A NEW DEAL FOR THE ONLINE PUBLIC SPHERE

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INTRODUCTION

This year marks the one-hundred-year anniversary of *Schenck v. United States*,[1] the Supreme Court's first direct encounter with the Speech Clause of the First Amendment. Only months after the Court affirmed Schenck's conviction under the Espionage Act, Justice Holmes penned the first of his great free-speech dissents in *Abrams v. United States*.[2] That dissent—along with Holmes' dissent in *Gitlow v. New York*[3] and Justice Brandeis's concurrence in *Whitney v. California*[4]—set the outer mold of the First Amendment tradition we know today.

At the broadest, most fundamental level, Holmes and Brandeis envisioned public discourse as a mostly self-regulating system that over the long run inclined toward the truth. Counterspeech, rather than governmental regulation, was overwhelmingly the preferred remedy for false or dangerous ideas within that system.[5] And the wilder the clash of public ideas, the more distant the regulatory hand, the more effectively counterspeech could perform its natural corrective function.

This laissez-faire sensibility, together with Holmes's irresistible if loose metaphor of a "marketplace" of ideas,[6] has over the years provided the closest approximation of a guiding philosophy of free speech in American courts. If nothing else, the first century of First Amendment jurisprudence has

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[1] 249 U.S. 47 (1919).

[2] 250 U.S. 616 (1919); *id.* at 624 (Holmes, J., dissenting).

[3] 268 U.S. 652 (1925); *id.* at 672 (Holmes, J., dissenting).

[4] 274 U.S. 357 (1926), *overruled by* Brandenburg v. Ohio, 395 U.S. 444 (1969); *id.* at 372 (Brandeis, J., concurring).

[5] *Whitney*, 274 U.S. at 375–76 (Brandeis, J., concurring) ("Those who won our independence . . . . knew that order cannot be secured merely through fear of punishment for its infraction; that it is hazardous to discourage thought, hope and imagination; that fear breeds repression; that repression breeds hate; that hate menaces stable government; that the path of safety lies in the opportunity to discuss freely supposed grievances and proposed remedies; and that the fitting remedy for evil counsels is good ones.").

[6] *See Abrams*, 250 U.S. at 630 (Holmes, J., dissenting) ("[W]hen men have realized that time has upset many fighting faiths, they may come to believe even more than they believe the very foundations of their own conduct that the ultimate good desired is better reached by free trade in ideas—that the best test of truth is the power of the thought to get itself accepted in the competition of the market, and that truth is the only ground upon which their wishes safely can be carried out. That at any rate is the theory of our Constitution.").

produced a broad consensus that government's presumed role where speech is concerned should be a minimal rather than pervasive one.

Yet at the beginning of a second century of First Amendment jurisprudence, free speech faces a new, radical challenge that has already begun to render the laissez-faire approach obsolete. The challenge comes in the form of online private governance structures—Facebook and Google, most prominently—that now regulate online speech with a precision and depth that no government on earth could have achieved in the twentieth century.

These nonstate regulators have in many respects proven to be poor custodians of the public sphere, operating under a surveillance-advertising business model that promotes unremitting distraction and polarization at the expense of deliberation and debate.[7] Still more troublingly, these platforms exercise an unchecked power to block and remove material in ways that the First Amendment would never countenance from a state actor.[8] In doing so, however, the platforms wield plausible claims to protection as "speakers" under a conventional First Amendment understanding.[9]

The curious result today is that a governmental posture of laissez faire toward speech has produced a public sphere that is closely managed by a few all-seeing private authorities. When the state steps out as a regulator, it only enables nonstate regulators to regulate more aggressively than the government would ever be permitted to—and often in ways that undermine, rather than promote, values of free expression.

The marketplace of ideas, somewhat like the depressed economic markets of the late *Lochner* era,[10] has crashed against the limits of private ordering, and things are likely to get worse before a Roosevelt comes along. But it is not too early to discuss the contours of a Rooseveltian approach—an ambitious and experimental intervention designed not to replace the marketplace of ideas, but to get it moving again. Through a combination of structural reforms and new rights for speakers against overreach by private censors, this approach would use state action to stimulate public discourse and to restore confidence and profitability to traditional media institutions.

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7 *See infra* notes 77–122 and accompanying text.

8 *See generally* Kate Klonick, *The New Governors: The People, Rules, and Processes Governing Online Speech*, 131 HARV. L. REV. 1598 (2018).

9 In particular, online platforms hold themselves out as similar to newspaper editorial boards. *See* Miami Herald Pub. Co. v. Tornillo, 418 U.S. 241, 256–58 (1974) (striking down Florida statute granting a "right of reply" to political candidates personally attacked in newspaper editorial pages); Eugene Volokh & Donald M. Falk, *Google: First Amendment Protection for Search Engine Search Results*, 8 J.L. ECON. & POL'Y 883, 884–85, 887 (2012). For opinions applying *Tornillo* to search engines, see *e-ventures Worldwide, LLC v. Google, Inc.*, No. 2:14-cv-646-FtM-PAM-CM, 2017 WL 2210029, at *3–4 (M.D. Fla. Feb. 8, 2017); *Zhang v. Baidu.com Inc.*, 10 F. Supp. 3d 433, 436–43 (S.D.N.Y. 2014); and *Langdon v. Google, Inc.*, 474 F. Supp. 2d 622, 629–30 (D. Del. 2007).

10 The "*Lochner* era" conventionally refers to a roughly four-decade period from the 1890s until 1937 in which the Supreme Court regularly (if inconsistently) overturned economic regulations on grounds of substantive due process and a restrictive reading of Federal Commerce Clause power. *See generally* Lochner v. New York, 198 U.S. 45 (1905).

Maintaining a robust public sphere in the platform economy—or even a free one—will require the government to regulate media structure in ways that are far more ambitious, pervasive, and, at times, experimental than the structural regulation of twentieth and early twenty-first-century media.

This Article is a comprehensive, if preliminary, sketch of the issue. Part I explains the novelty and depth of the challenge that online platforms present to free speech and provides a conceptual overview of the risks. Part II turns to the eclectic range of interventions policymakers might someday bring to the platformed public sphere. Finally, Part III suggests some jurisprudential principles for courts to consider as they adapt First Amendment law to the new technological and social reality.

I. A NEW SET OF PROBLEMS

The Internet's emergence in the early twenty-first century as "the most important place . . . for the exchange of views"[11] has profoundly complicated the governance of free speech without much disturbing the state of First Amendment jurisprudence.

The most obvious and ultimately least consequential changes involve the removal of old technological barriers. As everyone knows, it is now so trivially cheap, fast, and easy to communicate across long distances and to large groups that most people in the developed world have the power to broadcast and consume essentially unlimited amounts of information. Much of this communication can be done anonymously or pseudonymously. The removal of the old barriers to expression has cleared the way for new kinds of speech-related harms to emerge—revenge pornography and targeted online harassment, for instance—while allowing other, older speech harms such as false news to burn further and faster.

A. *A New Layer in the Governance Structure*

The much more fundamental change, however, has to do with Internet communications' dependence on massive, privately owned communications platforms. These nonstate actors exercise a range of powers over speech that are constitutionally barred to the government and were technologically impossible only a few decades ago. They include the power of content moderation, which amounts to an unlimited and incredibly fine-grained censorial control.[12] They include an effective power to regulate the structure of media

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11 Packingham v. North Carolina, 137 S. Ct. 1730, 1735 (2017).

12 *See generally* Klonick, *supra* note 8.

markets by dictating the terms of content distribution.[13] They include a power to manipulate the underlying physics of popular opinion by constantly reinventing technologies of communication at the software level.[14] And they include a new kind of power over cultural flows, through sorting algorithms that decide what manners of expression go viral.[15]

Privately owned platforms for speech have always existed, of course, and the law has not usually regarded their prerogative to censor as an existential threat to speech freedoms. But no old-school platform—not private property owners, not broadcast networks, not cable service providers—has intermediated so much public discussion in print, audio, video, and augmented and virtual reality, and at both public and personal levels. The great CBS[16] could dictate its own programming schedule and, with it, exert influence over the daily national news agenda; but not even CBS could interpose "cruelty checks" in private conversations[17] or break up independent dissident groups.[18] Nor was CBS the only television titan in the market. Facebook, on the other hand, really does corner the market on social media: it owns Instagram, and Twitter lags far behind.[19]

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13 Online publishers spent much of 2017 reallocating resources to video production to satisfy Facebook's newly video-hungry News Feed sorting algorithm. Then, in January 2018, Facebook announced that it would deprioritize news across the board. Cale Guthrie Weissman, *For Digital Publishers, the "Pivot to Video" Bloodbath Is Here*, FAST COMPANY (Jan. 12, 2018), https://www.fastcompany.com/40516189/for-digital-publishers-the-pivot-to-video-bloodbath-is-here.

14 *See, e.g.*, Jay Stanley, *New Technology Renews Old Fears of Manipulation and Control*, ACLU: FREE FUTURE (Aug. 1, 2014, 1:18 PM), https://www.aclu.org/blog/national-security/new-technology-renews-old-fears-manipulation-and-control.

