and community leaders believe controlling Internet access is critical to protect social mores. In one Aboriginal community, the observed misuse of social media to overstep authority resulted in the temporary shutdown of local public Wi-Fi (Rennie & Yunkaporta, 2016). China's approach has been to systematically censor any website that undermines the Communist Party's narrative and control (Denyer, 2016). Plans to launch satellites to expand open access to the Internet globally may undermine the rule of these governments.

A Utilitarian Approach

The utility of the Internet has become deeply ingrained in American society. Whether it is to apply for government programs, to shop for groceries, or to complete assignments for class, Americans are increasingly relying on the Internet in their daily lives (Rogers, 2018). With so many resources readily available on the Internet, it is a disadvantage to be one of the 11% of Americans without a method of connecting to the Internet (Poushter, Bishop, & Chwe, 2018). The digitally underserved are more likely to live in urban or rural locations, be people of color, and come from lower socioeconomic backgrounds (Tichavakunda & Tierney, 2018). Because of this perceived inequity, advocates from both the private and public sector have called for a narrowing of the digital divide by building infrastructure in underserved locations.

The Obama Administration sought a solution through two initiatives ConnectEd—a program to connect 99% of American schools to the Internet by 2018—and ConnectHome—another Internet-expansion initiative targeting over 200,000 families across 28 low-income communities (Basu, 2015). As a public-private collaboration, ConnectHome relies upon “community leaders, local governments, nonprofit organizations, and private industry to...produce locally-tailored solutions for narrowing the digital divide” (Carson, n.d.). In expanding access, Obama sought “to prepare our kids and our workers for an increasingly competitive world” (Basu, 2015). This is consistent with the principle of utilitarianism, an ethical framework traced to an 18th century English legal reformer, Jeremy Bentham. Under utilitarianism, one should choose a policy that impacts the greatest societal benefit (Markkula Center, 2014). By providing Internet access to citizens, regardless of where they live and how much money they make, this effectively narrows “the homework gap” imposed on 5 million children (Anderson, 2016). Not only can an equally-accessible Internet provide academic

benefits, but it can also be capital enhancing and lead to positive gains in social mobility (Tichavakuna & Tierney, 2018). This betters the individual and society at large.

On a global scale, private corporations are taking to the skies to bring international access to affordable, high-speed Internet. Greg Wyler, CEO of OneWeb, is motivated by his past venture in laying fiber optic cable across Rwanda, facilitating Internet access in a number of community schools there (Scoles, 2018). The positive impacts he saw on the digitally isolated is why he seeks to launch a constellation of 900 microsattellites to expand access globally. Alphabet's Loon, a balloon-powered wireless network broadcasting system, has brought Internet services to rural areas such as the California central valley and New Zealand (Teller, 2018) and stepped in to provide emergency connectivity to Puerto Rico after the Category 4 Hurricane Maria devastated the territory (Westgarth, 2017). Because OneWeb and Alphabet serve to spread the perceived benefit of the Internet on a global scale, their actions are ethical under the utilitarian framework.

An Ethical Relativist Approach

While advocates for narrowing the digital divide do so from the stance that Internet access is beneficial to our global society, others argue that what is perceived as "good" is relative, and that a developed country's definition of "good" may differ from a developing nation's definition of "good" (Lor & Britz, 2004). One concern is that, since the developed world has a much larger capacity for processing data over developing nations, this may increase their social control over developing nations (Tatalović, 2014). This is illustrated by the fact that developing nations are forced to use cloud-based services controlled by major corporations in developed nations. Michael Kwet, a South African researcher at the Yale Privacy Lab asserts that "no South African entity will rival the position of a Facebook, Google or Amazon" and that

Western society largely dictates the structure of digital society and economy (2018). There are implications that diversity is being undermined by “information imperialism”—a massive flow of information from the West to developing countries (Lor & Britz, 2004). As developing nations become increasingly connected to a Western-dominated Internet, their culture becomes subjugated to Western cultural influences (Lor & Britz, 2004).

To uphold cultural integrity, community and government leaders have resolved to varying degrees of Internet governance. In one Aboriginal community in central Australia, when Internet use oversteps cultural boundaries or threatens leadership, the public Wi-Fi hotspots are powered off (Rennie & Yunkaporta, 2016). This is a manageable solution since the Internet is accessed from a sparse number of cellphones shared throughout the community. China, which has over 700 million users, resorts to the systematic censorship of the Internet through its “Golden Shield” (Denver, 2016). Among the tens of thousands of websites blocked are popular social media websites Facebook, Instagram, Twitter, and YouTube (Denver, 2016). In addition to this, because China has a longstanding history of self-censorship, it has been easy to get its online news agencies to maintain accord with the governmental decree: “to make the Internet a vital publisher of scientific theories... maintain social stability, and promote the building of a socialist harmonious society” (China Daily, 2006).

