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Chairman Velazquez, Ranking Member Chabot, thank you for inviting me here to testify today on this important issue.

No one can doubt that digital platforms, including “big tech” platforms such as Google, Amazon, and social media platforms such as Facebook, have created enormous opportunities for small businesses. Not only have these services allowed small businesses to extend their existing reach, but they have also created exciting new opportunities for entirely new small businesses. YouTube (owned by Google) and Twitch (owned by Amazon) have allowed tens of thousands of people to make their living through content creation, forming small businesses employing others.¹ Online shopping sites such as Amazon, Etsy and eBay have not only expanded the reach of traditional merchants, but also created new business opportunities for resellers and local distributors that suit local community needs. The Ultra-Orthodox Jewish Communities of Lakewood and Brooklyn, for example, has found that signing up as Amazon partners offers them flexibility that is well suited to the religious restrictions of Sabbath and religious holidays.²

At the same time, the dominance of a handful of massive companies in online retail, online search, online video and social media creates enormous problems for small businesses. These problems can be divided into two categories. First, small businesses face potential obstacles when they potentially compete with digital platforms. For example, there have been repeated reports that Amazon harvests information from third party vendors to develop competing products.³ (Amazon claims it does not do this and has no incentive to do so.) There is evidence from leaked emails that Facebook used its control over application programming interfaces (APIs) to block competitors and extort concessions from app developers once it reached dominance in the social media market.⁴ In 2017, the European Commission antitrust authority found that Google violated EU antitrust laws by favoring its affiliated content in its “Google shopping” service.⁵

¹ See David J. Bland, *What is the Business Model for a Twitch Streamer?*, Medium (April 19, 2017). Available at: <https://medium.com/precoil/what-is-the-business-model-for-a-twitch-streamer-f3b9e5351666>

² See Leticia Miranda, *America’s Orthodox Jews Are Selling a ton of Products You Buy on Amazon*, BuzzFeed (September 4, 2019). Available at: <https://www.buzzfeednews.com/article/leticiamiranda/amazon-orthodox-jews>.

³ Julie Cresswell, *How Amazon Steers Shoppers to Its Own Product*, New York Times (June 2018); Greg Ip, *The Antitrust Case Against Facebook, Google and Amazon*, The Wall Street Journal (Jan. 2018),

⁴ See Bill Goodwin, Sebastian Klovig Skelton & Duncan Campbell, *How Facebook’s ‘Switcheroo’ Plan Concealed Scheme To Kill Popular Apps*, ComputerWeekly.com (November 6, 2019). Available at: <https://www.computerweekly.com/feature/How-Facebooks-Switcheroo-plan-concealed-scheme-to-kill-popular-apps>.

⁵ See EC Competition Antitrust Page 39740. Available at: https://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=1_39740

Importantly, however, small businesses that use digital platforms as necessary inputs for their businesses can face enormous costs and barriers to entry even when they do not compete against the platform. Giant platforms, lacking competition and focused on maximizing their own revenue and preserving their own quality of service, can cause havoc with small businesses through poorly implemented decisions or imposing cumbersome and expensive processes. For example, rivals have been known to sabotage each other on platforms such as Amazon and YouTube with fake complaints, forcing small businesses to undertake expensive and complicated appeals processes.⁶ Changes in monetization policies or search algorithms can cause small businesses – through no fault of their own – to experience a sudden unanticipated drop in revenue.⁷ Changes in policy by giants such as Amazon can force smaller platforms such as Etsy to change their own policies to compete, shifting costs to the small merchants that use these rival platforms.⁸

In other words, giant platforms present a danger to small businesses not simply when they deliberately try to put them at a disadvantage. Like the proverbial bull in the china shop, giant digital platforms are simply incapable of controlling how even their rational business decisions can have unanticipated and disastrous impacts on the small businesses dependent on them. It therefore lies with Congress to set necessary safeguards that balance providing a stable and competitive environment for small businesses while preserving the valuable features of digital platforms.

Lessons From The Physical World and the Last 150 Years of Communications Policy.

In the physical world, there is a well-developed body of law to prevent both deliberate anticompetitive conduct and to prevent providers of necessary business inputs from distorting the market. For example, there is an entire body of commercial real estate law that prevents landlords from unilaterally changing the terms on small businesses with no notice. A shopping mall owner could not, for example, simply lock a merchant out of their store for some presumed violation of the shopping mall's policy. But most digital platforms can – and do – shut down online merchants or impose various other penalties for purported infractions without any sort of notice or appeal process.⁹ There are rules that govern necessary inputs such as telecommunications or electricity so that providers of these vital services cannot squeeze merchants dependent on them into agreeing to onerous terms and conditions. But there are no such rules in the digital space. To the

⁶ Josh Dzieza, *Prime and Punishment, Dirty Dealing in the \$175 Billion Amazon Marketplace*, The Verge (Dec. 2018). Available at: <https://www.theverge.com/2018/12/19/18140799/amazon-marketplace-scams-seller-court-appeal-reinstatement>.

⁷ *YouTube shooting spotlights creators' frustrations with monetization policy changes*, CBS News (April 7, 2018). Available at: <https://www.cbsnews.com/news/youtube-shooting-spotlights-recent-changes-to-companys-ad-revenue-sharing/>.

⁸ Kaitlyn Tiffany, *Was Etsy too good to be true?*, Vox (September 4, 2019). Available at: <https://www.vox.com/the-goods/2019/9/4/20841475/etsy-free-shipping-amazon-handmade-josh-silverman+&cd=1&hl=en&ct=clnk&gl=us>.

⁹ Ari Levy, *Amazon sellers say they were unfairly suspended before Prime Day, and now have two bad choices*, CNBC (July 17, 2018). Available at: <https://www.cnbc.com/2018/07/12/amazon-sellers-removed-before-prime-day-two-bad-choices.html>.

contrary, small businesses are left vulnerable in the online world in ways they have not been in the real world for over a century.