15 Paul Lewis, *"Fiction Is Outperforming Reality": How YouTube's Algorithm Distorts Truth*, THE GUARDIAN (Feb. 2, 2018, 7:00 PM), https://www.theguardian.com/technology/2018/feb/02/how-youtubes-algorithm-distorts-truth.

16 Professor Owen Fiss's writings in the 1980s and '90s often invoked the Columbia Broadcasting System as representing the apex of managerial power within the public sphere. *See, e.g.*, Owen M. Fiss, *Free Speech and Social Structure*, 71 IOWA L. REV. 1405 (1986).

17 Nick Hopkins, *Facebook Moderators: A Quick Guide to Their Job and Its Challenges,* THE GUARDIAN (May 21, 2017, 1:00 PM), https://www.theguardian.com/news/2017/may/21/facebook-moderators-quick-guide-job-challenges ("For comments that seem cruel or insensitive, moderators can recommend a 'cruelty checkpoint'; this involves a message being sent to the person who posted it asking them to consider taking it down. If the user continues to post hurtful material, the account can be temporarily closed.").

18 ZEYNEP TUFEKCI, TWITTER AND TEAR GAS: THE POWER AND FRAGILITY OF NETWORKED PROTEST 139–42 (2017).

19 Facebook has 2.13 billion monthly active users, and Twitter has 330 million. Janko Roettgers, *Facebook Says It's Cutting Down on Viral Videos as 2017 Revenue Tops $40 Billion*, VARIETY (Jan. 31, 2018, 1:11 PM), http://variety.com/2018/digital/news/facebook-q4-2017-earnings-1202683184; Todd Spangler, *Twitter Posts First-Ever Profit on Strong Q4 Results as User Growth Stalls*, VARIETY (Feb. 8, 2018, 4:08 AM), http://variety.com/2018/digital/news/twitter-q4-2017-earnings-monthly-users-120269 1803.

What John Hermann describes as a thousandfold "scale shift"[20] has transformed the character of the largest platforms' power from that of a large market participant to something more like a government's power. Facebook founder and CEO Mark Zuckerberg confirms this assessment: "In a lot of ways Facebook is more like a government than a traditional company," he says. "We have this large community of people, and more than other technology companies we're really setting policies."[21]

The entrance of this parallel "government" into the public sphere disrupts the First Amendment calculus in two ways. First, it means that governmental restraint in regulating speech can no longer be presumed to create a less regulated speech environment overall. Instead, private platforms in a regulatory vacuum can be counted on to censor aggressively and to do so in a manner that is often in substantial tension with First Amendment values such as the rule against content and viewpoint discrimination.

Second, it means that government may for the first time be called to protect the freedom of speech on a grand scale from abridgement by the private sector. Government's role with respect to free speech could come to resemble its role with respect to civil rights and discrimination—restricted on one side by constitutional rules restricting governmental action but empowered on the other side to make and enforce rules against oppression by private enterprises.

A skeptic might object that it is far less touchy constitutionally for government to mandate equal–opportunity hiring and contracting than it is to regulate the workings of a social platform. Constitutionally, government has an open road to enact antidiscrimination law. Occasional as-applied challenges pop up now and then, such as the recent case *Masterpiece Cakeshop, Ltd. v. Colorado Civil Rights Commission*,[22] in which a baker refused to cater a same-sex wedding for religious and expressive reasons.[23] But there is no general constitutional principle—a "freedom to contract," for instance—standing in the way of antidiscrimination measures as such. Regulations of online social platforms, on the other hand, raise obvious and seemingly all-pervading First Amendment concerns.

This distinction, however, has more to do with jurisprudential choice than with any absolute distinction between online platforms and traditional private enterprises. After all, "expression" and "association" pervade all

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20 *Platform of the Real*, BENJAMEN WALKER'S THEORY OF EVERYTHING (Apr. 28, 2016), http://theoryofeverythingpodcast.com/2016/04/platform-of-the-real ("When you talk about a platform in like pre-software terms you're just talking about, like, a place from which you can be heard. When you talk about a platform in the sense of the, like, big internet platform, you're talking about a place that contains a thousand other places that you can climb on top of and be heard. And it's just a total scale shift.").

21 DAVID KIRKPATRICK, THE FACEBOOK EFFECT 254 (2010).

22 138 S. Ct. 1719 (2018).

23 *Id.* at 1720.

kinds of human activity, and discriminatory practices are no exception. Hostile-work-environment harassment consists largely of words. Companies sometimes make discriminatory hiring choices as a way to "communicate" a brand image.[24] A workforce is a kind of "association." One could *imagine* a First Amendment bizarro jurisprudence that aggressively challenged civil-rights legislation, but the law has wisely avoided that path.

This is partially because the trace expressive or associative element is relatively weak in garden-variety discrimination cases.[25] But there is clearly something more at work, and the likeliest explanation is that antidiscrimination law represents a necessary means to achieve a quasi-constitutional goal that private ordering cannot deliver. The transcendent consensus position on equal access arrived at during the civil rights revolution simply steamrolls all but the most acute concerns discriminators might raise about expressive and associational freedoms.[26]

The question of privatized speech governance lends itself to a similar framing, but only once it is generally acknowledged that platform governance poses a similar threat to free speech as private markets do to racial equality. If you accept that these platforms are speech regulators and that no private entity has played a similar regulatory role until now, then a new possibility enters the First Amendment universe: governmental meta-regulation of an overlapping private governance structure.[27]

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24 *See, e.g.*, Steven Greenhouse, *Going for the Look, but Risking Discrimination*, N.Y. TIMES (July 13, 2003), https://www.nytimes.com/2003/07/13/us/going-for-the-look-but-risking-discrimination.html.

25 *See* United States v. O'Brien, 391 U.S. 367, 388–89 (1968) (Harlan, J., concurring). In another era of the First Amendment, the Supreme Court was more willing to acknowledge and weigh different depths of expressive interest. The result in *Roberts v. U.S. Jaycees*, 468 U.S. 609 (1984) is a relatively complicated but much more frank discussion of the relationship between discrimination and the freedom of expression. *See id.* at 621–23. Justice Brennan's majority opinion does not wave away the U.S. Junior Chamber of Commerce's associational interest, but rather, the Court is "persuaded that Minnesota's compelling interest in eradicating discrimination against its female citizens justifies the impact that application of the statute to the Jaycees may have on the male members' associational freedoms." *Id.* at 623.

26 *See* Bruce Ackerman, *Constitutional Politics/Constitutional Law*, 99 YALE L.J. 453, 489 (1989) ("The single greatest triumph of constitutional politics has been the civil rights movement—whose successful mobilization of citizen energies in the 1950's and 1960's transformed the initial meaning of *Brown* . . . into the constitutional symbol of a renewed American commitment to equality—which other subordinated groups have sought to extend and deepen.").

27 The fact that the First Amendment was incorporated against state governments so early in its interpretive history has obviated the need for preemption conflicts over speech rights. *See, e.g.*, Gitlow v. New York, 268 U.S. 652, 666 (1925). In a parallel universe in which the First Amendment was not incorporated against the states, one could imagine Congress intervening to impose strong speech rights in illiberal states—Southern states, for example, during the civil rights movement. But of course, Congress has never needed to legislate those kinds of issues in the realm of speech. Instead, the closest parallel might be found in Congress's failed attempt under the Religious Freedom Restoration Act to preempt state laws that lacked religious exemptions. *See* City of Boerne v. Flores, 521 U.S. 507, 511 (1997).

B. *A New Suite of Regulatory Tools*

The technical capabilities of online platforms have created new modes of speech regulation that American policymakers have only recently begun to consider and confront. A state's traditional techniques for regulating public discourse include:

* proscribing or censoring expression;

* subsidizing expression;

* creating, maintaining, and policing public forums for expression; and

* official speech.

These powers overlap, of course, and twenty-first-century platforms exercise all of them in their own ways. They create "community standards" and take down content that violates them;[28] they give credentials and certifications to preferred speakers;[29] they moderate forums and subforums; they run public relations offices.

But the platforms exercise subtler techniques as well, including:

* *behavioral targeting*, in which speech and speakers are pushed toward individual hearers based on highly detailed user data;[30]

* *behavior modification*, in which platforms mete out individualized rewards and penalties to train users' social, reading, and viewing habits;[31] and

* *reconfiguring the virtual "medium"*—for example Twitter's increase from 140 to 280 characters per tweet.[32]

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28 *Community Standards*, FACEBOOK, https://www.facebook.com/communitystandards (last visited Sept. 3, 2018).

29 Twitter, for example, "verifie[s]" an account "if it is determined to be an account of public interest." *About Verified Accounts*, TWITTER HELP CENTER, https://help.twitter.com/en/managing-your-account/about-twitter-verified-accounts (last visited Sept. 3, 2018).

30 *See infra* Section II.C.4.

