A POLICY FRAMEWORK FOR AN OPEN INTERNET ECOSYSTEM

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INTRODUCTION

In December 2017, under the Trump administration, the Federal Communications Commission (FCC or Commission) repealed its 2015 network neutrality rules and abdicated its role to protect consumers and competition in the broadband market. This widely criticized decision, coupled with the enormous and growing power of online platform companies like Amazon, Facebook, and Alphabet's Google, raised serious concerns about the future of a free, open, and universally accessible and affordable Internet ecosystem that promotes choice, innovation, privacy, and user control.

In the absence of net neutrality rules, broadband Internet access service (BIAS) providers like Comcast, AT&T, and Charter will be able to block, throttle, or otherwise discriminate against, or favor, certain Internet traffic. By blithely tossing aside its strongest legal authority to protect consumers and competition in the broadband market, the FCC has ensured that this already consolidated market will only become more so. Meanwhile, the vibrant online platform market, which only a decade ago saw great investment and competition in social networks, search capability, and e-commerce, has itself become dangerously consolidated both horizontally and vertically. This has left consumers little choice other than to rely upon—and give their personal information to—a handful of large online gatekeepers. The danger of online platforms with huge troves of personal data crystalized with the revelation that the data analytics firm, Cambridge Analytica, improperly obtained access to the personal information of tens of millions of Facebook users.

This paper sets out policy prescriptions intended to start a conversation about how to shape an Internet ecosystem that will serve the

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public interest. Inside-the-Beltway policymakers tend to focus on broadband conduits and online platforms separately. Yet, they are equally important to an open Internet. Policymakers, however, should be wary of calls for "regulatory parity," that is, regulating broadband providers and online platforms exactly alike. These industries serve very different roles in the Internet ecosystem, have different relationships with consumers, and as discussed below, the problems that affect these industries are, for the most part, very different.

I. WHY THE U.S. NEEDS A NEW POLICY FRAMEWORK FOR AN OPEN INTERNET ECOSYSTEM

II.

There are numerous reasons why the United States needs a new policy framework for an open Internet ecosystem. I highlight four considerations below: 1) lack of competition/incentive and the ability to discriminate; 2) collection of and control over personal data; 3) lack of transparency; and 4) inadequacy of current laws and enforcement.

A. Lack of Competition/Incentive and Ability to Discriminate

Since 2002, there has been enormous consolidation among the companies that control access to the Internet. At that time, there were 7,000 Internet Service Providers (ISPs) in the United States.[1] However, the FCC's decision to deregulate BIAS that year eliminated the requirement that dominant network operators share access to their physical infrastructures with other companies seeking to provide last-mile Internet access.[2] This decision, upheld by the Supreme Court in 2005,[3] resulted in the rapid demise of the competitive ISP industry.[4]

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[1] Bruce Kushnick, *How the FCC and Trump's Transition Team Leader, Jeff Eisenach, Helped to Kill Competition in America,* HUFFINGTON POST (Nov. 28, 2016, 1:08 PM), http://www.huffingtonpost.com/bruce-kushnick/how-the-fcc--trumps-trans_b_13284182.html [https://perma.cc/KY34-93F8].

[2] 47 U.S.C. § 251(c)(3) (requiring telecommunications service providers to make available to their competitors, on a non-discriminatory basis, "network elements on an unbundled basis"). While far from perfect, this system of selling "UNEs" to competitors resulted in robust competition for Internet service in the late 1990's and early part of the 21st century. *See* Kushnick, *supra* note 1. The Obama FCC declined to apply this section of Title II to BIAS in its 2015 *Open Internet Order*. Protecting and Promoting the Open Internet, 80 Fed. Reg. 19737 (codified at 47 C.F.R. pt. 1, 8, 20).

[3] Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Servs, 545 U.S. 967 (2005).

[4] *See* Kushnick, *supra* note 1.

Further consolidation over the past five years[5] has resulted in nearly three quarters of American households having a choice of two or fewer BIAS providers, usually a cable and a telephone company, and nearly half of American households having a "choice" of only one or fewer BIAS providers.[6] This consolidation was further exacerbated by companies avoiding competition with each other, which resulted in regional monopolies and duopolies across the country. When local communities attempted to provide competition by building their own networks or partnering with industry, the large incumbent BIAS providers convinced state legislators to pass laws that prohibit these communities from doing so.[7] In addition, BIAS providers have become increasingly vertically integrated,[8] controlling both content and conduit, giving them the incentive and ability to discriminate against rival BIAS providers and content providers.

Minimal regulation and a lack of competition has entrenched BIAS providers' market advantage.[9] In addition, the BIAS market suffers from high barriers to entry.[10] Entry into this market requires extensive planning, resources, and a significant amount of time. Before providing service, a potential competitor must obtain permission to operate from local communities and obtain access to telephone poles and other infrastructure

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[5] Since 2013, among other combinations, AT&T merged with DirectTV, Charter Communications merged with Time Warner Cable, Verizon merged with XO Communications, CenturyLink merged with Level 3, and Windstream merged with Earthlink.

[6] *Internet Access Services Reports,* FED. COMM. COMMISSION, http://www.fcc.gov/internet-access-services-reports [https://perma.cc/MF3B-H3TS].

[7] *See* Institute for Local Self-Reliance, *Facts Sheets,* COMMUNITY NETWORKS, http://muninetworks.org/fact-sheets [https://perma.cc/ET87-N7B7] (noting that nineteen states have prohibitions on communities either building new networks or expanding existing ones).

[8] Among the largest of these vertical mergers were Comcast-NBC-Universal, Verizon's acquisition of Yahoo and the Huffington Post, and AT&T-DirecTV.

[9] In February 2018, the FCC released the Internet Access Services Report. The report shows that 30% of developed census blocks only had one provider offering broadband services at speeds of 25 Mbps/3 Mbps while 13% of developed census blocks had no provider offering broadband services at speeds of 25 Mbps/3 Mbps. *Internet Access Services Reports*, *supra* note 6; *see also* John Cassidy, *We Need Real Competition, Not a Cable-Internet Monopoly*, NEW YORKER (Feb. 13, 2014), https://www.newyorker.com/news/daily-comment/we-need-real-competition-not-a-cable-internet-monopoly [https://perma.cc/R4TD-7NPX].

[10] *See, e.g.,* Jon Brodkin, *One Big Reason we Lack Internet Competition: Starting an Internet ISP is Really Hard*, ARSTECHNICA (Apr. 6, 2014), https://arstechnica.com/information-technology/2014/04/one-big-reason-we-lack-internet-competition-starting-an-isp-is-really-hard/ [https://perma.cc/5DFV-WDCU].

that are often controlled by incumbent BIAS providers.[11] If a company seeks to provide a wireless service, it must be licensed by the FCC to use the public airwaves or spectrum.[12] On the consumer side, where there is some competition for BIAS, consumers face high switching costs, such as cancellation fees, loss of the benefits of bundled service, requirements of purchasing new equipment, and the inconvenience associated with a new installation.

As the FCC and the D.C. Circuit have noted,[13] the lack of competition in the BIAS market, coupled with high barriers to entry and vertical integration, has given BIAS providers the "incentive and ability" to act as gatekeepers and discriminate against certain Internet traffic. This lack of competition has also kept broadband prices high and out of reach for millions of Americans. The median cost of a fixed broadband connection in the United States is $80 per month.[14] As a result, only half of American adults with household incomes under $30,000 have a home broadband connection, and only one in three have a smartphone.[15] Despite the Internet's centrality to full participation in our economy, our culture, and our society, the United States is still many years away from universal connectivity.