Below, I discuss important reforms Congress should consider to protect small businesses in cyberspace comparable to those they enjoy today in the physical world. While we must increase antitrust enforcement and improve antitrust law, we must also recognize the limits of antitrust law.

In my book *The Case for the Digital Platform Act*,¹⁰ I argue that the rise of digital platforms reflects the latest iteration of disruptive communications technology. In the 150 years since the telegraph revolutionized every aspect of society from commerce to foreign relations to news reporting, society observed how dramatic changes in communications technology produce equally dramatic and disruptive changes in society. This should come as no surprise. At heart, all human interaction that creates society and commerce is communication. When society changes the nature of how people communicate, then society also changes the nature of how people do business. At the same time, however, society's fundamental values guide how people address these challenges. Our commitment to democracy, competition, consumer protection and public safety provide the necessary foundation for how our laws respond to the challenges these new communication technologies create.

Below, I summarize the relevant sections and recommendations for the committee. First, I discuss the importance of defining digital platforms and distinguishing between “dominant” and “non-dominant” platforms. Behavior that is neutral, or even pro-consumer or pro-competitive, when done by a small business in a competitive environment can be harmful when done by a dominant firm. This is particularly true in the digital platform space because of the enormous network effects that dominant digital platforms enjoy and the susceptibility of digital markets to “tipping.”¹¹ Next, I make specific recommendations for legislative remedies that Congress could adopt, either individually or as part of a package, to create a new “digital authority” as recommended both in *The Case for the Digital Platform Act* and by several recent expert reports. I will focus specifically on measures to protect small businesses from anti-competitive conduct by platforms, certain pro-competitive regulations such as interoperability, how “filter bubbles” and other problems with search and recommendation algorithms harm small businesses, and protections against arbitrary treatment. Finally, I will discuss how antitrust law can and cannot promote a digital environment in which small businesses can thrive.

Defining Digital Platforms and What Constitutes “Dominance” In The Digital Platform Space.

Nearly every business today incorporates digital technology. Additionally, numerous businesses with radically different business models claim for various reasons to be “platforms” or digital platforms. Should the law treat businesses such as Google

¹⁰ Harold Feld, *The Case for the Digital Platform Act: Market Structure and Regulation of Digital Platforms* 17 (2019).

¹¹ Tipping refers to the tendency of certain markets to become uncontestable once they reach a sufficient level of concentration. Several expert reports have observed that digital platform markets seem particularly susceptible to tipping. See Jean-Pierre H. Dubé et al., *Tipping and Concentration in Markets with Indirect Network Effects*, 29 *Marketing Science* 2 at 199 (2010).

Search and other online businesses such as Netflix, or internet access providers such as Verizon or Comcast, the same? What distinguishes a would-be digital platform such as WeWork from a genuine digital platform such as Twitter? Defining what makes this particular sector of the economy unique makes clear the impact of “big tech” (as distinguishable from “big business” generally) on small businesses. In the last year, in addition to my own analysis, three separate expert reports have reached similar conclusions on what distinguishes digital platforms from other businesses.¹²

First, digital platforms do not provide internet access themselves. Instead, they are available through the internet. This radically changes the cost structure and enables rapid growth not possible for physical networks such as ISPs. Second, digital platforms enjoy powerful network effects. There is some argument as to what factors are most significant in creating these network effects, but they include: the ability of the platform to enable multisided markets and self-organizing subnetworks networks (e.g., users can be simultaneously buyers and sellers, can create multiple distinct groups, and can engage in multiple activities on the same platforms simultaneously); platforms can use personal information to manipulate users without their knowledge; and platforms can achieve a sufficient head start over rivals that it becomes almost impossible for new entrants to directly challenge the dominant platform (“tipping point economies”).

These factors also create tremendous benefits for users. Collecting personal information enables platforms to customize features for enhanced service efficiency. Delivering service via the internet enables platforms to provide “always on” service (even if, as in the case of online shopping, goods and services may be delivered offline, they may be ordered at any time). The ability of users to self-organize and to simultaneously occupy multiple roles on the platform enables users (and small businesses) to enjoy unique business and social opportunities. At the same time, however, these attributes create the potential for tremendous competitive harms.

The Difference Between Net Neutrality and Search Neutrality. For political reasons, industry lobbyists over the years have sought to conflate internet access providers and “edge” providers such as digital platforms. These two businesses have radically different cost structures and business models. While the history of telecommunications (including broadband) provides useful information about networked industries centered on human speech, rote mechanical application of rules governing one business to the other is a recipe for disaster. It would be like applying the same regulations to airplanes and buses because “both are passenger vehicles for transportation.”

The difference between digital platforms that *use* the internet and broadband providers that offer *access to* the internet is best illustrated by the difference between

¹² See Jacques Crémer et al., *Competition Policy for the Digital Era*, European Commission (2019). Available at: <https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf>; Digital Competition Expert Panel, *Unlocking Digital Competition*, Her Majesty’s Treasury (2019). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf; Fiona Scott Morton et al., *Stigler Committee on Digital Platforms*, Chicago Booth Stigler Center for the Study of Economy and the State (2019). Available at: <https://research.chicagobooth.edu/-/media/research/stigler/pdfs/digital-platforms---committee-report---stigler-center.pdf?la=en&hash=2D23583FF8BCC560B7FEF7A81E1F95C1DDC5225E>.

what “neutrality” means in the internet access context and the search context. As a principle of ensuring reliability and avoiding anticompetitive conduct, the basic concept of non-discrimination works reasonably well. But consider the difference in application between an internet service provider and a search engine.