31 See *infra* notes 80–111 and accompanying text.

32 Mike Isaac, *Tweeting in 280 Characters? Now You Can Do It, Too*, N.Y. TIMES (Nov. 7, 2017), https://www.nytimes.com/2017/11/07/technology/twitter-280-character-limit.html.

Such powers allow platforms not only to police individual categories of speech, but to exercise an incredible degree of real-time control over the underlying *physics* of speech. How fast does word travel? How often do disagreements occur? How often do people check in with each other? What kinds of things in the world do people notice? How many things does a person hear, read, or say in a day? Through what kind of medium? What is the overall mood in the community?[33]

Until recently these were cultural and technological questions that lay beyond the control of any single authority. Today they depend heavily on quickly adjustable elements in a platform's design. And the answers not only provide shape to the culture but also mold the factual terrain beneath speech law's conceptual foundations.

Consider, for example, the basic Holmes–Brandeis judgment that counterspeech is, in the long run, an effective remedy for ill counsels.[34] That judgment assumed certain facts about the world: namely, that listeners would encounter conflicting positions; that under most circumstances a bit of time and effort would be required before a listener could pass on one or the other of them; and that this time and effort would hopefully expose the listener to contemplation and moderating voices.[35] Those assumptions may or may not have reflected the way life goes, but at the least they were not subject to the whim of any governing figure. Today's social platforms, on the other hand, have the technical capacity to manipulate or totally obliterate those preconditions. And, as later explained *infra* Section II.C.1, their business models in many ways depends on them doing so.[36]

C. *A New Set of Risks*

In their role as speech regulators, private platforms pose four broad types of speech-related risk. (Later, Part II will discuss in broad terms the types of policies that governments might pursue to mitigate each class of risk.)

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33 *See infra* Section I.C.3.

34 Whitney v. California, 274 U.S. 357, 375–76 (1927) (Brandeis, J., concurring) ("Those who won our independence . . . . knew that order cannot be secured merely through fear of punishment for its infraction; that it is hazardous to discourage thought, hope and imagination; that fear breeds repression; that repression breeds hate; that hate menaces stable government; that the path of safety lies in the opportunity to discuss freely supposed grievances and proposed remedies; and that the fitting remedy for evil counsels is good ones."), *overruled by* Brandenburg v. Ohio, 395 U.S. 444 (1969).

35 *Id.* at 375.

36 *See infra* Section II.C.1.

1. Failure to Moderate Harmful Speech

First, a failure to moderate certain types of speech—false news or online harassment[37]—may cause nonspeech harms. This is the class of platform failures that has attracted the most attention from policymakers around the world, and most policies proposed or enacted to deal with it are designed to encourage more content moderation.

2. Unwarranted Censorship

Second, a platform may moderate speech too heavily or on a capricious or unacceptably discriminatory basis. There is extensive and distinguished literature around this set of risks,[38] and some political actors have spoken broadly about regulating social media "like public utilities."[39] But there are few policy proposals that contain any detail about how to implement this kind of regulation, and thus far no one in any government has shown any interest in them.[40]

3. Cultural Engineering

Third, a platform may interfere with the structure and flow of public discourse in a way that prevents it from performing its traditional functions. For example, platforms' algorithms might intensify the "filter bubble" effect[41] in a way that prevents serendipitous encounters with opposing viewpoints. Or their systems may, by optimizing for time spent in-site, bias media production and consumption heavily toward the lurid and conspiratorial.[42]

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37 *See* Danielle Keats Citron, *Cyber Civil Rights*, 89 B.U. L. REV. 61, 68–71 (2009); Emma Marshak, *Online Harassment: A Legislative Solution*, 54 HARV. J. ON LEGIS. 503, 509 (2017) (summarizing the individual and social costs of the problem).

38 *See, e.g.*, Kate Klonick, *The Terrifying Power of Internet Censors*, N.Y. TIMES (Sept. 13, 2017), https://www.nytimes.com/2017/09/13/opinion/cloudflare-daily-stormer-charlottesville.html.

39 This group includes Bernie Sanders and Steve Bannon. *Why Washington Is Turning on Silicon Valley*, THE WEEK (Sept. 23, 2017), http://theweek.com/articles/726004/why-washington-turning-silicon-valley.

40 *See* Kyle Langvardt, *Regulating Online Content Moderation*, 106 GEO. L.J. 1353, 1357 (2018) (outlining three legislative approaches to the problem); David McCabe, *One Idea for Regulating Google and Facebook's Control over Content*, AXIOS (Aug. 18, 2017), https://www.axios.com/one-idea-for-regulating-google-and-facebooks-control-over-content-1513304938-26b2f2ae-90b7-4f6a-b12f-012aad621e3b.html (discussing conservative activist Phil Kerpen's proposal to withdraw the Communications Decency Act section 230 liability shield from platforms that do not maintain viewpoint neutrality).

41 Kalev Leetaru, *Why 2017 Was the Year of the Filter Bubble?*, FORBES (Dec. 18, 2017, 10:41 AM), https://www.forbes.com/sites/kalevleetaru/2017/12/18/why-was-2017-the-year-of-the-filter-bubble/#6b16f2a0746b.

42 Lewis, *supra* note 15.

This is less a content-moderation problem than a form of cultural damage. It is the most abstract and novel kind of damage the platforms deal, but likely the most consequential.

Platforms do not, for the most part, effect cultural change through ordinary persuasion. Instead, they effect cultural change through matchmaking and behavioral-modification techniques. A simple change to a sorting algorithm can produce cultural change—for instance, in the overall level of ideological segregation among platform users—essentially overnight.[43]

Facebook, whose motto until a few years ago was "move fast and break things,"[44] tinkers incessantly with the social fabric. In 2014, for instance, the company secretly conducted an A/B study on 689,000 unsuspecting users to determine whether it could engineer "emotional contagion" on a mass scale.[45] The "A" group's news feed was adjusted to contain more "positive emotional content," and the "B" group saw more "negative emotional content."[46] Group A responded with more emotionally positive posts, and Group B responded with emotional negativity.[47] Similar cultural changes in the past—the "big sort" of Americans into separate ideologically concentrated ZIP Codes, for instance[48]—have taken place on a much longer and less disruptive time scale.

4. Damage to Traditional Media Markets

Finally, a platform may mismanage or otherwise dry up the markets that underwrite the production of speech. Google and Facebook effectively operate a duopoly in the online advertising market, taking in over half of all online ad revenue worldwide and over sixty percent in the United States.[49] That market position grows stronger every year, as the two firms take in ninety-nine percent of annual growth in the industry.[50] Online publishers, who depend

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43 For one example of quick cultural change, see Alex Hern, *Facebook: No Current Plans to Make "Catastrophic" News Feed Change Worldwide*, THE GUARDIAN (Oct. 24, 2017, 9:17 AM), https://www.theguardian.com/technology/2017/oct/24/facebook-no-plans-news-feed-change-worldwide.

44 Samantha Murphy, *Facebook Changes Its "Move Fast and Break Things" Motto*, MASHABLE (Apr. 30, 2014), https://mashable.com/2014/04/30/facebooks-new-mantra-move-fast-with-stability/#i6sv ZJFm9PqB.

45 Russell Brandom, *Facebook Altered 689,000 Users' News Feeds for a Psychology Experiment*, THE VERGE (June 28, 2014, 1:02 PM), https://www.theverge.com/2014/6/28/5852652/facebook-altered-689000-users-news-feeds-for-a-psychology-experiment.

46 Adam D.I. Kramer et al., *Experimental Evidence of Massive-Scale Emotional Contagion Through Social Networks*, PNAS (June 17, 2014), http://www.pnas.org/content/111/24/8788.full.

47 *Id.*

48 On ZIP Code sorting by ideology, see BILL BISHOP, THE BIG SORT: WHY THE CLUSTERING OF LIKE-MINDED AMERICA IS TEARING US APART 202–05 (2008).

49 *Why Google and Facebook Prove the Digital Ad Market Is a Duopoly*, FORTUNE (July 28, 2017), http://fortune.com/2017/07/28/google-facebook-digital-advertising/.

50 Matthew Ingram, *Google and Facebook Account for Nearly All Growth in Digital Ads*, FORTUNE (Apr. 26, 2017), http://fortune.com/2017/04/26/google-facebook-digital-ads/.

almost exclusively on advertising for revenue, are at the mercy of these two companies. Decisions such as Facebook's choice to deprioritize journalism in users' news feeds can shake the foundation of the entire industry on a whim.[51]

II. HOW SHOULD GOVERNMENT RESPOND?

This Part envisions social policies to deal with each of the harms raised in Part I: failure to moderate harmful speech; unwarranted censorship; cultural engineering; and damage to traditional media markets.

Ten years into the platform economy, these problems are still so new that there are few real-world templates for a regulatory response. Still, it is easy enough to envision some broad outlines.

These suggestions take a long view, with no regard for present-day political marketability. Some of them may prove dysfunctional in practice. But they represent a best effort to envision a "New Deal" for speech—an assortment of aggressive policies that a highly motivated polity might adopt in time as the crisis of online speech becomes more urgent.