A similar consolidation of power has also occurred among the country's largest tech platforms. For example, over the past fifteen years, Alphabet's Google has become the dominant search engine, Facebook the dominant social network, and Amazon the dominant e-commerce site.[16]

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[11] *See* Susan Crawford, *Google Fiber was Doomed from the Start,* WIRED (Mar. 14, 2017, 12:00 AM), https://www.wired.com/2017/03/google-fiber-was-doomed-from-the-start/ [https://perma.cc/P2HF-NCF6] (noting that Google largely failed at providing competitive BIAS service in the U.S. because the cost was prohibitive, and it was often stymied by local restrictions and difficulties gaining access to poles).

[12] *See* 47 U.S.C. §§ 301–303, 308–310, 332.

[13] Verizon v. FCC, 740 F.3d 623, 645 (D.C. Cir. 2014).

[14] *See* Carl Weinschenk, *Report: US Median Broadband Price is $80 Monthly*, TELECOMPETITOR (Aug. 8, 2017, 1:41 PM), http://www.telecompetitor.com/report-u-s-median-broadband-price-is-80-monthly/ [https://perma.cc/XS2R-C5ED] (noting that the median price for a broadband connection in the United States is about $80 a month).

[15] Monica Anderson, *Digital Divide Persists even as Lower-Income Americans Make Gains in Tech Adoption*, PEW RES. CTR. (Mar. 22, 2017), http://www.pewresearch.org/fact-tank/2017/03/22/digital-divide-persists-even-as-lower-income-americans-make-gains-in-tech-adoption/ [https://perma.cc/K27V-D3NJ].

[16] *See Market Share Statistics for Internet Technologies*, NETMARKETSHARE, https://www.netmarketshare.com/search-engine-market-share.aspx [https://perma.cc/5VZB-TWBL]; Sebastian Huempfer, *Facebook Remains the Dominant Social Platform*, SOCIAL MEDIA TODAY (May 30, 2017), https://www.socialmediatoday.com/social-networks/facebook-remains-dominant-social-platform-infographic [https://perma.cc/7XQR-8Y33]; *Most Popular Online Stores in the United States in 2017, by Net e-Commerce Sales (in Million U.S. Dollars)*, STATISTA

Like the BIAS providers, platforms have become increasingly vertically integrated. Among its many acquisitions, Google acquired the online video company YouTube, the online advertising company Doubleclick, the airfare shopping engine ITA, the navigation company Waze, and the mobile advertising company AdMob. In just the past five years, Facebook has acquired the photo sharing company Instagram, the messaging company WhatsApp, and the Virtual Reality company Oculus VR, among many others. Amazon too has gone on a shopping spree, acquiring the e-commerce site Qudisi/Diapers.com, the grocer Whole Foods, the online shoe retailer Zappos, the live streaming video platform Twitch, and the robotics firm Kiva Systems (now Amazon Robotics).

Like BIAS providers, vertical integration provides these platforms with the incentive and ability to discriminate against unaffiliated content, applications, and services. For example, the European Union fined Google 2.42 billion euros ($2.7 billion) and forced it to change its practices after finding that Google deliberately favored its affiliated comparison shopping service in its search results and deliberately demoted rival comparison shopping services.[17] Similarly, in a 2016 investigation of Amazon's algorithm, *ProPublica* found that Amazon automatically prioritized its own products and products sold by vendors that participate in its shipping program.[18]

As in the BIAS market, the power of online platforms is exacerbated by high barriers to entry. These barriers to entry are primarily caused by two factors. First, online platforms collect enormous amounts of data on individuals who use their sites—collection exclusive to the platform provider and virtually unregulated. With a treasure trove of information about their users, platforms can sell that data to advertisers, who then target advertising based on that user data.[19] Second, because

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(Feb. 2018), https://www.statista.com/statistics/646030/top-online-stores-united-states-revenues/ [https://perma.cc/2ERC-9Q4S].

[17] European Commission Press Release IP/17/1784, Antitrust: Commission Fines Google €2.42 Billion for Abusing Dominance as Search Engine by Giving Illegal Advantage to Own Comparison Shopping Service (June 27, 2017), http://www.europa.eu/rapid/press-release_IP-17-1784_en.htm [https://perma.cc/Z5DN-SA5M] (finding that Google's favoritism resulted in traffic to Google's comparison shopping service increasing significantly, while rival services suffered "very substantial losses of traffic on a lasting basis").

[18] Julia Angwin & Surya Matta, *Amazon Says It Puts Customers First. But Its Pricing Algorithm Doesn't*, PROPUBLICA (Sept. 20, 2016, 8:00 AM), https://www.propublica.org/article/amazon-says-it-puts-customers-first-but-its-pricing-algorithm-doesnt [https://perma.cc/CAT7-GWEY].

[19] *See generally* Allen P. Grunes & Maurice E. Stucke, *No Mistake about It: The Important Role of Antitrust in the Era of Big Data*, ANTITRUST SOURCE (Apr. 2015),

these platforms have acquired many millions, and in the case of Facebook, billions of users, they benefit from what is known as network effects—the phenomenon where a platform gains more value as more people use it.

Imagine a new social network with zero users trying to compete with Facebook, which has over two billion users and which controls your "friends," your photos, and every post you have ever made. Or imagine an e-commerce site that wants to compete with Amazon, which had 310 million active customers as of 2016, which knows everything you have ever bought on the site, which has the ability to favor its own sellers, and which has a history of below cost pricing to undercut competition.[20] The combination of control over data and network effects has raised the barriers to entry by new firms such that investment in seed funding for online start-ups has dropped precipitously since 2015.[21] Indeed, new firms are turning to the largest online platforms themselves for financing, not with the hope of independence, but with the hope that their host companies will buy them. [22]

B. Collection of and Control over Personal Data

As discussed above, the largest online platforms collect huge amounts of personal data from their users and maintain exclusive control over it.[23] In fact, Facebook's and Google's entire business model consists of collecting users' personal data and selling targeted advertising based on what the data indicates the users like and want. Essentially, the user is paying them with his or her personal data and receiving "free" online services in return. To the extent that a user has any choice about what data to give to Facebook and who else might access it, the company has made

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https://www.americanbar.org/content/dam/aba/publishing/antitrust_source/apr15_grunes_4_22f.authcheckdam.pdf [https://perma.cc/JGT8-YHPE].

[20] Lina Khan, *Amazon's Antitrust Paradox*, 126 YALE L.J. 710, 756–768 (2017).

[21] Victor Basta, *There's an Implosion of Early-Stage VC Funding, and No One's Talking about It*, TECH. CRUNCH (Nov. 30, 2017), https://techcrunch.com/2017/11/30/theres-an-implosion-of-early-stage-vc-funding-and-no-ones-talking-about-it/ [https://perma.cc/PP68-MQNM].

[22] Scott Galloway, *Silicon Valley's Tax-Avoiding, Job Killing, Soul Sucking Machine*, ESQUIRE (Feb. 8, 2018), http://www.esquire.com/news-politics/a15895746/bust-big-tech-silicon-valley/ [https://perma.cc/GGW5-5LJQ] ("I've sat in dozens of VC pitches by small firms. The narrative has become universal and static: 'We don't compete directly with the Four but would be great acquisition candidates.'").