An ISP simply delivers information from one location to another – classic telecommunications, generally referred to as “common carrier.” For “neutrality” to apply in this context, the ISP needs to reliably deliver the information without any artificial distinction in service. The user buys transmission, the ISP provides it. Nothing more is required for the system to function, and the users on either end of the connection desire nothing more than that the system work in the same reliable way every time. Now consider a search engine. What would it mean for a search engine to be a “common carrier”? The entire point of a search engine is to help a user sort through the billions of potential pieces of information available so that the user can find the most relevant information. This is entirely different from the function the user wants from the ISP, where the user already knows the information they want transmitted. It is like the difference between the telephone and an information directory. A person used to dial “411” to speak to a human being to help them sort through information to find the phone number, and the human at the information desk would then use the phone system to connect him.

This does not mean that concepts of “nondiscrimination” or “neutrality” have no application to search (either in a search engine such as Google or a recommendation algorithm such as a Facebook newsfeed). It is simply that they must express themselves in very different ways, and that mechanically applying the definition of “neutrality” from telecommunications to digital platforms would be a disaster. In the context of digital platforms such as search, as I discuss in greater detail below, nondiscrimination requires a certain level of transparency as to the nature of the search criteria and prohibiting self-dealing or deception. For example, Amazon was accused recently of altering its recommendation algorithm to make recommendations based on what products would be most profitable to Amazon, rather than on correlations with consumer preferences.¹³ This violates “neutrality” to the detriment of small businesses trying to compete directly with the platform.

As this illustration shows, trying to compare the behavior of infrastructure providers such as ISPs or cloud storage providers to those of digital platforms is a recipe for bad policy outcomes. Legislative solutions should be designed to level the playing field between small businesses and big tech, not between big tech and big telecom.

Measuring the Cost of Exclusion. One of the difficulties in addressing market power is how to measure dominance. The term “digital platforms” covers a wide range of businesses, with giant platforms potentially able to impact or influence small businesses in ways traditional antitrust law has difficulty defining. Additionally, for a remedy to protect small businesses effectively, it must either blunt the impact of a dominant

¹³ See Dana Mattioli, *Amazon Changed Search Algorithm in Ways That Boosts Its Own Products*, The Wall St. Journal (Sept. 16, 2019). Available at: <https://www.wsj.com/articles/amazon-changed-search-algorithm-in-ways-that-boost-its-own-products-11568645345>

platform's actions or reduce the market power of a digital platform so that new entrants can compete.

Additionally, behaviors that are anticompetitive in dominant firms may be procompetitive in smaller firms. Again, rote mechanical application of the same rules and standards does not produce fairness or a "level playing field." The law imposes additional obligations on dominant firms as a remedy to their exceptional market power and as a mechanism for promoting competition. Once the market becomes competitive and the previously dominant firm becomes non-dominant, the additional safeguards imposed to limit abuses of market power can be removed. But it requires a reasonable test of dominance to avoid removing these safeguards prematurely – especially in a market subject to tipping, such as this one.

I have proposed the cost of exclusion from the platform (COE) as the appropriate measure of dominance. As I explain in greater detail in *The Case for the Digital Platform Act*, once a platform achieves a sufficient size, businesses suffer a significant, non-transient harm from losing access to the platform (either losing literal access through deplatforming, or by effectively disappearing as a result of being degraded in search results and disappearing from recommendations as a consequence of anticompetitive discrimination). The measurable cost of exclusion from the platform can be considered a measure of a platform's market power. If a small business can walk away from a platform with little loss of potential business, then the platform should not be considered dominant. On the other hand, if losing access to the platform can mean a significant drop in revenue or significant increase in expense, then the platform has significant market power and should be considered dominant.

Use of COE illustrates why small businesses require protection even from unintended consequences of dominant firms. When YouTube changes its monetization policy, for example, the impact is felt by tens of thousands of small content creators.¹⁴ Facebook's decision to prioritize "quality engagement" rather than extreme content in its newsfeed and recommendations had enormous impact on news outlets that had – for better or worse – optimized their headlines and coverage around Facebook's previous algorithm.¹⁵ Even though moving away from an emphasis on "engagement" that placed greater value to more extreme content over more informative content was a positive change made in response to widespread criticism, the way in which it was done created significant disruption for thousands of news outlets and content creators unprepared for the change.

Finally, recent actions by Amazon illustrate how dominant firms can directly target vulnerable small businesses to offload costs and to deny small businesses access to competing platforms at more favorable terms. For example, Amazon has been accused of

¹⁴ Ben Bours, *YouTube's Latest Shake-Up Is Bigger Than Just Ads*, Wired (January 18, 2018). Available at: <https://www.wired.com/story/youtube-monetization-creators-ads/>

¹⁵ Marlene Awaad, *Facebook is Changing its Algorithm (Again) To Stop Fake News*, Wired (April 10, 2019). Available at: https://www.google.com/search?q=facebook+algorithm+to+look+at+quality+engagement&tbm=nws&ei=OSLkXcjuMJCE5wLEsbDwBw&start=20&sa=N&ved=0ahUKEwiI7_mF2ePIAhUQwIkKHcQYDH44ChDw0wMIeQ&biw=1251&bih=609&dpr=1

penalizing sellers when their products are available for lower prices on Walmart.com.¹⁶ This summer, Amazon imposed a new refund policy that requires merchants who do not ship through Amazon to accept returned merchandise in the same way sellers who use Amazon do. This leaves businesses that feel they cannot leave Amazon with two choices: eat the cost or switch to Amazon’s delivery service.¹⁷

To be clear, this does not mean that dominant firms should be locked into the same technology or same set of algorithms forever. Rather, this highlights the need to impose due process obligations on dominant platforms to ensure that small businesses have the stability they need to thrive.

Measures to Promote Competition: The Case for the Digital Platform Act.