A. *Compel More Content Moderation*

The most basic source of harm from online communications platforms involves the proliferation of certain kinds of harmful speech. This Article is not concerned with the normative questions of how much speech-related harm a liberal society should tolerate or of when harmful speech may be suppressed. Instead, the point is simply that at least some classes of harmful speech may be suppressed under at least some circumstances. And in these situations, the most obvious way for a state to respond to an overgrowth of problem speech is to exert pressure on platform intermediaries to weed it out on a selective basis.

Some approaches are fairly direct. The German government, for instance, ordered social media companies to delete illegal, racist, or slanderous comments under penalty of law.[52] France is considering a bill that would deputize social platforms as censors of false news in the run-up to public elections.[53] And in 2017, some members of Congress pushed for a law requiring

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51 Derek Thompson, *How to Survive the Media Apocalypse*, THE ATLANTIC (Nov. 29, 2017), https://www.theatlantic.com/business/archive/2017/11/media-apocalypse/546935/.

52 Melissa Eddy & Mark Scott, *Delete Hate Speech or Pay Up, Germany Tells Social Media Companies*, N.Y. TIMES (June 30, 2017), https://www.nytimes.com/2017/06/30/business/germany-facebook-google-twitter.html.

53 *Emmanuel Macron: French President Announces "Fake News" Law*, BBC NEWS (Jan. 3, 2018), http://www.bbc.com/news/world-europe-42560688.

large "online platform[s]" to "make reasonable efforts to ensure that [political ads] are not purchased by a foreign national."[54]

These laws address themselves well to a familiar kind of First Amendment analysis. There are, first of all, conventional questions about the lines used to mark off the proscribed content. These lines might be drawn too broadly or vaguely, an issue raised in turn-of-the-century case law rejecting congressional efforts to protect minors from indecent online material.[55] And to the extent that the lines do not match the boundaries of some low-value speech category, laws targeting problem content will come in for strict scrutiny.[56]

In cases where the content lines are better drawn, however, another kind of overbreadth concern steps in: namely, that platforms will engage in overkill if they are focused on penalties for underenforcement. That is what happened in Pennsylvania under a law that allowed for court orders requiring Internet service providers ("ISPs") to block sites containing child pornography.[57] The overbreadth here lay not in the content-based line-drawing, but in the incredible degree of overkill in the privatized enforcement effort: the ISP blocked over 1.1 million websites to get at only about 400 that were actually hosting child pornography.[58]

Other strategies might use tort law to motivate online intermediaries. Section 512 of the Digital Millennium Copyright Act, for example, entitles ISPs to a safe harbor from vicarious copyright infringement liability if they comply with written requests to take down allegedly infringing materials.[59] Intermediaries almost always comply, and users who post allegedly infringing materials rarely avail themselves of the opportunity to challenge the takedown.[60] The approach has been highly effective as a technique for policing copyright-infringing content, but it has also drawn significant criticism for its susceptibility to abuse.[61]

Finally, government actors sometimes use informal pressures or partnerships to encourage platforms to step up their censorship efforts. Senator Joseph Lieberman in 2010 hounded PayPal to stop processing donations to Wikileaks, and the platform complied.[62] In the aftermath of the attacks on the

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54 S. 1989, 115th Cong. § 9 (2017).

55 *See* Reno v. ACLU, 521 U.S. 844, 864–68 (1997) (striking overbroad law restricting transmission of "obscene or indecent" material to minors).

56 *Id.* at 867–68.

57 Derek E. Bambauer, *Orwell's Armchair*, 79 U. CHI. L. REV. 863, 933 (2012).

58 *Id.* at 882.

59 17 U.S.C. § 512(c) (2012); *see also* Jeffrey Cobia, Note, *The Digital Millennium Copyright Act Takedown Notice Procedure: Misuses, Abuses, and Shortcomings of the Process*, 10 MINN. J. SCI. & TECH. 387, 390–93 (2009).

60 Cobia, *supra* note 59, at 393–94.

61 *See, e.g.*, Music Community, *Comment Letter on Section 512 Study*, REGULATIONS.GOV (Apr. 7, 2016), https://www.regulations.gov/document?D=COLC-2015-0013-89806.

62 Bambauer, *supra* note 57, at 892.

Benghazi diplomatic compound, the Obama administration asked Google, YouTube's parent company, to take down an inflammatory video that was alleged to have sparked the violence.[63] These unofficial applications of state pressure elude traditional conceptions of state action and judicial review by design.

There will always be some place for this category of regulation. Certain forms of targeted online harassment, for instance, make extremely compelling candidates for benign censorship.[64] But these tools should be used as little as possible due to the high potential for abuse. The fact that private frontline enforcers face no liability for going too far virtually guarantees some degree of censorial overkill.

B. *Place Limits on Content Moderation*

Overkill itself is a problem that governments committed to free expression online might someday want to address. Odd events occur from time to time—for example, where an obscenity filter mistakes fine art for pornography.[65] Or the consequences may be much more severe: Facebook, for some reason, has been taking down the pages of Rohingya Muslims reporting on their people's ethnic cleansing in Myanmar.[66]

Congress could approach these problems in a few ways.[67] One modest approach would simply require platforms to disclose their content-moderation standards in detail to the public or to some designated investigative body.[68] A disclosure-based approach, however, is unlikely to accomplish its purpose to the extent that the targeted platform's market position insulates it from public pressure. And even if the platform does respond to public pressure, it would be unwise to assume that public pressure will reliably push in a speech-protective direction.

A Congress that is really dedicated to a strong set of standards in the world of content moderation would therefore have to seek something

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63 Google refused. *See* Dawn C. Chmielewski, *"Innocence of Muslims": Administration Asks YouTube to Review Video,* L.A. TIMES (Sept. 13, 2012), http://articles.latimes.com/2012/sep/13/entertainment/la-et-ct-administration-asks-youtube-to-review-innocence-of-muslims-video-20120913.

64 *See* Citron, *supra* note 37, at 68–88; Marshak, *supra* note 37, at 508–13 (summarizing the individual and social costs of the problem).

65 *See* Mark Molloy, *Facebook Accused of Censoring Photo of Copenhagen's Little Mermaid Statue*, THE TELEGRAPH, (Jan. 4, 2016, 8:53 PM), http://www.telegraph.co.uk/news/worldnews/europe/denmark/12081589/Copenhagen-Little-Mermaid-statue-Facebook-accused-of-censoring-photo.html.

66 *See* Julia Carrie Wong, Michael Safi & Shaikh Azizur Rahman, *Facebook Bans Rohingya Group's Posts as Minority Faces "Ethnic Cleansing"*, THE GUARDIAN (Sept. 20, 2017, 3:02 AM), https://www.theguardian.com/technology/2017/sep/20/facebook-rohingya-muslims-myanmar.

67 Langvardt, *supra* note 40.

68 *Id.* at 1383–85.

stronger than a disclosure-based approach. The matter then becomes much more complicated.

The basic difficulty here is that platforms must moderate content to some extent or they will become unusable. The sheer *volume* of incoming garbage threatens to overwhelm the user if it is not held back. To illustrate, about half of all email consists of spam, and about ten percent of Facebook accounts are reportedly fake.[69]

And then there is the user-deterrent effect of traumatic content—beheading videos, for instance. Encounters with shocking content in the pre-digital world—such as neo-Nazi protests—are rare enough that they have never really threatened to make public spaces unusable as expressive venues. But the uninhibited and anonymous nature of Internet communications makes these confrontations much more common. Online trolling, for instance, really is pervasive enough to pose a credible threat to a conversation forum's usability.

Any law designed to limit online content moderation would therefore have to accommodate some degree of content moderation as well; there is no "clean" libertarian solution. Nor would it be possible to import First Amendment doctrine wholesale—the traditional prohibition against prior restraints, for instance, conflicts at a basic level with the whole concept of content moderation. Along similar lines, it would be unwise to define with too much specificity exactly what kinds of content moderation were prohibited. Instead, the most practical approach would define the offense broadly.[70] A law might prohibit platforms to interfere, for example, "with the exercise of constitutional freedoms of speech, religion, and assembly."[71]

Aiming to impose liability in individual cases of excessive content moderation would be unwise given the incredible volume of work that content moderators face. Facebook alone today employs several thousand content moderators who reportedly evaluate about one piece of content every ten seconds.[72] Under fire for the company's role in the Russia fiasco, Mark

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69 *See Spam Email Levels at 12-Year Low*, BBC NEWS (July 17, 2015), http://www.bbc.com/news/technology-33564016 (explaining that the "12-year-low" was fifty percent of all email messages); Heather Kelly, *83 Million Facebook Accounts Are Fakes and Dupes,* CNN (Aug. 3, 2012, 5:27 AM), https://www.cnn.com/2012/08/02/tech/social-media/facebook-fake-accounts/index.html.