[23] Google does allow users the ability to download their data. Todd Haselton, *How to Download a Copy of Everything Google Knows about You,* CNBC (Mar. 30, 2018, 9:01 AM), https://www.cnbc.com/2018/03/29/how-to-download-a-copy-of-everything-google-knows-about-you.html [https://perma.cc/EX5T-YZE2]. Whether that data is easily portable to and usable by other services is an open question.

that choice extremely difficult. Tools to opt-out of data collection are buried in places even the most sophisticated user would have trouble finding.[24] This laissez-faire attitude towards data collection and user control, along with a lack of effective government oversight, created the conditions that allowed the data firm, Cambridge Analytica, to collect data on 87 million unwitting Facebook users.[25]

BIAS providers have a different business model: they charge customers high monthly subscription fees[26] and sometimes equipment fees as well. Although it is discussed less often, BIAS providers have access to even more data than online platforms.[27] For example, BIAS providers can see every website a user has visited, every app a user has used, every device a user connects to the network, and every place that user has been with her mobile device.[28] While BIAS providers may not have taken advantage of this data in the same way as the online platforms, the potential exists for BIAS providers to use and monetize this data. For example, Verizon has announced that its purchases of AOL and Yahoo will give it the capability to compete with Google and Facebook in the digital advertising market.[29]

Users have few rights with respect to the data collected by either online platforms or BIAS providers.[30] There are currently no rules giving

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[24] Brian Barrett, *The Facebook Privacy Setting that Doesn't Do Anything at All,* WIRED (Mar. 27, 2018, 12:00 PM), http://www.wired.com/story/facebook-privacy-setting-doesnt-do-anything [https://perma.cc/VHV6-9VV4].

[25] Cecilia Kang & Sheera Franklin, *Facebook Says Cambridge Analytica Harvested Data of Up to 87 Million Users*, N.Y. TIMES (Apr. 4, 2018), http://www.nytimes.com/2018/04/04/technology/mark-zuckerberg-testify-congress.html [https://perma.cc/9QFA-CUQH].

[26] *See* Carl Weinschenk, *supra* note 14.

[27] Protecting the Privacy of Customers of Broadband and Other Telecommunications Services, 82 Fed. Reg. 44,118 (Sept. 21, 2017) (codified at 47 C.F.R. pt. 64).

[28] *What ISPs Can See*, UPTURN (Mar. 2016), https://www.teamupturn.org/static/reports/2016/what-isps-can-see/files/Upturn%20-%20What%20ISPs%20Can%20See%20v.1.0.pdf [https://perma.cc/2KGZ-AMG2]. *But see* Peter Swire, Justin Hemmings & Alana Kirkland, *Online Privacy and ISPs* (Ga. Tech-Inst. for Info. Sec. & Privacy, Working Paper 2016), http://www.iisp.gatech.edu/working-paper-online-privacy-and-isps [https://perma.cc/XNQ8-XEWY].

[29] Eric Jhonsa, *Verizon's Oath Sales Chief: Here's How We Plan to Battle Google and Facebook*, STREET (Jan. 18, 2018, 12:36 PM), http://www.thestreet.com/story/14453341/1/oath-executive-discusses-video-acquisitions-and-more.html [https://perma.cc/GP99-QC96].

[30] While certain types of data, such as health data or financial data, are subject to specific protections, such as the Health Insurance Portability and Accountability Act of 1996 and the Gramm-Leach-Bliley Act, respectively, other types of personal data are not protected. In April 2018, Senators Klobucher and Kennedy introduced the Social Media Privacy Protection and Consumer Rights Act of 2018, which would provide users greater rights

consumers the choice to opt in or out of data collection and sharing. And, as discussed below, the Federal Trade Commission's (FTC) case-by-case enforcement of its authority to constrain "unfair and deceptive trade practices" has not resulted in online privacy practices that promote transparency and consumer choice.[31]

The Obama administration developed a blueprint "Consumer Privacy Bill of Rights" that it had hoped could become the basis for comprehensive online privacy legislation, but that effort failed to move forward.[32] In 2016, however, the FCC adopted privacy rules in 2016 that, among other things required BIAS providers to 1) make their privacy policies transparent and understandable; 2) take reasonable measures to protect customer data; 3) provide notice for certain large data breaches; and most importantly, 4) provide consumer choice for the collection and sharing of information. [33] In April 2017, however, Congress repealed these rules.[34]

C. Lack of Transparency

The lack of transparency by BIAS providers and online platforms affect both sound policymaking and democracy itself. BIAS providers do not, and are not required to, provide useful data on how many Americans have BIAS,[35] nor are they required to reveal what they charge consumers.

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with respect to their data. S. 2728, 115th Cong. (introduced Apr. 23, 2018). The proposed legislation aims to protect the privacy of consumer's online data by improving transparency, requiring companies to comply with privacy policies and strengthening recourse options for users in the event of a data breach.

[31] 15 U.S.C. § 45(a)(1) (2012).

[32] Natasha Singer, *Why a Push for Online Privacy is Bogged Down in Washington,* N.Y. TIMES (Feb. 26, 2016), https://www.nytimes.com/2016/02/29/technology/obamas-effort-on-consumer-privacy-falls-short-critics-say.html [https://perma.cc/A7QR-245F].

[33] Protecting the Privacy of Customers of Broadband and Other Telecommunications Services, 82 Fed. Reg. 44,118 (Sept. 21, 2017) (codified at 47 C.F.R. Pt. 64).

[34] *See* Congressional Review Act, 5 U.S.C. §§ 801–08 (2012) (Allowing for the repeal of agency rules soon after adoption with only a simple majority in Congress. The CRA further prohibits the FCC from adopting "substantially similar" rules in the future.).

[35] The FCC requires facilities-based broadband providers to file Form 477 twice a year indicating where there is Internet access service at speeds exceeding 200 kbps in at least one direction. Fixed providers file lists of census blocks in which they can or do offer service to at least one location. Mobile providers file maps of their coverage areas for each broadband technology. It has been widely publicized that this data is unreliable and inaccurate. *See* Rob Pegoraro, *The Problem with America's New National Broadband Map,* CITYLAB (Feb. 28, 2018), https://www.citylab.com/life/2018/02/fcc-high-speed-broadband-internet-access-map/554516/ [https://perma.cc/2ZQG-ZJZM]; Modernizing the FCC Form 477 Data Program, 82 Fed. Reg. 40118 (Aug. 24, 2017) (codified at 47 C.F.R. pt. 1).

This lack of transparency makes it hard for regulators to make sound policy to encourage broadband deployment and adoption. It also makes it difficult for consumers to make sound choices when choosing a BIAS provider.

The problems caused by online platforms' failure to be transparent are even more egregious.

During the 2016 election season, both Facebook and Google were overrun by fake accounts, false news stories, and fake political advertisements. Many of these were generated by bots and foreign agents, which were often one and the same. While it has not been proven that these fake accounts, stories, and advertisements changed the outcome of the 2016 U.S. Presidential and Congressional elections, the accounts were likely intended to influence the results, harming American discourse and democracy.[36]

Online platforms have the legal authority to edit and curate their platforms from time to time, often by removing content they or a user finds offensive.[37] For the most part, they have taken a hands-off approach towards removing and identifying fake and foreign-paid posts and advertisements until recently when public, policymaker, and advertiser pressure caused them to be more proactive in identifying and removing such content.[38]

In addition to being unaware of what is real and fake on online platforms, users do not generally understand why they are receiving certain ads, why certain searches come up first, or why they see certain friends' posts more than others.[39] This is because search engines, social

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[36] *See, e.g.*, Nicholas Thompson & Fred Vogelstein, *Inside the Two Years that Shook Facebook-and the World*, WIRED (Feb. 12, 2018, 7:00 AM), http://www.wired.com/story/inside-facebook-mark-zuckerberg-2-years-of-hell/ [https://perma.cc/2ZPA-977Z].