The solutions employed by communities and governments that choose to self-isolate fall under cultural relativism. Cultural relativism is an ethical framework that posits that what is valued should be culturally-based, not dictated by the criteria of an outside entity. Under this framework, if the exposure to foreign influence threatens a culture’s sense of right or wrong, it is ethical to protect one’s citizens from such an influence.

A Moral Reflection on The Digital Divide

Governments and corporations should work together to close the digital divide because it benefits a global society and promotes social and economic mobility. While the notion of “common good” may not have a single, objective definition when it comes to approaching the digital divide, one can assume certain universal human rights, such as those declared by the United Nations (1948), to help guide a rule utilitarianism-based solution that would benefit most global citizens. Rule utilitarianism differs from utilitarianism in that one must base one’s actions on the rule that would enact the most common good (Markkula Center, 2014).

According to Article 3 of the Universal Declaration of Human Rights adopted by the United Nations General Assembly, “Everyone has the right to life, liberty and security of person” (1948). Information Scientist Douglas Raber (2004) argues that liberty now has a technological component and that all people, regardless of wealth or status, should have the freedom “to participate in an information society and share in its advantages.” Whether it be by laying fiber optic cable, launching constellations of satellites, or broadcasting networks via air balloon, private and public entities with the resources to do so should be contributing to universal Internet access.

While some communities and nations may want to protect their citizens from outside influences, every citizen should have the liberty to decide what is right from wrong—what should be accessed and what should be avoided. Moreover, while Internet content may be largely influenced by socially dominant groups, there is evidence that Internet access and social media use has allowed minority groups to make their viewpoints increasingly visible. André Block, professor of information science at the University of Iowa explains how the social movement, Black Lives Matter, and the associated hashtags that dominated Twitter “brought the activities of

tech literate Blacks to the mainstream attention, contravening popular conceptions of Black capitulation to the digital divide” (Guo, 2015). African American Studies researchers who specialize in the study of black online communities such as Meredith Clark, professor at the University of North Texas, claim that the Internet has become “a cradle for black culture and black causes, connecting far-flung communities and amplifying activist voices” (Guo, 2015).

The opportunity for self-expression should be afforded to each global citizen, regardless of the overarching stance of his or her government. Universal Internet access affords this civil liberty to everyone, regardless of geography, income, or social status. Enabling access is just one step towards narrowing the digital divide. International policymakers, with the help of advocates from organizations such as the Internet Society, must work together to ensure the protection of other rights—such as privacy and safety—supported by the United Nations.

References

- Airbus. (n.d.) OneWeb Constellation. Retrieved October 6, 2018, from <https://www.airbus.com/space/telecommunications-satellites/oneweb-satellites-connection-for-people-all-over-the-globe.html>
- Anderson, M. (2016, March 22). Digital Divide Persists Even as Lower-income Americans Make Gains in Tech Adoption. *Pew Research Center*. Retrieved from <http://www.pewresearch.org/fact-tank/2017/03/22/digital-divide-persists-even-as-lower-income-americans-make-gains-in-tech-adoption/>
- Basu, T. (2015, July 16). Obama to Expand High-Speed-Internet Access for Low-Income Families. *Time*. Retrieved from <http://time.com/3960139/obama-high-speed-internet/>
- Carson, Ben. (n.d.). Connect Home. *U.S. Department of Housing and Urban Development*. Retrieved October 5, 2018, from <https://connecthome.hud.gov/about>
- Carvin, A., Conte, C., and Gilbert, A. (2001). The E-rate in America: A Tale of Four Cities. In B.M. Compaine (Ed.), *The Digital Divide: Facing a Crisis Or Creating a Myth?*, The MIT Press: Cambridge, MA.
- China Daily. (2006, April 12). Major News Websites Back Internet Self-censorship. Retrieved from http://www.chinadaily.com.cn/china/2006-04/12/content_565793.htm
- Crabtree, J. (2018, July 20). Google's Loon to Bring 4G to Remote Areas of Kenya – Via Balloon. *CNBC*. Retrieved from <https://www.cnbc.com/2018/07/20/googles-loon-to-bring-4g-to-remote-areas-of-kenya--via-balloon.html>
- Dahir, A.L. (2018, July 11). Google's High-Altitude Internet Balloons Could Soon Connect Rural Kenya. *Quartz Africa*. Retrieved from <https://qz.com/africa/1325552/googles-project-loon-to-use-balloons-to-beam-the-internet-in-kenya/>

Denyer, S. (2016, May 23). China's Scary Lesson to the World: Censoring the Internet Works.