Several recent reports have urged creation of a new “digital authority” to promote competition in the digital platform space.¹⁸ Public Knowledge similarly believes that the digital platform sector is sufficiently important to the economy and to society generally to require a specialized agency empowered to affirmatively promote competition, protect consumers, ensure a robust marketplace of ideas, and protect public safety. Congress has historically moved cautiously in expanding sector specific regulation. Our recommendations are therefore designed to work individually as well as in combination.

Data portability. One important feature in digital platform dominance is the collection and use of personal data from customers. This is particularly important for small businesses trying to maintain relationships with customers. Requiring platforms to honor requests from customers to move data to other platforms in usable formats has been recommended by many experts as a way to enhance competition.¹⁹ In the small business context, it would enable customers to move information from the platform to the small business if the customer chooses, decreasing dependence on the platform intermediary, in addition to moving information to businesses that directly compete with the platform.

Open APIs, licensing essential patents, and interoperability. Interoperability is critically important for application developers. Disturbing reports of Facebook’s “Switcheroo” plan detail how Facebook initially encouraged application developers to

¹⁶ Eugene Kim, *Amazon is testing a new program that lets it control third-party product prices as its pricing policy draws criticism*, CNBC (August 8, 2019). Available at: <https://www.cnbc.com/2019/08/08/amazon-new-program-sold-by-amazon-amid-pricing-policy-scrutiny.html>

¹⁷ Spencer Soper, *Amazon is accused of forcing up prices for independent merchants in antitrust complaint*, Los Angeles Times (November 8, 2019). Available at: <https://www.latimes.com/business/technology/story/2019-11-08/amazon-antitrust-complaint>

¹⁸ See Fiona Scott Morton et al., *Stigler Committee on Digital Platforms*, at 18; Digital Competition Expert Panel, *Unlocking Digital Competition*, at 8; Harold Feld, *The Case for the Digital Platform Act: Market Structure and Regulation of Digital Platforms*, at 188 (2019).

¹⁹ See Fiona Scott Morton et al., *Stigler Committee on Digital Platforms*, at 16; Jacques Crémer et al., *Competition Policy for the Digital Era*, at 58-60; Harold Feld, *The Case for the Digital Platform Act: Market Structure and Regulation of Digital Platforms*, at 78- 81; Chris Riley, *Competition Through Interoperability*, Medium (Oct. 2017). Available at: <https://medium.com/@mchriscriley/competition-through-interoperability-3ed34a5c55f1>.

invest in Facebook applications with the understanding that they would have continued access to the necessary application interfaces.²⁰ Once Facebook achieved dominance, it used its power over these developers to extract concessions, such as requiring the app developers to spend over \$300,000 in advertising on Facebook’s mobile platform or lose access.²¹

Public Knowledge proposes eliminating significant barriers to interoperability for competitors and for businesses using a platform as an essential input. For example, content creators should be able to use the same applications to create content for diverse platforms such as YouTube, Twitch and Facebook without worrying that one of the important platforms will take steps to force them into proprietary applications. The history of the telecommunications industry shows that interconnection creates competition and creates stability for small businesses, since they can use interconnected competitors to access reliably their customers on competing platforms.

For the same reason, Public Knowledge recommends that companies that hold patents or copyrights that are essential to industry standards be required to license their intellectual property on fair, reasonable and non-discriminatory terms (FRAND). This does not mean that intellectual property holders must make their IP available for free. But FRAND licensing has been an important tool to prevent firms from using their IP to freeze out potential competitors or impose terms that prevent others from developing new, disruptive business models.²²

Restricting use of information collected from commercial rivals and prohibiting “most favored nation” clauses. When small businesses use digital platforms, they expose some of their most sensitive proprietary information to the platform. Indeed, for the relationship to work, the platform must “know” details such as the popularity of a specific product, whether or not there are returns, and customer billing information. A platform may also legitimately require proof of quality control and proof of capacity to meet specific demand thresholds. Nothing prevents platforms from using this information to develop rival products and services and compete directly with the small businesses that use the platform. Indeed, there are persistent accusations that platforms such as Amazon engage in precisely this kind of behavior.²³

Even without using information gleaned from the commercial relationship between the small business and the platform, dominant platforms can use their market power to require that small businesses provide them with terms as favorable as (or better than) those given to any rival platform. These “most favored nation” (MFN) policies prevent small businesses from taking advantage of efforts by potential competitors to compete against the dominant platform. The policies force small businesses to maintain

²⁰ Bill Goodwin et al., *How Facebook’s ‘Switcheroo’ plan concealed scheme to kill popular apps*, Computer Weekly (November 6, 2019). Available at: <https://www.computerweekly.com/feature/How-Facebooks-Switcheroo-plan-concealed-scheme-to-kill-popular-apps>

²¹ *Id* (“In one of the most extreme examples, Facebook proposed that developers would lose access to Facebook’s valuable data feeds unless they spent at least £250,000 a year advertising their apps on Facebook’s mobile advertising platform.”).

²² European Commission Decision No. IP/14/489 (Apr. 29, 2014).

²³ Eugene Kim, *Amazon has been promoting its own products at the bottom of competitors’ listings*, CNBC (October 2, 2018). Available at: <https://www.cnbc.com/2018/10/02/amazon-is-testing-a-new-feature-that-promotes-its-private-label-brands-inside-a-competitors-product-listing.html>.

higher prices even if the would-be competing platform offers superior terms in other respects. The ability of large platforms to conduct massive internet searches across multiple potential sales platforms gives the dominant platform an overwhelming advantage against any small business attempting to take advantage of competition between digital platforms.