[37] 47 U.S.C. § 230 (1998) (limiting platform liability for any good faith action to restrict access to material that is objectionable).

[38] Thompson & Vogelstein, *supra* note 36.

[39] *See* Meritxell Roca-Sales, *News on Social Platforms: Audience Hungry for Transparency*, TOW CTR. FOR DIGITAL DEMOCRACY (Oct. 24, 2017), https://towcenter.org/research/local-audiences-consuming-news-on-social-platforms-are-hungry-for-transparency/ [https://perma.cc/4GT5-KXQA]; Janna Anderson & Lee Raine, *The Future of Truth and Misinformation Online*, PEW RES. CTR. (Oct. 19, 2017), http://www.pewinternet.org/2017/10/19/the-future-of-truth-and-misinformation-online/ [https://perma.cc/6BYH-SKML]; Motahhare Eslami, Kristen Vaccaro, Karrie Karahalios & Kevin Hamilton, *"Be Careful; Things Can be Worse Than They Appear"-Understanding Biased Algorithms and Users' Behavior Around Them in Rating Platforms,"* Proceedings of the Eleventh International AAAI Conference on Web and Social Media (2017), https://aaai.org/ocs/index.php/ICWSM/ICWSM17/paper/view/15697 [https://perma.cc/4B6Y-7SUY].

networks, e-commerce, and other sites do not give users any explanation of how their algorithms work or why they generate specific results. These algorithms are completely opaque to the user, despite their enormous impact on what we see, hear, and believe.[40] This is not benign. It is well documented, for example, that lower income Americans are more likely to receive online advertisements for loans at higher interest rates or for illegal pharmaceuticals.[41] Importantly, the developers of these algorithms bear no responsibility for the financial or other harm these biases may cause.

D. Inadequacy of Current Laws and Enforcement

With the repeal of the FCC's net neutrality and privacy rules and the FCC's abandonment of its authority to police the broadband market, BIAS providers are subject to oversight only by the FTC and enforcement of antitrust laws. However, neither FTC consumer protection authority nor current antitrust law is adequate to constrain the power of either industry.

The following section explains where communications, consumer protection, and competition law fall short in addressing the competition, privacy, transparency, and accountability issues described above.

1. Communications Law

The Trump FCC's December 14, 2017 "Restoring Internet Freedom" order repealed the 2015 network neutrality rules and reclassified BIAS from a "telecommunications service" regulated under Title II of the Communications Act of 1934 to an unregulated "information service" under Title I of the Communications Act.[42] However, the Commission explicitly designated the FTC as the agency to

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[40] *See* ACM U.S. Public Policy Council, *Statement on Algorithmic Transparency and Accountability,* ASS'N FOR COMPUTING MACHINERY (Jan. 12, 2017), https://www.acm.org/articles/bulletins/2017/january/usacm-statement-algorithmic-accountability [https://perma.cc/9X8Q-4LRD].

[41] *See, e.g.*, Nathan Newman, *How Big Data Enables Economic Harm to Consumers, Especially to Low-Income and Other Vulnerable Sectors of the Population*, J. INTERNET L. 11–29 (2014);
see also FED. TRADE COMM'N, BIG DATA: A TOOL FOR INCLUSION OR EXCLUSION? UNDERSTANDING THE ISSUES 7 (Jan. 2016), https://www.ftc.gov/system/files/documents/reports/big-data-tool-inclusion-or-exclusion-understanding-issues/160106big-data-rpt.pdf [https://perma.cc/BKZ4-BUN2] (using big data to target ads for financial products could mean "low-income consumers who may otherwise be eligible for better offers may never receive them").

[42] Restoring Internet Freedom, 83 Fed. Reg. 7,852 (Feb. 22, 2018) (codified at 47 C.F.R. pt. 1, 8, 20).

oversee whether BIAS providers abide by the network practices they disclose to their customers.[43]

By reclassifying BIAS, the FCC abdicated its oversight role of the industry. Title II gave the FCC power to constrain "unjust and unreasonable" prices, terms, and practices by BIAS providers,[44] as well as practices that violated users' privacy.[45] Title II also allowed the FCC to apply broadband subsidies for low-income Americans and rural BIAS providers.[46] Without Title II authority, the FCC will no longer address privacy and data collection practices, fraudulent billing, or price gouging by BIAS providers. As for subsidies, the FCC has declared that only BIAS providers which also make available plain old wired or mobile telephone service (which is a telecommunications service subject to Title II) will be eligible to receive the subsidy for broadband.[47]

Among the rationales for the FCC's reclassification of BIAS and repeal of the net neutrality rules is that the FTC is well equipped to protect consumers against the discriminatory practices of BIAS providers.[48] But as discussed below, the FTC's tools are limited both by its organic statute and its own narrow interpretation of its consumer protection mandate.

2. Consumer Protection Law

The basic consumer protection law enforced by the FTC is Section 5 of the Federal Trade Commission Act, which prohibits both "unfair methods of competition" and "unfair and deceptive trade practices."[49] The FTC views the scope of its power to constrain unfair methods of competition as no more broad than its powers under Section 2 of the Sherman Act, which makes "monopolization," "attempted monopolization," and "conspiracy to monopolize" illegal.[50] The FTC's

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[43] *Id.* at 7,886.
[44] 47 U.S.C. § 201(b) (2016).
[45] 47 U.S.C. § 222 (2016).
[46] 47 U.S.C. § 254 (2016).
[47] Bridging the Digital Divide for Low-Income Consumers, Lifeline and Link Up Reform and Modernization, Telecommunications Carriers Eligible for Universal Service Support, 83 Fed. Reg. 2081 (codified at 47 C.F.R. 54).
[48] *Id.*
[49] 15 U.S.C. § 45 (2012).
[50] FED. TRADE COMM'N, STATEMENT OF PRINCIPLES REGARDING "UNFAIR METHODS OF COMPETITION" UNDER SECTION 5 OF THE FTC ACT (Aug. 13, 2015), http://www.ftc.gov/system/files/documents/public_statements/735201/150813section5enforcement.pdf [https://perma.cc/FEC9-LF8J].

willingness to bring lawsuits under Section 2 of the Sherman Act is no more aggressive.[51]

The FTC also interprets its Section 5 consumer protection authority to police unfair and deceptive trade practices narrowly.[52] For the most part, the agency uses its authority against companies that mislead or otherwise deceive consumers, such as by violating their terms of service. The FTC has occasionally gone beyond this narrow construction, using its Section 5 authority to penalize unfair privacy and data security practices, for example, to police negligent security practices by the Wyndham Hotel chain.[53]

Importantly, the FTC does not have rulemaking power under Section 5; enforcement of this provision is on a case-by-case basis.[54] Further, enforcement is a limited tool, since an agency cannot address every violation of the law and is constrained by limited resources. Rules do a far better job than enforcement of setting expectations, moderating industry behavior, and informing consumers of their rights. Academics have argued that the FTC has developed a "common law" of privacy that gives guidance to industry.[55] Still, this has not resulted in giving consumers greater control over the data they give to BIAS providers and online platforms nor has it resulted in halting the steady stream of recent, major data breaches. According to the Identity Theft Resource Center, data breaches rose forty percent in 2017.[56]

Importantly, the FTC has very limited ability under Section 5 to police BIAS providers' network management practices. Under the new regime set forth in the FCC's net neutrality repeal order,[57] the FTC's oversight role will be limited to enforcing the requirement that BIAS providers disclose to their customers how they will treat Internet traffic.