70 Anti-SLAPP statutes contain similarly broad language regarding speech rights. These statutes provide a remedy against SLAPPs, Strategic Lawsuits Against Public Participation—essentially predatory suits brought to silence plaintiffs' critics. *See, e.g.*, CAL. CIV. PROC. CODE § 425.16(b)(1) (West 2018) ("A cause of action against a person arising from any act of that person in furtherance of the person's right of petition or free speech under the United States Constitution or the California Constitution in connection with a public issue shall be subject to a special motion to strike, unless the court determines that the plaintiff has established that there is a probability that the plaintiff will prevail on the claim.").

71 Langvardt, *supra* note 40, at 1374.

72 Aarti Shahani, *From Hate Speech to Fake News: The Content Crisis Facing Mark Zuckerberg*, NPR NEWS (Nov. 17, 2016, 5:02 AM), http://www.npr.org/sections/alltechconsidered/2016/11/17/495827410/from-hate-speech-to-fake-news-the-content-crisis-facing-mark-zuckerberg.

Zuckerberg pledged to double the number of moderators to 20,000 by the end of 2018.[73] Some significant rate of error is unavoidable.

Regulators should instead focus on the reasonableness of platforms' policies and on keeping the rate of error at some tolerable level. A safe-harbor model seems like the most realistic way to do that—perhaps one that required platforms to keep clear, transparent, and well-drawn content-moderation policies and to demonstrate reasonable efforts to correct and prevent errors. To the extent that platforms rely on software filters, they would have to demonstrate their efficacy and precision. Overseeing all of this is largely work for an agency rather than a court.[74]

The thought of charging a federal administrative agency with so much responsibility in the area of free speech is intuitively unsettling. Some of this may have to do with the suddenly pervasive regulatory role the government would play in questions of censorship. Or it may be that speech freedoms feel too politically sacred to be handled bureaucratically rather than judicially.

These problems are unavoidable, however, so long as society relies on content moderation as its first line of defense against harmful speech online. Content moderation, whether good or bad, necessary or excessive, consists of workaday censorship at an industrial scale. The job is inherently pervasive, bureaucratic, and dangerous to the laborers who do it,[75] with none of the glories of the twentieth century First Amendment canon. It is already going on. We can leave it unrestrained, or we can attempt to manage the content moderators. But there is no way to manage the content moderators without getting down into the muck alongside them.

Given these undesirable choices, it is worth asking whether there is anything that might be done to alleviate the need for so much content moderation in the first place. The content moderator's work is sometimes compared to toxic waste disposal—a grave, regrettable necessity that incidentally exposes many workers to irreversible harm.[76] But what if some of the toxic waste is just preventable runoff from a careless and self-serving industrial operation?

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73 John Shinal, *Facebook's Fight to Kill Fake News May Hurt Its Profit Margin*, CNBC (Nov. 1, 2017, 9:08 PM), https://www.cnbc.com/2017/11/01/facebook-says-costs-will-rise-to-go-after-fake-news.html.

74 Langvardt, *supra* note 40, at 1376–78.

75 Two content moderators have sued Microsoft after developing posttraumatic stress disorder. June Williams, *Workers on Porn Detail Sue Microsoft for Injuries*, COURTHOUSE NEWS (Jan. 10, 2017), https://www.courthousenews.com/workers-on-porn-detail-sue-microsoft-for-injuries/.

76 Sarah T. Roberts, *Digital Refuse: Canadian Garbage, Commercial Content Moderation and the Global Circulation of Social Media's Waste*, 10 WI J. MOBILE MEDIA 1, 13 (2016), http://wi.mobilities.ca/digitalrefuse.

C. *Crack Down on the Business Model*

For years, the major online platforms have succeeded in selling themselves as providers of a free public service. It is true to an extent, as in the case of broadcast television. But the same old cliché applies at least as well now as it did then: if you are not paying for the product, you *are* the product. Consumers are only now developing a widespread awareness that social media and search platforms, just like television networks, are primarily in the business of harvesting user data and selling it to direct advertisers.[77]

Beyond the obvious privacy concerns, this "surveillance capitalism"[78] business model has dealt immense damage to the quality and character of public discourse. First, it provides a suite of incredibly powerful tools to speakers who wish to microtarget disinformation or misinformation to susceptible audiences while escaping the notice of the larger community.[79] Second, it accomplishes this microtargeting amid a social media–driven information environment that already feeds ideological isolation and polarization by design.[80]

More and more technology commentators have come forward to describe advertising as "the original sin of the web"[81]—the root of a gamut of twenty-first-century problems ranging from fake news to online addiction. Venture capitalist Roger McNamee, an early investor in Facebook and Google and an early mentor to Mark Zuckerberg, told *The Guardian*, "The people who run Facebook and Google are good people, whose well-intentioned strategies have led to horrific unintended consequences. The problem is that there is nothing the companies can do to address the harm unless they abandon their current advertising models."[82]

The coming pages of this Article raise a few broad-strokes possibilities for how governments might curb surveillance capitalism's worst excesses.

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77 *See* TIM WU, THE ATTENTION MERCHANTS: THE EPIC SCRAMBLE TO GET INSIDE OUR HEADS 6 (2016) (providing a history of advertising from the nineteenth century penny press to modern social media).

78 Mitch Joel, *Media's New Business Model: Surveillance Capitalism*, MEDIUM (Feb. 23, 2018), https://medium.com/@mitchjoel/medias-new-business-model-surveillance-capitalism-c77f159df932.

79 *See* Jake Johnson, *Social Media Misinformation Campaigns Are 'Big Business' Worldwide, Study Finds*, TRUTHDIG (July 20, 2018), https://www.truthdig.com/articles/study-social-media-misinformation-campaigns-are-big-business-worldwide.

80 *Id.*

81 *E.g.*, Ethan Zuckerman, *The Internet's Original Sin*, THE ATLANTIC (Aug. 14, 2014), https://www.theatlantic.com/technology/archive/2014/08/advertising-is-the-internets-original-sin/376041/; *see also* Farhad Manjoo, *Tackling the Internet's Central Villain: The Advertising Business*, N.Y. TIMES (Jan. 31, 2018), https://www.nytimes.com/2018/01/31/technology/internet-advertising-business.html.

82 Paul Lewis, *'Our Minds Can Be Hijacked': The Tech Insiders Who Fear a Smartphone Dystopia*, THE GUARDIAN (Oct. 6, 2017, 1:00 AM), https://www.theguardian.com/technology/2017/oct/05/smartphone-addiction-silicon-valley-dystopia.

But first, it will give a brief primer on Facebook's advertising-based business model. The emphasis is on Facebook not because its methods are unique, but because of Facebook's status as the hegemon of social-media-driven advertising.

1. What Does Facebook Mean by User "Engagement?"

For Facebook, some consumer data comes from in-site activities. Essentially everything a user does on Facebook has cash value to the company: clicking, "liking," sharing, messaging, commenting, even *beginning* to type out a message before retracting it.[83] All of this "engagement" helps Facebook to build a deeper dossier on the user. It takes surprisingly little to draw a remarkably precise profile. A hundred or so "likes," for instance, provide enough raw data to reliably determine race, political affiliation, sexual orientation, and even more arcane points such as whether a user's parents are divorced.[84]

Facebook pulls data from other sources as well. By embedding 1 × 1 "beacon" pixels on pages around the web, the company can access the IP addresses of all those pages' visitors.[85] Cross-checking this IP data with similar data from Facebook's own site allows it to assemble detailed, personally identifiable browsing histories.[86] As for Internet users who do not have Facebook profiles, the company does what it can to buy personally identifiable data from payment processors and consumer rewards programs at outside websites or brick-and-mortar stores.[87]

Once an advertiser has a list of core customers in hand, Facebook's "Lookalike Audience" feature can use it to uncover a much larger audience

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83 Victoria Woollaston, *Facebook Tracks Everything You Type Even If You DON'T Post the Update or Comment*, DAILY MAIL (Dec. 17, 2013, 9:27 AM), http://www.dailymail.co.uk/sciencetech/article-2525227/Facebook-tracks-type-DONT-post-update-comment.html.

84 *See* Hannes Grassegger & Mikael Krogerus, *The Data that Turned the World Upside Down*, VICE MOTHERBOARD (Jan. 28, 2017, 9:15 AM), https://motherboard.vice.com/en_us/article/mg9vvn/how-our-likes-helped-trump-win ("In 2012, [Psychologist Michal] Kosinski proved that on the basis of an average of 68 Facebook 'likes' by a user, it was possible to predict their skin color (with 95 percent accuracy), their sexual orientation (88 percent accuracy), and their affiliation to the Democratic or Republican party (85 percent). But it didn't stop there. Intelligence, religious affiliation, as well as alcohol, cigarette and drug use, could all be determined. From the data it was even possible to deduce whether someone's parents were divorced.")

85 *The Facebook Pixel*, FACEBOOK, https://www.facebook.com/business/learn/facebook-ads-pixel (last visited Aug. 31, 2018).

86 *Cf.* DIPAYAN GHOSH & BEN SCOTT, #DIGITALDECEIT: THE TECHNOLOGIES BEHIND PRECISION PROPAGANDA ON THE INTERNET 17 (Jan. 2018), https://www.newamerica.org/documents/2077/digital-deceit-final-v3.pdf.