Public Knowledge therefore proposes measures that have demonstrated effectiveness in the communications market. First, Public Knowledge proposes limitations on the use of proprietary information collected by the platform as part of its business dealings with small businesses. This type of information is known in communications law as “customer proprietary network information” (CPNI).²⁴ CPNI recognizes that although the network must “know” certain types of highly proprietary information to function, the law can limit the ability of the rival network to use this information for purposes other than the contracted service.²⁵

Second, Public Knowledge proposes prohibiting punitive MFN clauses, or other mechanisms that prevent small businesses from finding alternatives to the dominant platform. Allowing small businesses to move freely between platforms without fear of reprisals is critical to maintaining a competitive environment and limiting the ability of dominant platforms to abuse small businesses dependent on them. It also promotes the development of competition, since dominant platforms cannot use their market power to prevent small businesses from patronizing rivals and enhancing their likelihood of success.

Non-discrimination, transparency and ‘black box testing.’ A repeated concern by small businesses and consumers alike is that platforms may favor content for reasons having nothing to do with consumer preferences. Whether it is Google Search, or Amazon’s search engine and recommendations, or any other ordering and presentation of information, the platform has tremendous opportunity to discriminate in a number of ways without the consumer knowing. The most obvious concern is favoring affiliated products or down-ranking rivals. But platforms may also take money to prioritize search without disclosing this fact.

At the same time, businesses have incentive to “game the system” and try to manipulate search results. In the United States, “search engine optimization” (SEO), essentially the business of trying to get to the top of Google’s search page, is a multibillion dollar business.²⁶ Bad actors have routinely used understanding of how YouTube and Facebook optimize their recommendation and news feed algorithms for “engagement” to promote content designed to radicalize or undermine democratic discourse. Creating a truly transparent system to verify non-discrimination is therefore highly inadvisable.

²⁴ See 47 U.S.C. §222.

²⁵ See 47 U.S.C. §222; Harold Feld, *CPNI Is More Than Just Consumer Privacy -- How To Apply It to Digital Platforms*, Wetmachine (July 30, 2018). Available at: <https://wetmachine.com/tales-of-the-sausage-factory/cpni-is-more-than-just-consumer-privacy-how-to-apply-it-to-digital-platforms/>

²⁶ TJ McCue, *SEO Industry Approaching \$80 Billion, But All You Want Is More Web Traffic*, Forbes (July 30, 2018). Available at: <https://www.forbes.com/sites/tjmccue/2018/07/30/seo-industry-approaching-80-billion-but-all-you-want-is-more-web-traffic/#7128f8247337>

In that case, the best solution is “black box testing.”²⁷ Where a party has reason to believe that search and recommendation results are manipulated to discriminate in an inappropriate fashion, the party would file a complaint with the enforcing agency. The enforcing agency would then be given access to the code for testing purposes. The enforcing agency would then determine whether or not reasonable grounds exists to open an investigation. The complaining party would not get access to the code, thus avoiding the ability of parties to use the complaint process as a pretext to gain access to proprietary algorithms to reverse engineer them.

Product unbundling and structural separation. When the combination of products creates both a powerful incentive to engage in anticompetitive conduct and the structure of the company makes it difficult to otherwise police anticompetitive conduct, it makes sense to consider product unbundling and structural separation. Historically, these two remedies represent a range from requiring separate accounting within an intact firm to wholly separating the company into affiliated firms with entirely separate governance (even if they remain commonly owned). Typically, structural separation is created under the supervision of a court or an agency to ensure that it successfully creates lines of division that reduce or eliminate the incentive to favor one’s own product and make it possible to police non-discrimination easily.

For example, beginning in the 1970s and continuing until Congress passed the Telecommunications Act of 1996, the Federal Communications Commission (FCC) required that incumbent telephone networks (first the AT&T monopoly, then the “Baby Bells”) only offer certain types of service through a separate affiliate. For example, AT&T offered an alarm service. To ensure that it competed on equal terms with rival alarm companies, AT&T was required to offer this alarm service through an entirely separate affiliate, with separate corporate headquarters and separate facilities and workforce. Because AT&T was required to tariff the cost of interconnection with its phone network,²⁸ the FCC could make sure that AT&T the phone company offered the same rate to every alarm company – including AT&T’s own affiliate.

Product unbundling works somewhat differently from structural separation. With product unbundling, a seller has a suite of products it may wish to sell as a unit, but regulators require it “unbundle” and sell the components separately. For example, in the 1990s, the United States required that local telephone companies sell unbundled access to various elements of the local network at regulated wholesale prices to potential competitors. The theory was that this would allow competition to emerge as competitors initially gained access to customers by leasing unbundled elements from the local

²⁷ Harold Feld, *The Case for the Digital Platform Act: Market Structure and Regulation of Digital Platforms*, 111 (2019).

²⁸ A tariff is a regulated rate determined by a regulator (through a public rate-setting proceeding), based on the cost of providing the regulated service and a reasonable rate of return. It is a public document, and any similarly situated party is entitled to the same regulated rate. The rate regulator, such as the FCC, also has the power to hear and investigate complaints that the provider is engaging in price or service discrimination. Here, AT&T was required to offer all companies that wanted to interconnect with its network to provide alarm service the same government approved price, subject to investigation and enforcement by the government if it tried to favor its own affiliate.

monopoly provider, which would provide them with revenue to build out independent networks where economically feasible.

To illustrate with examples in the digital platform space, requiring Amazon to separate its retail business “Amazon Essentials” from its online merchant platform and operate them as entirely separate companies (even while allowing them to remain commonly owned) would be an example of structural separation. Alternatively, requiring Amazon to separate various services it currently requires third party sellers to take as a bundle and allowing them to pick which ones they wish to use would be an example of unbundling.

Structural separation and unbundling can be a very effective means of introducing competition and providing a level playing field for small businesses. The difficulty of implementing these regimes, however, should not be underestimated. Both structural separation and unbundling require ongoing regulatory supervision to ensure that the platform follows the rules. While the need for pervasive monitoring and supervision can be reduced in a well-designed system, it cannot be wholly eliminated as the economic factors that drove the consolidation in the first place will, absent some countervailing force, drive the separated pieces to reconsolidate.