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[51] Powerpoint, William E. Kovacic, Designing Regulatory Institutions for the 21st Century: A View From Abroad, http://siliconflatirons.org/wp-content/uploads/2018/02/Designing-Twenty-First-Century-Regulatory-Institutions.pdf (Section 5 of the FTC Act and Section 2 of the Sherman Act have become "sterile instruments").

[52] *Id.*

[53] FTC v. Wyndham Worldwide Corp., 799 F.3d 236 (3d Cir. 2015) (holding that the FTC could use the prohibition on unfair practices in Section 5 of the FTC Act to challenge the lapses in Wyndham's data security practices).

[54] 15 U.S.C. § 45(b) (2012).

[55] Daniel Solove & Woodrow Hartzog, *The FTC and the New Common Law of Privacy*, 114 COLUM. L. REV. 583 (2014).

[56] Steven Bearak, *2018 Data Breaches — The Worst So Far*, IDENTITY FORCE (Dec. 27, 2017), https://www.identityforce.com/blog/2018-data-breaches [https://perma.cc/7WNC-A28C].

[57] Restoring Internet Freedom, 83 Fed. Reg. 7,852 (Feb. 22, 2018) (codified at 47 C.F.R. pt. 1, 8, & 20).

So long as the BIAS provider discloses that it may block, throttle, or prioritize traffic, the FTC will not otherwise exercise an oversight role as to whether the BIAS provider is engaging in discrimination.

3. Antitrust Laws & Enforcement

Starting in the 1930s, courts and antitrust officials used the available antitrust laws to constrain the market power of the country's largest industries, with a focus not only on how mergers and anticompetitive conduct affected competition, but also on how they affected market structure and democracy.[58] Vertical mergers were blocked if they would foreclose competition. In the 1970s and 1980s that focus started to shift with the influence of economists and scholars like Robert Bork, Richard Posner, and Milton Friedman. Ignoring market structure, vertical integration, and predatory pricing, these "Chicago School" scholars focused solely on prices and output as indicators of a competitive market. Courts and antitrust officials soon began to follow this approach.[59]

Antitrust jurisprudence that focuses largely on price and output is not well suited to addressing the market power of large platforms,[60] which are free for consumers to use, in the case of Facebook and Google, or which result in lower consumer prices, in the case of Amazon. As a result, the large online platforms have been mostly unconstrained by antitrust enforcement. In 2011, the FTC commenced an investigation into anticompetitive tactics by Google. Despite the staff's recommendation that the Commission sue the company, the five Commissioners voted to close the investigation, citing insufficient evidence of a violation under either Section 5 or the Sherman Act.[61]

Antitrust enforcement in the broadband industry has not been particularly robust either. While the mergers of AT&T and T-Mobile and Comcast and Time Warner Cable were halted by the Obama-era FCC and Department of Justice (DOJ), those horizontal mergers were arguably

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[58] Matt Stoller, *The Return of Monopoly*, NEW REPUBLIC (July 13, 2017), https://newrepublic.com/article/143595/return-monopoly-amazon-rise-business-tycoon-white-house-democrats-return-party-trust-busting-roots [https://perma.cc/5K9T-AMBF]; Khan, *supra* note 20 at 717–36; Marc Jarsulic et al., *Reviving Antitrust, Why Our Economy Needs a Progressive Competition Policy*, CTR. FOR AM. PROGRESS (June 29, 2016, 12:01 AM), https://www.americanprogress.org/issues/economy/reports/2016/06/29/140613/reviving-antitrust/ [https://perma.cc/2F66-FZD6].

[59] *Id.*

[60] *See* Khan, *supra* note 20.

[61] Brody Mullins, *Inside the US Antitrust Probe of Google*, WALL ST. J. (Mar. 19, 2015, 7:38 PM), http://www.wsj.com/articles/inside-the-u-s-antitrust-probe-of-google-1426793274 [https://perma.cc/4ZG2-VYB9].

indefensible to begin with. Indeed, as discussed previously, there were numerous mergers in the broadband and media companies during the Obama administration. Among the reasons for this acquiescence is lack of political will, the large amount of resources needed to bring an antitrust lawsuit, and the high burden of proof the government must meet to prevail.[62]

Another barrier to antitrust enforcement in the broadband industry is that the United States Supreme Court has made it more difficult to bring antitrust lawsuits, especially in industries where there is regulatory oversight. For instance, in a seminal case, a customer of AT&T sued Verizon under Section 2 of the Sherman Act alleging that Verizon refused to make certain parts of its network available to AT&T, as it was required to do under Section 251(c)(3) of the Communications Act.[63] The Court found that because a detailed regulatory scheme existed that addressed this very issue, the customer could not seek redress under the Sherman Act.

More recently, the Supreme Court dealt an even bigger blow to the ability of private parties and government to bring a successful lawsuit under antitrust law. In *Ohio v. American Express*,[64] the Court found that in industries serving two distinct sets of users (or "two-sided markets"),[65] it would be insufficient for a plaintiff to show that just one side of the market was harmed by anticompetitive behavior—he or she would have to show that both sides were harmed. In the online context, this would mean that, for example, even if it was proven that Amazon engaged in anticompetitive behavior with respect to some of the sellers on its platform, an antitrust lawsuit would not prevail unless the plaintiff could also show that consumers were also being harmed.[66]

Thus, currently, the nation's antitrust laws fall short of what is needed to address consolidation, vertical integration, and anticompetitive behavior in the BIAS market and for online platforms.

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[62] Jarsulic et al., *supra* note 58.

[63] *Verizon Commc'ns., Inc. v. Law Offices of Curtis V. Trinko, LLP,* 540 U.S. 398 (2004).

[64] Ohio v. American Express Co., 138 S. Ct. 2274, No. 16-1454, 2018 WL 3096305 (2018).

[65] For example, credit card companies like American Express serve both merchants and consumers. An e-commerce website like eBay serves both sellers and buyers.

[66] *See* Lina Kahn, *The Supreme Court Just Quietly Gutted Antitrust Law*, Vox (July 3, 2018, 9:40 AM), https://www.vox.com/the-big-idea/2018/7/3/17530320/antitrust-american-express-amazon-uber-tech-monopoly-monopsony [https://perma.cc/465A-6ZN2].

III. A POLICY FRAMEWORK FOR AN OPEN INTERNET ECOSYSTEM

Many of the problems discussed above can be addressed with targeted legislative and regulatory interventions. Others require more research and investigation before the right policy prescriptions can be developed. The policy proposals I suggest can be placed in five categories: 1) regulatory oversight, 2) privacy, 3) competition, 4) access and affordability, and 5) transparency.

A. Regulatory Oversight

There can be no effective policy framework for an open Internet ecosystem if policymakers lack the legal tools to enforce that framework. As discussed previously, neither the FCC nor the FTC currently have adequate legal authority to promote an open Internet.