87 *Id.* at 15.

of people with a similar demographic and psychological profile.[88] A disinformation campaign, for instance, might start by posting a fake event with a provocative title to Facebook and allowing it to circulate organically until a list of a few hundred people RSVP.[89] This list can then be submitted to the Lookalike service, which will produce a much larger list of Facebook users with similar ideological profiles. These users, in turn, are far more likely to recirculate bias-confirming materials that are pushed on them, triggering a process of "viral" friend-to-friend distribution that no longer requires the propagandist's affirmative intervention.

The term of art for this unpaid leg of the distribution is "organic reach."[90] But like so much of the discourse surrounding social media, the phrase mistakes a corporately micromanaged set of social interactions as representing some spontaneously occurring online state of nature. When content is passed from one user to another, it usually occurs through the "News Feed," an endless scroll of status updates, photos, links, and so on from "friends" and advertisers. It is key to understand that everyone's News Feed is curated—not for chronology, educational value, entertainment value, or expressed user preferences, but for driving "engagement" with the Facebook environment.[91] The more time the user spends "engaging" with Facebook, the more ads Facebook gets to display in-site and the more intelligence Facebook gets to extract for advertising purposes.[92]

An algorithm designed to drive engagement at all costs is unlikely to push users toward contemplation, intellectual challenge, or doubt. Instead, it will tend to forward users a selection of bias-affirming materials that by turns soothe and provoke the user into more Facebooking. These processes are self-optimizing; algorithms at the major social firms learn constantly from ongoing A/B experiments on the user base to determine what "engages" and what does not.[93] Americans today are, by all accounts, heavily "engaged"; the average American spends fifty minutes using Facebook and its Instagram

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88 *Id.* at 16; *see also About Lookalike Audiences*, FACEBOOK, https://www.facebook.com/business/help/164749007013531 (last visited Aug. 31, 2018).

89 Craig Timberg & Elizabeth Dwoskin, *Russians Got Tens of Thousands of Americans to RSVP for Their Phony Political Events on Facebook*, WASH. POST, (Jan. 25, 2018), https://www.washingtonpost.com/news/the-switch/wp/2018/01/25/russians-got-tens-of-thousands-of-americans-to-rsvp-for-their-phony-political-events-on-facebook/?utm_term=.b64ac3d8d2ac.

90 Brian Boland, *Organic Reach on Facebook: Your Questions Answered*, FACEBOOK BUSINESS (JUNE 5, 2014), https://www.facebook.com/business/news/Organic-Reach-on-Facebook.

91 Josh Constine, *How Facebook News Feed Works*, TECHCRUNCH (Sept. 6, 2016), https://techcrunch.com/2016/09/06/ultimate-guide-to-the-news-feed.

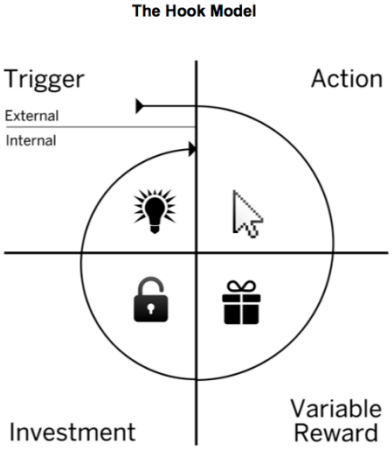
92 Kurt Wagner, *This Is How Facebook Uses Your Data for Ad Targeting*, RECODE (Apr. 11, 2018, 6:00 AM), https://www.recode.net/2018/4/11/17177842/facebook-advertising-ads-explained-mark-zuckerberg.

93 *See* Will Oremus, *Facebook's New Secret Sauce*, SLATE (Apr. 24, 2014, 4:25 PM), http://www.slate.com/articles/technology/technology/2014/04/facebook_news_feed_edgerank_facebook_algorithms_facebook_machine_learning.html.

and Messenger products each day,[94] with thirty-seven minutes of that time going to Facebook alone.[95]

It helps, of course, that the major tech companies have intentionally designed their products to be as addictive and emotionally manipulative as possible. Author Nir Eyal's 2014 business bestseller *Hooked: How to Build Habit-Forming Products*[96] describes a four-step pattern that "successful products [use to] reach their ultimate goal of unprompted user engagement, bringing users back repeatedly, without depending on costly advertising or aggressive messaging."[97] He writes that "[t]he ultimate goal of a habit-forming product is to solve the user's pain by creating an association so that the user identifies the company's product or service as the source of relief."[98]

[Figure 1]



The cycle shown in Figure 1 begins with a "trigger" inviting the user to use the product. For first-time users it takes an "external" trigger such as an

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94 James B. Stewart, *Facebook Has 50 Minutes of Your Time Each Day. It Wants More.*, N.Y. TIMES (May 5, 2016), https://www.nytimes.com/2016/05/06/business/facebook-bends-the-rules-of-audience-engagement-to-its-advantage.html?_r=0.

95 Farhad Manjoo, *The Difficulties with Facebook's News Feed Overhaul*, N.Y. TIMES, (Jan. 12, 2018), https://www.nytimes.com/2018/01/12/technology/facebook-news-feed-overhaul.html.

96 NIR EYAL, HOOKED: HOW TO BUILD HABIT-FORMING PRODUCTS (Ryan Hoover ed., 2014).

97 *Id.* at 5.

98 *Id.* at 52. To his credit, Eyal does devote a chapter late in the book to the ethical dimension of this business. *Id.* at 163–79. His standard is nearly as lax as it could possibly be, however: only "dealers" who both (1) acknowledge that the product is bad for people and (2) who do not use it themselves are doing wrong by engineering addiction. *Id.* at 167–68. Note that even by this extremely permissive standard many tech executives are likely "dealers" who know better than to "get high on their own supply." Alex Hern, *'Never Get High on Your Own Supply'—Why Social Media Bosses Don't Use Social Media*, THE GUARDIAN (Jan. 23, 2018, 7:27 AM), https://www.theguardian.com/media/2018/jan/23/never-get-high-on-your-own-supply-why-social-media-bosses-dont-use-social-media.

invitation from an acquaintance to join Facebook.[99] Once addiction has set in later on, the user's internal sense of withdrawal and discomfort provides a spontaneously arising "internal" trigger: "[p]roducts that attach to these internal triggers provide users with quick relief."[100] "Triggered" users then take "action" by logging in and scrolling, posting, supplementing their profiles, or whatever.[101] Successful tech companies lower the barriers to action as much as possible—for instance, by embedding share icons across the web and allowing users to send a prewritten explanation of the shared material with a single click.[102]

Now comes the "variable reward,"[103] a manipulative technique first discovered by Harvard behavioral psychologist B.F. Skinner in his experiments on caged animals.[104] Skinner's pigeons were placed in a box that contained a lever attached to a food pellet dispenser.[105] He discovered that pigeons tapped the lever far more frequently when the pellets were distributed after a random rather than a fixed number of taps.[106] The result has been reproduced widely and is generally credited as the principle behind the addictiveness of slot machines.[107] The "like" feature on Facebook produces a similar effect: a highly variable affirmational "reward" to users for posting or sharing content.[108]

Finally, the user is prodded to "invest" in the platform by sinking time and effort into it in ways that do not necessarily produce any reward. This may include following other users on Twitter, "liking" friends' posts on Facebook,[109] uploading photos to user profiles (and in many cases relinquishing copyright in them), and so on. These investments often spur external trigger events for other users—such as an obligation to "like" a friend's status out of courtesy—and ideally, they help prime internal triggers as well: new sources of psychic "pain" for the social product to "relieve."[110]

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99 EYAL, *supra* note 96, at 45.

100 *Id.* at 50–51.

101 *See id.* at 61.

102 *Id.* at 74–75.

103 *Id.* at 95.

104 *Id.* at 99.

105 *See* EYAL, *supra* note 96, at 99.

106 *Id.*

107 *See* Andrew Thompson, *Engineers of Addiction*, THE VERGE (May 6, 2015), https://www.theverge.com/2015/5/6/8544303/casino-slot-machine-gambling-addiction-psychology-mobile-games.

108 *See* Julian Morgans, *Your Addiction to Social Media Is No Accident*, VICE (May 19, 2017, 1:57 PM), https://www.vice.com/en_us/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction.

109 *See* ADAM ALTER, IRRESISTIBLE: THE RISE OF ADDICTIVE TECHNOLOGY AND THE BUSINESS OF KEEPING US HOOKED 128 (2017).

110 In a presentation to bankers, Facebook executives reportedly touted the company's ability to detect pain in need of relief by demonstrating that it could discern in real time when teenagers "feel 'insecure,' 'worthless' and 'need a confidence boost.'" Sam Levin, *Facebook Told Advertisers It Can Identify Teens Feeling 'Insecure' and 'Worthless'*, THE GUARDIAN (May 1, 2017, 3:01 PM), https://www.theguardian.com/technology/2017/may/01/facebook-advertising-data-insecure-teens.