Break ups and the Starfish problem. Sometimes, the only way to restore competitive balance to the marketplace is by breaking up a company into separate components. A successful break up will identify and separate the “natural monopoly” component for specific regulation, while simultaneously separating out those lines of business that reinforce the existing monopoly or monopolies.

The AT&T break-up is generally acknowledged as the most successful break-up in the last 50 years. It illustrates both the potential rewards of dismantling a set of interconnected and reinforcing monopolies and the enormous investment required to do so. The final litigation that concluded in the settlement breaking up AT&T into a long-distance company, an equipment manufacturing company, an information/yellow pages publisher and regional bell operating companies (“RBOCS,” aka the “Baby Bells”) took ten years and the combined efforts of the Department of Justice and the FCC. The FCC conducted multiple proceedings to ensure that the break-up did not disrupt the phone system, and preserved service in rural areas subsidized by AT&T’s regulated monopoly rates. Even after the break-up in 1984, the FCC continued to regulate AT&T long-distance as a dominant carrier until 1995.²⁹

Once the Telecommunications Act of 1996 removed legal barriers to the telecommunications monopoly reconstituting itself, the market proceeded on a steady march to concentration. While not a monopoly, the current communications market has been described as an “oligopoly on steroids.”³⁰ The same fundamental economic factors that created the AT&T monopoly once again drove the communications market to concentration – a process which continues unabated with the recent acquisition of Sprint

²⁹ Harold Feld, *The Case for the Digital Platform Act: Market Structure and Regulation of Digital Platforms* 100 (2019) (citing Federal Communications Commission (FCC), 1995, *In re: Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier*, Order, FCC 95-427 11 FCC Rcd 3271 (1995)).

³⁰ Gene Kimmelman and Mark Cooper, *A communications oligopoly on steroids*, Washington Center for Equitable Growth (2017). Available at: <https://equitablegrowth.org/wp-content/uploads/2017/07/071817-kimmelman-cooper2.pdf>

by T-Mobile. Broadband, which was supposed to provide the competitive antidote, is divided in most markets between a higher-speed cable offering and a lower speed DSL offering from the legacy telephone company.

This reconstituted communications oligopoly 35 years after the break-up of the original “Ma Bell,” is an example of the “starfish problem.” Tear up a starfish and it simply regrows the missing limbs. While not all monopolies suffer from the starfish problem, this natural regeneration of concentration will occur in any market where the underlying economic structure of the market itself drives toward concentration. For this reason, although vigorous antitrust investigation and enforcement against dominant platforms is necessary, even the largest platforms can not simply be broken into pieces as a means of solving existing competition problems. Before any break-up, Congress must carefully consider what regulatory framework will prevent the market from simply returning to its highly concentrated state.

The Importance of Due Process.

Due process does not extend simply to government action.³¹ Small businesses depend on a wide body of law protecting their rights to notice in the physical world. If a small business rents a storefront or space in a shopping mall, a body of commercial real estate law protects the business from arbitrary changes by the landlord and protects the shopkeeper from certain abusive behaviors. A small business can contract for critical inputs such as electricity or telecommunications or water service, confident that these utilities are subject to special regulation because society recognizes their vital importance as an input to small businesses.

Again, the point is not to replicate commercial real estate law or public utility law in the digital space. To the contrary, as I have repeated throughout this testimony, mechanical rote application of traditional law to digital platforms is a recipe for disaster. But the basic principle that both economic efficiency and fundamental fairness entitle small businesses to due process before losing access to essential services or experiencing dramatic changes in contract terms applies equally in cyberspace as in physical space. Distinguishing between dominant firms and non-dominant firms gives a starting point for discussion. When the decision of a single company can impact the bottom line of tens of thousands of small businesses, basic notice and protection become more urgent than when the stakes are lower. In the same vein, the nature of the notice and protections due should depend on the level of potential impact.

For example, Amazon has such a complicated and arcane set of rules around its appeals process that an entire cottage industry has developed to help small businesses navigate through it.³² The problem extends outside of Amazon. Users routinely complain that they do not understand platform policies, nor do they feel well treated by their appeal

³¹ See John Bergmayer, *Even Under Kind Masters: A Proposal to Require that Dominant Platforms Accord Their Users Due Process*, Public Knowledge, 22 (May 2018). Available at: https://www.publicknowledge.org/assets/uploads/blog/Even_Under_Kind_Masters.pdf.

³² Amazon Account Suspension Appeals, Riverbend Consulting. Available at: https://www.riverbendconsulting.com/what-we-do/account-appeals/?gclid=EA1aIQobChMI9o_vkOvk5QIV2IVaBR1D7gZPEAAAYASAAEgIjLvD_BwE

process.³³ And, as mentioned above, content creators and third party sellers often find themselves given short “take it or leave it” notice for major changes imposing significant cost. Finally, in the cut-throat world of online retail, small business competitors may “hack” the processes of platforms to sabotage their rivals.³⁴

A recent high-profile case on YouTube involving creator Lindsay Ellis illustrates how the lack of an appeals process can have significant impact for small businesses. Lindsay Ellis creates content for YouTube, and employs four people in her production studio.³⁵ As part of a video essay critical of Disney’s effort to obscure its problematic history on racism, Ellis included a 5 second clip from the original animated Dumbo containing offensive lyrics from “the Song of the Roustabouts.” UMG holds the copyright to the Song of the Roustabouts. When YouTube’s Copyright ID system identified the 5-second clip as part of a song belonging to UMG, it did not conduct a fair use analysis. YouTube offered UMG the option to monetize Ellis’ work by inserting advertising in Ellis’ video. This not only unjustly allowed UMG to profit from Ellis’ intellectual property (the use of the clip clearly falling into the category of fair use), but interfered with Ellis’ sponsorship contract with Audible, which prohibits internal advertising in Ellis’ video essays that it sponsors. When Ellis complained to YouTube, she was informed that YouTube provided no appeal process and that she would need to go to court to vindicate her fair use claim.