The FCC was created in 1934 as the expert agency overseeing access to communications networks, and it should remain the principal agency for carrying out this task. However, the limitations on the FTC's authority should not prevent it from having concurrent, if not primary, oversight over BIAS providers. Indeed, after the Obama FCC classified BIAS providers as telecommunications services, technically removing them from FTC's jurisdiction,[67] the agencies pledged to work together to bring enforcement actions against BIAS providers for fraudulent billing and anti-consumer privacy practices.[68] Broadband Internet access is critically important to our economy and society, and as such, empowering multiple regulators is both prudent and necessary.[69]

Similarly, Congress should strengthen the FTC's authority to protect consumers from the unfair and anticompetitive activities of online platforms and should investigate whether the FTC alone is an adequate regulator. In 2014, online industries contributed six percent, or nearly $1

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[67] The Federal Trade Commission Act exempts "common carriers" from the agency's jurisdiction. 15 U.S.C. § 45(2) (2012). A "telecommunications service" regulated under Title II is a common carrier. 47 U.S.C. § 153 (51).

[68] FTC, P974405, MEMORANDUM OF UNDERSTANDING ON CONSUMER PROTECTION BETWEEN THE FTC AND THE FCC (Nov. 2015), https://www.ftc.gov/policy/cooperation-agreements/memorandum-understanding-consumer-protection-between-federal-trade [https://perma.cc/LG4R-ZJJP].

[69] For example, banks and airlines are just two of the industries that have multiple regulators. Gigi B. Sohn, Counselor to the Chairman, Office of Chairman Wheeler, Providence, R.I., Remarks at the 4th Annual Professor Anthony J. Santoro Business Law Lecture Series, Consumer Protection in the Broadband Era: The Role of the FCC (Sept. 25, 2015), https://www.fcc.gov/document/remarks-gigi-b-sohn-consumer-protection [https://perma.cc/EF94-MWED].

trillion, to the gross domestic product of the United States.[70] Such a huge part of our economy may warrant its own regulatory agency.

To address the gaps in regulatory oversight, Congress should:

- Restore and clarify the FCC's authority to oversee the broadband market, either under Title II of the Communications Act of 1934 or a new title that codifies, at a minimum, the 2015 Open Internet Order.

- Repeal the FTC's "Common Carrier" exemption, which would allow the FTC to conduct oversight of BIAS providers regulated either under Title II or another title that treats providers as common carriers.

- Give greater specificity and clarity as to the FTC's powers under Section 5, specifically that the powers go beyond mere deception.

- Task one of the Congressional investigative services (*e.g.,* Government Accountability Office (GAO) or Congressional Research Service (CRS)) with investigating and if warranted, making recommendations for the creation of either a special bureau at the FTC or a separate agency or tribunal to oversee consumer, competition, and privacy aspects of online platforms.[71]

B. Privacy

The repeal of the FCC's broadband privacy rules and the Facebook-Cambridge Analytica scandal shined a spotlight on the fact that U.S. citizens have little affirmative protection with respect to consumer privacy. Americans have made it clear that they want protection. A recent Pew survey found that ninety-one percent of Americans want the ability to

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[70] CHRISTOPHER HOOTON, REFRESHING OUR UNDERSTANDING OF THE INTERNET ECONOMY (Internet Association Jan. 12, 2017), https://cdn1.internetassociation.org/wp-content/uploads/2017/01/Refreshing-Our-Understanding-Economy-Internet-Association.pdf [https://perma.cc/6ZNK-KLL9].

[71] *See* Hal Singer, *It's Time to Modernize Communications Policy*, FORBES (Dec. 12, 2012, 8:31 AM), https://www.forbes.com/sites/halsinger/2012/12/12/its-time-to-modernize-communications-policy/#710a88716762 [https://perma.cc/YA25-RP5U] (suggesting an adjudication process similar to that carried out under Section 616 of the Communications Act to determine whether cable operators have unfairly denied carriage to an independent programmer).

control what data they give to online platforms, but they do not know how to exercise that control.[72]

There has been a lot of recent discussion about what online privacy legislation might look like, including mimicking the General Data Protection Regulation (GDPR) recently adopted by the European Union. The GDPR is commendable for provisions such as creating strong consumer control over data collection and sharing and the significant penalties for noncompliant companies.[73] However, parts of it are over-regulatory and likely inconsistent with the First Amendment, such as the "Right to Be Forgotten," which allows an individual to compel a company to remove certain data.[74]

The FCC's broadband privacy rules[75]—which were quickly repealed by Congress in April 2017 and never took effect—are arguably a better model for giving consumers control over their data. Developed after a long public comment period and with significant input from privacy advocates, industry, and the FTC, the rules could be applied just as easily to online platforms. Congress should codify these rules and require, among other things, that both online platforms and BIAS providers:

- Give consumers control over their data, unless it is necessary to providing service. For "sensitive information," (*i.e.*, health and financial information, social security numbers, geolocation, information pertaining to children, the content of communications, web browsing history, and app usage (and their functional equivalents)), a customer must opt-in to the use and sharing of their data. For all other information, the consumer must be given clear, persistent, and easily available notice of the opportunity to opt-out of the use and sharing of their data.

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[72] Lee Raine, *The State of Privacy in Post-Snowden America*, PEW RES. CTR. (Sept. 21, 2016), http://www.pewresearch.org/fact-tank/2016/09/21/the-state-of-privacy-in-america/ [https://perma.cc/Y957-869J].

[73] *See generally* EU GENERAL DATA PROTECTION REGULATION (GDPR), http://www.eugdpr.org/ [https://perma.cc/P8J9-TPXP] (summarizes key provisions of the GDPR).

[74] Christopher Titze, *How the "Right to be Forgotten" Puts Privacy and Free Speech on a Collision Course*, CONVERSATION (Nov. 18, 2016, 3:18 AM), http://theconversation.com/how-right-to-be-forgotten-puts-privacy-and-free-speech-on-a-collision-course-68997 [https://perma.cc/JQ68-E498] (discussing how if news outlets can be asked to "unpublish" a story, the right to be forgotten directly clashes with the First Amendment's guarantee of freedom of the press).

[75] Protecting the Privacy of Customers of Broadband and Other Telecommunications Services, 82 Fed. Reg. 44,118 (Sept. 21, 2017) (codified at 47 C.F.R. pt. 64).

- Take reasonable measures to protect customers' data. Reasonableness is measured by a variety of factors, including industry practices.

- Notify law enforcement and consumers of major data breaches in a timely fashion.[76]

- Prohibit the requirement that users give up their privacy rights to obtain a service.

Depending on the industry, this law could be enforced by the FCC, the FTC, both, or a new agency created by Congress.

C. Competition

Improving competition for BIAS providers and for the largest search, social media, and e-commerce sites will require the most change and oversight but may have the greatest impact in opening the Internet ecosystem. BIAS providers and platforms perform different roles and operate under different business models; solutions for promoting competition in each industry are similarly diverse. However, improvements to antitrust law can be applied across the board and well beyond the Internet ecosystem.

1. BIAS Providers

Given the high barriers to entry in the BIAS market, restoring competition will necessitate re-establishing successful policies that were eliminated at the behest of the broadband industry. In addition, local communities should be able to determine whether their citizens would benefit from a competitive broadband network built in whole or in part by the community.[77] Either way, it is critical that competitors have access to the means for providing service, including poles, conduits, and apartment

[76] *Id.* (For example, the now-repealed FCC privacy rules required BIAS providers to notify law enforcement within seven days of a breach affecting more than 5000 customers; customers were to be notified no later thirty days after the breach and impacted agencies at least 3 days before customers.).