Outrage, catharsis, insecurity, and the need to belong to one's tribe all seem to provide potent "triggers" and "rewards" for the habit-forming product. Recent studies have confirmed what is intuitively plain in social networks: appeals to group identification and negative emotion drive engagement more reliably than anything else.[111] Algorithms optimized to drive engagement therefore tend to serve up cartloads of these reactive stories to users whose past engagement indicates they are predisposed to click on them.[112]

A vicious feedback loop sets in as users are herded into ideological affinity groups.[113] An online social movement picks up steam among a group that is sympathetic to it.[114] Algorithms then serve up hostile stories to users who are recruitable into an opposing camp.[115] The discussion on each side becomes increasingly pitched, and the inevitable excesses on each side are harvested and served to the other as oppositional propaganda.[116] The targeted nature of the materials served to users on both sides ensures that measured "debate" across ideological lines is deprioritized.

The First Amendment tradition generally presumes that more is better: that counterspeech can remedy ill counsels with good ones.[117] And when Justice Kennedy described "the Internet . . . and social media in particular" as "'vast democratic forums'" and "'the most important places . . . for the

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111 M.J. Crockett, *Moral Outrage in the Digital Age*, 1 NATURE HUM. BEHAV. 769, 770 (2017); Rui Fan et al., *Anger Is More Influential than Joy: Sentiment Correlation in Weibo*, 9 PLOS ONE 1, 6 (2014), http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0110184 (finding that connected users of Weibo, a Twitter-like platform in China, correlate significantly more along lines of anger than of joy or sadness); *see also* Michela Del Vicario et al., *Echo Chambers: Emotional Contagion and Group Polarization on Facebook*, 6 SCI. REPORTS 1, 8 (2016), https://www.nature.com/articles/srep37825 (demonstrating that users on Facebook tend to organize into echo chambers and that higher involvement produces more negative emotion).

112 In an essay, Mark Zuckerberg's former mentor Roger McNamee wrote, "Of the millions of pieces of content that Facebook can show each user at a given time, they choose the handful most likely to maximize profits. If it were not for the advertising business model, Facebook might choose content that informs, inspires, or enriches users. Instead, the user experience on Facebook is dominated by appeals to fear and anger. This would be bad enough, but reality is worse." Roger McNamee, *How Facebook and Google Threaten Public Health—and Democracy*, THE GUARDIAN (Nov. 11, 2017, 4:00 AM) http://www.theguardian.com/commentisfree/2017/nov/11/facebook-google-public-health-democracy.

113 *See* Del Vicario et al., *supra* note 111, at 3.

114 *See id.*

115 *See* JARON LANIER, TEN ARGUMENTS FOR DELETING YOUR SOCIAL MEDIA ACCOUNTS RIGHT NOW 6–7 (2018).

116 *See* Vidya Narayanan et al., *Polarization, Partisanship and Junk News Consumption over Social Media in the US* 1 (Univ. of Oxford, Data Memo No. 2018.1 Feb. 6, 2018).

117 *See* Whitney v. California, 274 U.S. 357, 375–76 (1927) (Brandeis, J., concurring) ("Those who won our independence . . . knew that order cannot be secured merely through fear of punishment for its infraction; that it is hazardous to discourage thought, hope and imagination; that fear breeds repression; that repression breeds hate; that hate menaces stable government; that the path of safety lies in the opportunity to discuss freely supposed grievances and proposed remedies; and that the fitting remedy for evil counsels is good ones."), *overruled by* Brandenburg v. Ohio, 395 U.S. 444 (1969).

exchange of views,'" he seemed only to be recognizing the obvious.[118] It would seem, at least over the long run, that a platform empowering average Americans to speak their minds across long distances at essentially no cost should be a boon to the system of free speech—and if they are "addicted" to public discourse, all the better.

Yet it is far from clear that Americans' addiction to expressive online "engagement" has produced a richer or wiser public discourse. To the contrary, it increasingly appears that social media products are eroding the mechanisms that allow the freedom of speech to police itself and to produce public goods. That is the view at least of former Facebook vice president Chamath Palihapitiya, who regretfully acknowledged that "[t]he short-term, dopamine-driven feedback loops that we have created are destroying how society works: no civil discourse, no cooperation, misinformation, mistruth. . . . It is eroding the core foundations of how people behave by and between each other."[119]

These observations on surveillance advertising and its apparent effect on public dialogue are neither original nor even especially controversial. After revelations of Facebook's role in distributing Russian propaganda during the 2016 presidential election, it has become increasingly commonplace to point out targeted advertising's corrosive effect on culture.[120]

It is therefore somewhat surprising that we have not seen more public calls to restrain these advertising practices by law. There are a few explanations at hand, however. First, the Supreme Court has extended generous protections to advertisers who work in conjunction with data-mining operations.[121] Fair enough, but those kinds of doctrinal limitations alone usually do not inhibit people from producing aspirational writing or from calling for an objectionable Supreme Court decision to be moved out of the way.

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118 Packingham v. North Carolina, 137 S. Ct. 1730, 1735 (2017) (quoting Reno v. ACLU, 521 U.S. 844, 868 (1997)).

119 Julia Carrie Wong, *Former Facebook Executive: Social Media Is Ripping Society Apart*, THE GUARDIAN (Dec. 12, 2017, 1:58 PM) https://www.theguardian.com/technology/2017/dec/11/facebook-former-executive-ripping-society-apart.

120 *See, e.g.*, Julie E. Cohen, *Law for the Platform Economy*, 51 U.C. DAVIS L. REV. 133, 166 (2017) ("At minimum, the platform business model, which is so heavily reliant on predictive profiling and target marketing and on the information cascades and sensationalism that draw eyeballs and generate ad revenues, is causally implicated in the current dysfunctions of the online information environment even though that was not its creators' intent.").

121 *See* Agatha M. Cole, *Internet Advertising After* Sorrell v. IMS Health*: A Discussion on Data Privacy & the First Amendment*, 30 CARDOZO ARTS & ENT. L.J. 283, 308–09 (2012) ("Congress could theoretically ban behavioral tracking altogether without violating the First Amendment under *Sorrell*'s reasoning (unless the prohibition applied only to specific groups or provided exceptions for certain types of uses). It is improbable, of course, that Congress would consider such drastic measures since the negative economic impact on Internet businesses and innovation of such a plan would drastically outweigh any information privacy benefit to consumers. It is increasingly likely, however, that a framework restricting specific practices and giving legal force to consumer privacy guidelines (requiring consent, for example) will be implemented.").

Two deeper factors are probably in play here. First, even if the tech industry has recently taken a hit to its public image, tech *itself* continues to enjoy much of the goodwill that the individual companies have lost. In other words, it is one thing to say that Facebook the company has managed its platform irresponsibly; it is quite another to say that the problem lies at the heart of the product. After all, only a few years ago Facebook and Twitter were generally held up as freedom-building instruments of openness and social change. That consensus is only now beginning to crack. And perhaps even more importantly, two-thirds of the American population have already "invested" in a highly successful "habit-forming product" that is apparently rather difficult to quit cold-turkey.[122]

Efforts to rein in social platforms' toxic business model could take a few forms.

2. Lock Down Behavioral Data

Americans who want data privacy online are generally left to fall back on cookie blockers and other technological means of self-help. Some early California tort litigation suggests that users might have an invasion-of-privacy claim in cases where they activate a cookie blocker and an online entity surreptitiously places cookies on the user's browser anyway.[123] But even if these tort theories bear fruit, they do not pose a significant threat to the surveillance-advertising business model. American platforms remain free to deny service to users who will not agree to tracking. For a user who is already heavily dependent on Facebook, the privacy question is too abstruse and remote to give up the service.

The European Union has adopted a much more muscular privacy law in the form of its General Data Protection Regulation ("GDPR").[124] In effect as of May 2018, the GDPR requires data processors to tell users what

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122 Andrew Perrin, *Social Media Usage: 2005–2015*, PEW RESEARCH CENTER (Oct. 8, 2015), http://www.pewinternet.org/2015/10/08/social-networking-usage-2005-2015 (finding that sixty-five percent of all American adults now use social networking sites).

123 *See In re* Google Inc. Cookie Placement Consumer Privacy Litig., 806 F.3d 125, 151 (3d Cir. 2015) ("To Google's point, a sophisticated internet user may well have known that, in browsing the internet, her URL information was sent to Google. But such a user would also reasonably expect that her activated cookie blocker meant her URL queries would not be associated with each other due to cookies. As the activated cookie blocker equates, in our view, to an express, clearly communicated denial of consent for installation of cookies, we find Google 'intru[ded] upon reasonable expectations of privacy.'" (alteration in original) (footnote omitted) (quoting Hernandez v. Hillsides, Inc., 211 P.3d 1063, 1074 (Cal. 2009))).