Washington Post. Retrieved from

https://www.washingtonpost.com/world/asia_pacific/chinas-scary-lesson-to-the-world-censoring-the-internet-works/2016/05/23/413afe78-fff3-11e5-8bb1-f124a43f84dc_story.html?utm_term=.e3501fd4e280

Guo, J. (2015, October 22). What People Don't Get About "Black Twitter". *The Washington*

Post. Retrieved from https://www.washingtonpost.com/news/wonk/wp/2015/10/22/why-it-can-be-offensive-to-use-the-term-black-twitter/?utm_term=.1069cb309911ilea

Hoffman, D.L., Novak, T.P., and Schlosser, A. (2001). The Evolution of the Digital Divide:

Examining the Relationship of Race to Internet Access and Usage Over Time. In B.M. Compaine (Ed.), *The Digital Divide: Facing a Crisis Or Creating a Myth?*, The MIT Press: Cambridge, MA.

Internet Society. (2016, December 6). Internet Facing Unprecedented Challenges; Time to Act is

Now Says Internet Society. Retrieved from <https://www.internetsociety.org/news/press-releases/2016/internet-facing-unprecedented-challenges-time-to-act-is-now-says-internet-society/>

Kennard, W.E. (2001). Equality in the Information Age. In B.M. Compaine (Ed.), *The Digital*

Divide: Facing a Crisis Or Creating a Myth?, The MIT Press: Cambridge, MA.

Kwet, M. (2018, June 29). Break the Hold of Digital Colonialism. *Mail & Guardian*. Retrieved

from <https://mg.co.za/article/2018-06-29-00-break-the-hold-of-digital-colonialism>

Lor, P.J. and Britz, J.J. (2004). Information Imperialism: Moral Problems in Information Flows

from South to North. In T. Medina & J. J. Britz (Eds.), *Information Ethics in the*

Electronic Age: Current Issues in Africa and the World. Jefferson, NC: McFarland Publishing.

Markkula Center for Applied Ethics. (2014, August 1). Calculating Consequences: The Utilitarian Approach to Ethics. Retrieved from <https://www.scu.edu/ethics/ethics-resources/ethical-decision-making/calculating-consequences-the-utilitarian-approach/>

Poushter, J., Bishop, C., and Chwe, H. (2018, June 19). Social Media Use Continues to Rise in Developing Countries but Plateaus Across Developed Ones. *Pew Research Center*. Retrieved from <http://www.pewglobal.org/2018/06/19/social-media-use-continues-to-rise-in-developing-countries-but-plateaus-across-developed-ones/>

Raber, D. (2004). Is Universal Service a Universal Right? In T. Medina & J. J. Britz (Eds.), *Information Ethics in the Electronic Age: Current Issues in Africa and the World*. Jefferson, NC: McFarland Publishing.

Rennie, E. and Yunkaporta, T. (2016, November 28). Aboriginal Communities Embrace Technology, But They Have Unique Cyber Safety Challenges. *The Conversation*. Retrieved from <http://theconversation.com/aboriginal-communities-embrace-technology-but-they-have-unique-cyber-safety-challenges-69344>

Rogers, K. (2018, April 16). What It's Like to Live in America Without Broadband Internet. *Vice*. Retrieved from https://motherboard.vice.com/en_us/article/d35kbj/americans-who-dont-have-internet

Scoble, S. (2018). Maybe No One Wants Your Space Internet. *Wired*. Accessed from <https://www.wired.com/story/maybe-nobody-wants-your-space-internet/>

Tatalović, Mićo. (2014, February 26). How mobile phones increased the digital divide.

SciDevNet. Retrieved from <https://www.scidev.net/global/data/scidev-net-at-large/how-mobile-phones-increased-the-digital-divide.html>

Teller, A. (2018, July 11). Graduation Day: Loon and Wing Take Flight. *Medium*. Retrieved

from <https://blog.x.company/graduation-day-loon-and-wing-take-flight-e23a42620131>

Tichavakunda, A.A. and Tierney, W.G. (2018). The “Wrong” Side of the Divide: Highlighting

Race for Equity’s Sake. *The Journal of Negro Education* 87(2), 110-124. Retrieved from

<https://www.jstor.org/stable/10.7709/jnegroeducation.87.2.0110>

Ulloa, J. (2018, January 20). How California Plans to Fill the Digital Divide in Rural Areas Long

Left Behind. *Government Technology*. Retrieved from

<http://www.govtech.com/computing/How-California-Plans-to-Fill-the-Digital-Divide-in-Rural-Areas-Long-Left-Behind.html>

United Nations General Assembly. (1948). *Universal Declaration of Human Rights* (217 [III]

A). Paris.

Vanberg, M.A. (2009). Competition and Cooperation in Internet Backbone Services. In B.

Preissl, J. Haucap, & P. Curwen (Eds.), *Telecommunication Markets: Drivers and*

Impediments. Heidelberg, Germany: Physica Verlag.