[77] *See* Baller, Stokes, & Lide, *State Restrictions on Community Broadband Services or Other Public Communications Initiatives,* BALLER, STOKES & LIDE PC, http://www.baller.com/2018/01/state-restrictions-on-community-broadband-services-or-other-public-communications-initiatives/ [https://perma.cc/8F7Y-REK5] (noting that nearly half the states in the U.S. prohibit local communities from building their own broadband networks).

buildings.[78] Incumbent BIAS providers often control access to this type of critical infrastructure and make it very difficult for competitors to access it. Therefore, Congress should:

- Restore the 2015 network neutrality rules that prohibit blocking, throttling, and paid prioritization by BIAS providers.

- Pre-empt state laws that place restrictions on the building and/or expansion of broadband networks built by cities, towns, and other localities.

- Restore the requirement that dominant BIAS providers permit last-mile competitors to share their networks.[79]

- Require incumbent BIAS providers and local communities to give potential competitors the same access to poles, conduits, and apartment buildings that incumbents have.

2. Online Platforms

Unlike the solutions to competition concerns in the BIAS market, there are no tried and true solutions for restoring competition to the markets for search, social media, e-commerce, and other dominant platforms. Thus, Congress should proceed with some (but not too much) caution. At a minimum, these solutions should include:

- A prohibition on platform discrimination in favor of affiliated companies, content, or sellers.

- A requirement that platform providers provide users access to all of their collected data in a format that can be used easily by competing platforms (*e.g,* a read/write API with the same data the service provider has) or third-party agents who negotiate with competing platforms for the kind of privacy protection the user wants.[80]

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[78] Susan Crawford, *Blame your Lousy Internet on Poles*, WIRED (Aug. 31, 2016, 12:00 AM), http://www.wired.com/2016/08/blame-your-lousy-internet-on-poles/ [https://perma.cc/573N-AXFA].

[79] 47 U.S.C. § 251(c)(3).

[80] *See* Steven Johnson, *Beyond the Bitcoin Bubble*, N.Y. TIMES (Jan. 16, 2018), http://www.nytimes.com/2018/01/16/magazine/beyond-the-bitcoin-bubble.html [https://perma.cc/PK22-J2NQ] (explaining that third parties are variously called "data stores" or "data lockers;" venture capitalist Brad Burnham promotes the idea of data

- Recommendations from the GAO, the FTC, or the DOJ for other laws and policies that help promote competition between online platforms.

3. Applicable to Both Industries

As discussed previously, federal courts have limited much of antitrust enforcement to instances where either prices have risen or output has dropped, and the Supreme Court has closed the courthouse door to antitrust actions that overlap with regulatory frameworks and made it almost impossible for a plaintiff to succeed in an antitrust lawsuit involving two-sided markets. The good news is that some members of Congress are taking note and offering ways to strengthen antitrust enforcement. To bring antitrust law back to its roots in limiting the market and political power of large trusts, Congress should:

- Pass legislation that overturns *Trinko* and its progeny, allowing for private antitrust lawsuits even where there may also be a regulatory regime that may address the same issue.

- Pass legislation that overturns *Ohio v. American Express*, making clear that it is not necessary to show that both sides of a two-sided market must be harmed for a plaintiff to bring a successful case under the Sherman Act.

- Pass S. 1812, the Consolidation Prevention and Competition Promotion Act, which, among other things:
    - Shifts the burden of proof for large mergers ($5 billion in value for one company or $10 billion combined);
    - Prohibits mergers that are "materially likely" to harm competition (as opposed to likely to substantially harm competition); and
    - Codifies an intent to review vertical transactions.

- Task the FTC or the DOJ with making recommendations for other ways to strengthen antitrust laws.

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stores); *see also* Allen P. Grunes & Maurice E. Stucke, *No Mistake About it: The Important Role of Antitrust in the Era of Big Data*, ANTITRUST SOURCE (Apr. 2015), https://www.americanbar.org/content/dam/aba/publishing/antitrust_source/apr15_grunes_4_22f.authcheckdam.pdf [https://perma.cc/RQJ7-CWJV].

D. Access and Affordability

Affordable access to the Internet is rarely discussed in conversations about Internet openness. An open network is of limited value, however, if significant numbers of people cannot access it for cost or other reasons. In the United States, fully twenty percent of Americans are not connected to BIAS.[81] For half of those Americans and nearly forty percent of rural Americans, there is no BIAS to connect to in their area.[82] For the other half, cost and other barriers discourage adoption.[83]

The largest programs for addressing broadband access and affordability are the FCC's Connect America Fund (CAF) program, which provides subsidies for BIAS providers to deploy broadband in rural areas, and the Lifeline program, which provides a small ($9.25) subsidy to low-income Americans to purchase broadband service.[84]

In addition to these FCC programs, the National Telecommunications & Information Administration (NTIA) of the Department of Commerce successfully ran two grant programs, as part of the 2009 American Recovery and Reinvestment Act, intended to increase access and adoption of broadband. The Broadband Technology Opportunities Program (BTOP)[85] made grants to build critical infrastructure, like middle mile networks and last-mile networks in rural areas. The State Broadband Initiative[86] made focused grants to community organizations and governments to encourage broadband adoption. Both programs expired once they spent their allotted funds.

In his first week in office, current FCC Chairman, Ajit Pai, attacked the Lifeline program, reversing an Obama-era FCC decision to

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[81] F.C.C., 2018 BROADBAND DEPLOYMENT REPORT, Docket No. 17-199 (Feb. 2, 2018), http://apps.fcc.gov/edocs_public/attachmatch/FCC-18-10A1.pdf [https://perma.cc/7WQU-AJVW].

[82] *Id.*

[83] John Horrigan & Maeve Duggan, *Home Broadband 2015*, PEW RES. CTR. (Dec. 21, 2015), http://www.pewinternet.org/2015/12/21/3-barriers-to-broadband-adoption-cost-is-now-a-substantial-challenge-for-many-non-users/ [https://perma.cc/Z5TZ-KETP].

[84] Until 2016, the Lifeline program paid only for landline and mobile telephone service. In 2016, the Obama FCC modernized the program and applied the subsidy to broadband connectivity for the first time. Under this decision, the subsidy for telephone service will be phased out by December 1, 2021. Lifeline and Link Up Reform and Modernization, Telecommunications Carriers Eligible for Universal Service Support, Connect America Fund, 81 Fed. Reg. 33,031 (May 24, 2016) (codified at 47 C.F.R. 54).

[85] *Broadband Technology Opportunities Program,* NAT'L TELECOMM. & INFO. ADMIN., https://www.ntia.doc.gov/category/broadband-technology-opportunities-program [https://perma.cc/8FWQ-7RXM].