The point here is not that YouTube should not have a Content ID system. The point is that by failing to provide an appeal system, YouTube has privileged the complainant over the defendant and privileged large businesses that can afford expensive litigation over small businesses that cannot. Indeed, under applicable law, had UMG ordered YouTube to take down Ellis’ video as infringing, Ellis would have been entitled to issue a counter-notice to YouTube to restore the video pending court review.³⁶ But because YouTube has decided to give the complaining rights holder an option to monetize the alleged infringement rather than demand a takedown, Ellis’ statutory due process right has been abrogated.

As this example illustrates, a decision that a platform believes will benefit small businesses (providing a copyright complainant with an option other than takedown) can actually prove harmful to small businesses without appropriate due process. As this example also illustrates, there is no clear solution. Ideally, competition would prevent any single platform from becoming dominant, so that unintended consequences on one platform would not have broad impact and best practices could emerge as a function of competition between platforms. Absent this, however, Congress must consider how to encourage or require platforms to develop processes that treat small businesses fairly.

³³ Eugene Kim, *Amazon’s updated suspension policy still has sellers worried about getting inexplicably booted*, CNBC (July 20, 2019). Available at: <https://www.cnbc.com/2019/07/20/amazons-updated-suspension-policy-still-has-sellers-worried.html>

³⁴ Ari Levy, *This Amazon seller lost \$400,000 in sales after being attacked by self-proclaimed ‘virus of Amazon’*, CNBC (November 17, 2017). Available at: <https://www.cnbc.com/2017/11/17/amazon-seller-targeted-virus-of-amazon.html>

³⁵ The facts of this case and relevant citations are provided in my blog post: *Lindsay Ellis and the Future of Content in Europe*, Wetmachine.com (November 6, 2019). Available at: <https://wetmachine.com/tales-of-the-sausage-factory/lindsay-ellis-and-the-future-of-content-in-europe/>

³⁶ See 17 U.S.C. §512.

Small Businesses, Social Media, and the Problem of Filter Bubbles.

Small businesses rely on social media both directly and indirectly. Small businesses may themselves be content producers or offer businesses that rely directly on social media platforms. More commonly, small businesses use social media platforms to communicate with potential customers and to attract interest. A viral video or Tweet can drive business and increase search optimization. One of the contributing factors to the success of the Instant Pot was the organic growth of its Facebook community as a place to exchange recipes and generally encourage people to feel that owning an Instant Pot made them part of a community.³⁷

But small businesses may find themselves stymied by the tendency of recommendation algorithms to recommend to people increasingly homogenous content. Dubbed “filter bubbles,” this phenomena challenges the ability of new content providers to find an audience. As legal scholar Cass Sunstein has argued, traditional media have an “architecture of serendipity.”³⁸ Go to a movie theater and you will see marquis for all the movies playing at the theater, even if you might not normally look for movies of that particular genre. Flip through television channels and you may stumble across an unexpectedly interesting TV show. Peruse the shelves of a bookstore and you may discover books from authors you never knew existed.

Increasingly, this experience cannot happen on digital platforms – to the detriment of small businesses. Recommendations are typically based on a combination of personal information (what the individual has previously watched before) and aggregate information (“people who liked this also liked that”). As the algorithm becomes more familiar with the individual user, its recommendations focus on content more and more similar to what the user watched previously, or what similarly situated people watched previously. Unlike the physical world, where the possibility of discovering something new *increases* with the length of time spent searching, the possibility of discovering something genuinely different actually *decreases* the longer someone uses the service. Addressing this “filter bubble” problem is complicated. Forcing users to look at content they do not want to see “for their own good” will create resentment. But the entire point of an “architecture of serendipity” is that the user actually *would* enjoy the content if they had the opportunity to discover it under circumstances that replicated browsing a bookstore or other situation where a person is searching for new content.

One approach I recommend is called the “wobbly algorithm.” Algorithms generate a probability curve of content the user is likely to find engaging. Generally, given the limited space available, the algorithm recommends only a few choices at the very peak of the curve. What if, on some random number of recommendations, the algorithm recommended items slightly lower down the curve on either side? These would still fall within a general range of interest for the user, but they would not move in the same inexorable straight line as always selecting from the peak of the curve. Over time, this “wobbly algorithm” would introduce a significantly wider variety of content, but still falling within the range of content likely to appeal to the specific user.

³⁷ Tom Huddleston, Jr., *How Instant Pot Became A Kitchen Appliance with a Cult Following and a Best Seller on Amazon*, CNBC (Nov. 26, 2018). Available at: <https://www.cnn.com/2018/11/26/how-instant-pot-became-a-kitchen-appliance-with-a-cult-following.html>

³⁸ Cass Sunstein, *#Republic: Divided Democracy in the Age of Social Media* (2017).

Special Concerns Relating to App Stores.

Many application developers have a beneficial relationship with the platform they develop for. By making platforms more useful and versatile, they provide value to the platform owner itself, and to users. Platforms, in turn, provide them with a customer base, distribution, technical and payment services, and other things. In recent years, app stores have made it easier than ever for users to install software while being assured that it is secure, and security techniques like sandboxing and code-signing can protect user data and device integrity.

However, the relationship doesn't always go smoothly, especially when the interests of the platform owner and the app developer may not align--for example, when the app developer creates apps that compete with those produced by the platform itself. At these times, the very techniques that are used to benefit users and developers in most cases can become tools used for anticompetitive purposes.

The conflict between platforms and application developers has several flashpoints. Platform owners may privilege their own apps by preinstalling them on devices, and making it impossible to change certain defaults. Platform developers control the app stores that developers need to access to reach users, and could simply deny access to the store for alleged violations of the rules. App store rules themselves may be anticompetitive--and first-party apps might not even have to follow them. Platforms create the APIs that developers need to interact with, and these APIs in part determine the capabilities of apps. The APIs that developers are permitted to interact with may not give third-party apps the same functionality as first-party apps, and using the "private APIs" that platform owners can make free use of may be enough to block an app from an app store. Even the content guidelines that platforms establish may be problematic, if they prevent users from accessing lawful or politically sensitive content that is otherwise lawful.

The solution to these problems, however, cannot be to sacrifice user convenience and security by giving up the benefits that app stores and secure platforms provide. Instead, major platforms should prioritize the interests of users, and do a better job of creating an equal playing field for third-party developers. For example, a platform's own app store should not be the only way to install software on a device. With the safeguards provided by security techniques like sandboxing, code-signing, and app notarization in place,³⁹ users should be able to "sideload" software from the web. Public APIs should allow third-party apps to be fully competitive with platform-provided apps. Third-party apps that provide access to media like music, movies, and ebooks should not have to use platform-provided billing systems that make it impossible for developers to turn a profit. Additionally, while it is appropriate for the creators of major platforms to

³⁹ Sandboxing limits the amount of access that apps have to user data, data created by other apps, and system resources, sometimes allowing such access only in response to specific user actions. Code-signing is a cryptographic feature that ensures that an app comes from a specific developer, and prevents code from running if it has been modified after having been signed. Notarization is similar to code-signing, but involves the platform owner signing an app after checking it for malware and other issues. Both code-signing and app notarization allow an app to be remotely prevented from running if it is discovered to be malicious. Apps distributed through app stores are typically signed. Platforms can decide whether to require that apps be signed in some way, or can encourage if not require that apps be signed through certain user interface design choices.

provide users with a functional “out of the box” experience by preloading certain basic apps like email and a web browser, users should be able to change their defaults, and other apps (e.g., a video streaming service) should have to compete on a level playing field in the app store.

While policies like this can go a long way toward promoting competition and user choice while protecting security, a recent concrete example may illustrate why a sector-specific regulator is needed--to deal with specific factual scenarios it is unreasonable to expect Congress to have legislated about in advance, and where antitrust remedies may not be adequate.

In iOS 13, Apple limited the ability of third-party apps to gather location information in the background. While this may have some unintentional side effects on some categories of app, as a general matter this can be seen as an improvement to user privacy, and even a method to prolong an iPhone's battery life. However, Apple's own Maps app is not affected by this rule change—not because Apple has allowed the Maps app to collect location information in the background, but because location information for “Routing & Traffic” and “Improve Maps” is collected not by the Maps app but by the system itself. To opt out of this data collection, users have to go into the Settings app, chose “Privacy,” then “Location Services,” then “System Services” to locate the appropriate setting. By contrast, users have to use the Settings app to opt in to allow a third-party app to continually collect location data in the background--the app itself cannot offer that option at all. But the solution to this isn't to simply ask that Apple allow for indiscriminate data collection by apps--it is to require that Apple follow the same rules for data collection that it imposes on third parties, or to require that it makes the (non-personally identifiable) data that it collects available to third-party apps so that they can make the same use of it that Apple itself does.

This example shows that, with digital platforms, issues of privacy, security, competition, and even user experience can all arise together from a single decision. Deciding in advance as a matter of policy to optimize for one at the expense of the others would lead to a bad outcome. Thus, a unified approach is needed, and a single digital platform regulator would be best-suited to provide it.

The Role of Antitrust.

Traditionally, small businesses have benefited from pro-competition laws and rules, as well as strong antitrust enforcement, that kept consolidated power in check. This allowed small businesses greater room to thrive and provided them with a variety of options to choose from for their necessary inputs and paths to market. Over the last forty years, a de-regulatory spirit swept away many of these pro-competition policies, and the antitrust laws have been increasingly narrowed by judicial precedents based on economics that is now called into question.⁴⁰ Antitrust law needs targeted improvements in order to fulfill this important role again.

At the same time, America’s antitrust agencies need to increase enforcement of our antitrust laws. The FTC, DOJ, and state attorneys general are investigating the dominant platforms for potential antitrust violations. This is a positive step. It’s imperative that our antitrust enforcers scrutinize these companies to discover whether

⁴⁰ Jonathan B. Baker et. al, *Unlocking Antitrust Enforcement*, 127 Yale L.J, 7, 1742 (2018). Available at: <https://www.yalelawjournal.org/collection/unlocking-antitrust-enforcement>

they have committed violations of the antitrust laws and stop and remedy any violations that have occurred. It's important that the FTC, DOJ, and State Attorneys General devote the appropriate resources to make these investigations successful.

But digital platforms are a special case. Economists have identified digital platform markets as being particularly prone to tipping, with or without antitrust violations.⁴¹ As a result, antitrust will only go so far towards building competition in an industry where there is currently very little competition. Antitrust enforcement must wait until anticompetitive conduct occurs, and remedies are limited to correcting the impacts of that anticompetitive conduct. Antitrust enforcers rarely get the opportunity to restructure industries in the big and continuing ways that are needed. A comprehensive regulatory plan is required to fully address the problems of competition in digital platforms.

Thank you and I am prepared to answer any questions at this time.

⁴¹ Fiona Scott Morton et al., *Stigler Committee on Digital Platforms*, Chicago Booth Stigler Center for the Study of Economy and the State at 34 (2019). Available at: <https://research.chicagobooth.edu/-/media/research/stigler/pdfs/digital-platforms---committee-report---stigler-center.pdf?la=en&hash=2D23583FF8BCC560B7FEF7A81E1F95C1DDC5225E>