[86] *State Broadband Initiative,* NAT'L TELECOMM. AND INFO. ADMIN., https://www.ntia.doc.gov/category/state-broadband-initiative [https://perma.cc/7Q4V-J5CK].

allow nine new providers into the program.[87] The providers used a new certification process that allowed them to seek authorization to become Lifeline providers directly from the FCC without having to ask permission from the states in which they were operating. Chairman Pai argued that the plain language of the Communications Act does not provide for the streamlined approval process and has now proposed to do away with this process in a Notice of Proposed Rulemaking issued in Fall 2017.[88]

Moreover, as discussed previously, the FCC's reclassification of broadband has forced both Lifeline providers and CAF recipients to provide regular telephone service to be eligible for the subsidies.[89] This requirement adds costs and discourages BIAS-only providers from making service available to the poor and in rural areas.[90]

Finally, Congress should examine making major changes to the CAF program, including whether the billions of dollars in funding should be paid not to rural BIAS providers but to infrastructure companies to deploy infrastructure like fiber backhaul and towers.[91] The record demonstrates that despite the significant funding for rural broadband deployment over the past six years, there are still wide swaths of rural America that remain unserved and underserved.[92] By paying for new infrastructure, the chances for increasing competition, expanding access, and improving speeds and quality of service will be greatly improved.

To promote greater broadband access and affordability, Congress should:

- Clarify the FCC's authority to provide broadband subsidies to low-income Americans (Lifeline) and rural connectivity (Connect America Fund) by:

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[87] Telecommunications Carriers Eligible for Universal Service Support; Lifeline and Link Up Reform and Modernization, 32 FCC Rcd 1095 (Feb. 3, 2017).

[88] Bridging the Digital Divide for Low-Income Consumers, Lifeline and Link Up Reform and Modernization, Telecommunications Carriers Eligible for Universal Service Support, 83 Fed. Reg. 2075 (codified at 47 C.F.R. 54).

[89] *Id.* at 2081.

[90] Jon Brodkin, *Sorry, Poor People: The FCC is Coming After Your Broadband Plans*, ARSTECHNICA (Nov. 16, 2017, 12:45 PM), https://arstechnica.com/tech-policy/2017/11/sorry-poor-people-the-fcc-is-coming-after-your-broadband-plans/ [https://perma.cc/N499-8SD5].

[91] Harold Feld, *Solving the Rural Broadband Equation-Fund Infrastructure, Not Carriers,* WETMACHINE (Jan. 29, 2018), https://www.wetmachine.com/tales-of-the-sausage-factory/solving-the-rural-broadband-equation-fund-infrastructure-not-carriers/ [https://perma.cc/T68U-K4VS].

[92] *Id.*; *see* Phil McCausland, *Rural Communities see big return with broadband access, but roadblocks persist,* NBC NEWS (June 11, 2018, 9:54 AM), https://www.nbcnews.com/news/us-news/rural-communities-see-big-returns-broadband-access-roadblocks-persist-n881731 [https://perma.cc/WZ6M-E5J9].

  - Allowing Lifeline BIAS providers to choose one-stop FCC certification, and
  - Reversing the decision to condition Lifeline and CAF subsidies on carriers providing regular telephone service.

- Revive and expand NTIA's State Broadband Initiative and Broadband Technology Opportunities Grant Programs.

- Ask the GAO or the CRS to conduct a study on the desirability and feasibility of shifting some or all CAF funds from rural BIAS providers to infrastructure providers.

E. Transparency

Without granular data about who has broadband service and who does not, it is a challenge to make targeted and effective broadband policy. The FCC requires that BIAS providers report broadband access on a census-tract level.[93] Thus, if one household in a census block has access, then all residents of that census block are deemed to also have access.[94] This data collection results in a significant over-counting of who has broadband.

A related problem is that it is nearly impossible for consumers to compare broadband prices in those areas where there is more than one BIAS provider because BIAS providers are not required to reveal their prices. To that end, either the FCC or Congress should require that BIAS providers submit block-by-block deployment data and cost of service (not promotional) on the semi-annual broadband deployment survey they are required to submit to the FCC.

The lack of transparency of online platforms strikes at the heart of our democracy. The proliferation of fake political advertisements, fake news, and fake accounts warrant strong and swift action to require disclosure of the sponsors of that content. In addition, the power of algorithms to control what we see and influence what we think calls for greater insight into how those algorithms work and greater accountability for any harm caused by the bias inherent in those algorithms.

To ensure greater transparency and accountability for online platforms, Congress should:

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[93] *Internet Access Services Report*, *supra* note 6.
[94] *Id*.

- Require sponsorship identification for all political and issue advertisements.[95]

- Require platforms to explain to their customers in simple terms the procedures followed by their algorithms and why they receive certain advertisements, posts, and search results.

- Hold platforms legally accountable for any economic or other harm resulting from algorithmic bias.

IV. OPEN QUESTIONS AND UNKNOWNS

The purpose of this paper is to start a conversation on which legislative and policy interventions are necessary to promote competition, user control, privacy, and openness on the Internet. There are several important questions that remain for which I do not have answers, but they are worth exploring, including:

- Should all platforms be subject to the same rules or just the largest ones that meet some type of revenue or concentration threshold? Since not all platforms perform the same functions, should there be separate rules for social networks, search engines, web browsers, and mobile operating systems?

- Is a separate regulatory body for online platforms necessary or even desirable? If yes, what should be the limits on its authority? How can you prevent the regulatory capture one sees in other agencies?
- Is the problem with Section 5 and the antitrust laws the laws themselves or the enforcers? How can Congress best undo the jurisprudence that has shaped antitrust law for the past thirty years?

- Given the incredibly fast pace of technological change and the difficulty of policymakers to keep up, should some of these legislative and regulatory solutions have a built-in review after five or ten years or less?

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[95] *See* Honest Ads Act, S. 1989, 115th Cong. (2017–2018), https://www.congress.gov/bill/115th-congress/senate-bill/1989/text [https://perma.cc/6G5Y-J5N8] (This act requires online platforms to provide sponsorship identification for all political ads but not requiring identification for issue ads. It also requires large platform providers to keep a public file of all digital political ads.).

There are other unknowns that will affect this debate, including changes in technology and protocols,[96] industry self-regulatory actions, advertiser and public pressure,[97] impact litigation, and other third party initiatives intended to mitigate the problems identified in this paper.[98]

CONCLUSION

The key players in the Internet ecosystem have become so consolidated and powerful that the network is no longer the open platform where innovation, creativity, free speech, robust discourse, and democracy once thrived. The good news is that policymakers are finally taking notice. Hopefully, now, they will also act. The targeted policy framework suggested here forms a good starting point for tackling these issues.

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[96] *See* Steven Johnson, *Beyond the Bitcoin Bubble*, N.Y. TIMES (Jan. 16, 2018) (explaining that Blockchain is being promoted as a decentralized technology that could wrest control of the Internet from big tech companies.)

[97] *See, e.g.*, Sam Meredith, *Unilever Tells Facebook and Google: Drain the "Swamp" or Lose Advertising*, CNBC (Feb. 13, 2018, 9:03 AM), https://www.cnbc.com/2018/02/13/unilever-tells-facebook-and-google-drain-the-swamp-or-lose-advertising.html [https://perma.cc/T7BN-DVW4] (Unilever, which makes Ben & Jerry's ice cream and Dove soap, has threatened to no longer advertise on Facebook unless it polices extremist and illegal content.).

[98] *See, e.g.*, Julia Angwin & Jeff Larson, *Help Us Monitor Political Ads Online,* PROPUBLICA (Sept. 7, 2017, 10:00 AM), http://www.propublica.org/article/help-us-monitor-political-ads-online [https://perma.cc/8AU7-VXDM] (The nonprofit investigative journalist organization ProPublica has announced an initiative called Political Ad Collector, which will crowd source political ads on Facebook which ProPublica will then scrutinize for veracity.).