124 Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the Protection of Natural Persons with Regard to the Processing of Personal Data and on the Free Movement of Such Data, and repealing Directive 95/46/EC (General Data Protection Regulation), 2016 O.J. (L 119) 1 [hereinafter GDPR].

information has been collected on them and to do it on demand and free of charge.[125] Users will also be able to opt out of data sharing[126] and to request that information service providers delete the information they have on file.[127] Data processors will not be permitted to deny service to these users.[128]

It is not obvious what the ramifications of GDPR will be for social networking in Europe and throughout the world. It seems at the time of this writing that most users presented with the clear opportunity to opt out of data collection will do so. Where data platforms intend to collect data for a new purpose, the law actually requires users to opt *in*, and they face no penalty if they do not.[129] Compliance with other aspects of the law appear to be exceedingly difficult. Providing a full and accurate accounting of a user's data profile and the uses it is put to, for example, will be expensive and technically difficult.[130] Certain basic principles in the law, such as the concept that personal data may not be processed in a way that is incompatible with the purpose that was initially disclosed to the data subject, are in fundamental tension with industry practices.[131]

Even to the extent that compliance is possible, to do so would seriously affect the platforms' bottom line. Both Google and Facebook depend almost entirely on targeted advertising for revenue. Google, at least, makes part of its money from targeting techniques that do not require user tracking.[132] Instead, its AdWords algorithms match ads to searches.[133] Search for "flu," for instance, and you will see NyQuil ads alongside your search results. Facebook, on the other hand, depends entirely on user profiles that enable it to serve you targeted advertising across the entire web.[134] In Facebook's case, GDPR cuts to the heart of the business model.

We can assume that both firms will look for ways to skirt the regulatory edges, and it is always possible that they will somehow persuade users to give up their data for free—the big tech sales pitch is not called a "reality

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125 *Id.* art. 12.

126 *Id.* art. 7.

127 *Id.* art. 17.

128 *Id.* art. 7.

129 *Id.*

130 GDPR, *supra* note 124, art. 17.

131 *See* Tal Z. Zarsky, *Incompatible: The GDPR in the Age of Big Data*, 47 SETON HALL L. REV. 995, 1006 (2017) ("To comply with the purpose specification rule, entities striving to engage in Big Data analysis will need to inform their data subjects of the future forms of processing they will engage in (which must still be legitimate by nature) and closely monitor their practices to assure they did not exceed the permitted realm of analyses. Carrying out any one of these tasks might prove costly, difficult and even impossible.").

132 *See* Aranyak Mehta et al., *AdWords and Generalized On-line Matching*, 54 J. ACM 1, 1 (2007).

133 *See id.*

134 *See* Michelle Castillo, *Here's How Facebook Ad Tracking and Targeting Works*, CNBC (Mar. 19, 2018, 11:32 AM), https://www.cnbc.com/2018/03/19/how-facebook-ad-tracking-and-targeting-works.html.

distortion field" for nothing.[135] But to the extent these gambits fail, the major platforms may eventually prefer to flout GDPR's requirements and instead pay the annual fine: up to four percent of annual turnover.[136] The likelihood that these firms will simply budget for the fine may make GDPR little more than a "Google tax."

GDPR seems likely to make the business of behavioral advertising less lucrative, but it may do so without altering Facebook's incentives to drive network-wide engagement. Suppose that seventy-five percent of European Facebook users opt out of having Facebook market their data.[137] In that case, the attention of the remaining twenty-five percent is still a resource that can be marketed to advertisers. Facebook will work as it always has to make that resource as precious as possible by driving the "engagement" of the twenty-five percent and surveilling it. Keeping the twenty-five percent engaged will require continuing participation from the seventy-five percent: posts, status updates, likes, and all the other crowdsourced "external triggers" and "variable rewards" that compel the twenty-five percent to use the platform. One could even argue that Facebook's incentives to drive engagement at all costs would *increase* in compensation for the diminishment in the pool of marketable eyeballs.

At the same time, there must be some threshold of participation below which the behavioral model becomes unsustainable and Facebook loses its dominant position as a broker for outside advertisers. At this point, Facebook would be forced to move toward a model based more heavily on in-site advertising. This is prime ad space, of course, but it has a significantly smaller draw than the revenue from placing ads across the web, as Facebook and Google do now.

For now, however, it appears entirely possible that GDPR will force Facebook, Google, and other data processors to curtail sharply their reliance on user surveillance in the European market—nearly a third of Facebook's global business. In a best-case scenario, that change could produce a significant benefit much more consequential than the privacy gain regulators are seeking. Some analysts in the advertising sector have already observed that

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135 The phrase is generally associated with Steve Jobs. *E.g.*, Jack Shafer, *The Apple Polishers*, SLATE (Oct. 13, 2005, 7:04 PM) http://www.slate.com/articles/news_and_politics/press_box/2005/10/the_apple_polishers.html ("From the beginning, Jobs flexed his powerful reality-distortion field to bend employees to his will, so pushing the most susceptible customers and the press around with the same psi power only comes naturally.").

136 *Fines and Penalties*, GDPR EU.ORG, https://www.gdpreu.org/compliance/fines-and-penalties (last visited Apr. 3, 2019).

137 At least one small survey suggests that the level of consent might be even lower: twenty-one percent for single-brand tracking and five percent for across-the-web tracking. Johnny Ryan, *Research Result: What Percentage Will Consent to Tracking for Advertising?*, PAGEFAIR (Sept. 12, 2017), https://pagefair.com/blog/2017/new-research-how-many-consent-to-tracking.

GDPR may "save advertising from itself."[138] But it could produce a much more substantial benefit for the larger culture if GDPR cuts off points of access for fake news and disinformation. Even better, it would produce this runoff benefit without requiring any censor to make the kinds of content and viewpoint judgments that pose the greatest threat to a free-speech principle.[139]

Yet restrictions on data handling alone are unlikely to address the entire problem of toxic viral content. Even if Facebook moved to a sharply restricted advertising model—one like Google's "AdWords," for instance, which serves in-site ads tailored to the content being viewed rather than the profile of the user—its incentives to drive engagement at all costs would remain substantially the same.

Under those circumstances, puppet masters such as Russia's Internet Research Agency would lose access to their most powerful tools.[140] Processes of organic reach, however, would still tend to polarize users and viralize toxic material. So long as social networks' revenue comes from advertising—even in-site advertising—they will design systems optimized to maximize user time spent on the platform. Those systems will continue to gravitate toward the same button-pushing strategies that drive user engagement so effectively today, and the social environment they create will continue to bias users toward outrage, distraction, and tribal polarization.

3. Loosen Corporate Control over Algorithmic Sorting

The pathologies of organic reach might be neutralized somewhat, however, if some checks were put in place over platforms' matchmaking functions. Some technology commentators have urged Facebook to publish information about its algorithms and about what kinds of content get pushed to which users.[141]

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138 Klint Finley, *Stronger Privacy Laws Could Save Advertising from Itself*, WIRED (Apr. 12, 2017, 7:00 AM), https://www.wired.com/2017/04/stronger-privacy-laws-save-advertising/; *see also* Maciej Zawadziński, *Why GDPR Is Good for Online Advertising, Even Ad Tech*, MEDIAPOST (Nov. 30, 2017), https://www.mediapost.com/publications/article/310879/why-gdpr-is-good-for-online-advertising-even-ad-t.html.

139 *See* GHOSH & SCOTT, *supra* note 86, at 16–17 (describing usefulness of ad buys based on behavioral targeting to disinformation campaigns).

140 The Internet Research Agency is the name of the Russian troll farm used to disrupt the 2016 election. Matt Apuzzo & Sharon LaFraniere, *13 Russians Indicted as Mueller Reveals Effort to Aid Trump Campaign,* N.Y. TIMES (Feb. 16, 2018), https://www.nytimes.com/2018/02/16/us/politics/russians-indicted-mueller-election-interference.html.

141 *See* Christina Bonnington, *It's Time for More Transparency in A.I.*, SLATE (Oct. 24, 2017, 9:15 AM), http://www.slate.com/articles/technology/technology/2017/10/silicon_valley_needs_to_start_embracing_transparency_in_artificial_intelligence.html; Nancy Scola & Josh Meyer, *Google, Facebook May Have to Reveal Deepest Secrets*, POLITICO (Oct. 1, 2017, 6:49 AM), https://www.politico.com/story/2017/10/01/google-facebook-2016-probe-secrets-243319.

A switch toward transparency in data handling may shock the public and diminish Facebook's public standing, but it is overly optimistic to imagine that the real-world consequences would extend far beyond a round of bad press.[142] The company operates a natural monopoly, and its users are not only locked in but are, in many cases and to varied degrees, "hooked."[143]

Professor Jonathan Zittrain has a more promising suggestion: namely, that users should be able to port their own algorithms into online platforms.[144] If users were given this right, then presumably they could shop for algorithms designed to reflect their own aspirational priorities as opposed to the "revealed" priorities that Facebook targets.[145] Under the current system, Facebook pays little to no attention to the user's expressed values; a user, for instance, may say she wishes to see a representative balance of news and opinions. Instead, Facebook's engagement-optimizing algorithms home in on the user's *appetites*, deepen them through behavioral modification, and then pander relentlessly to them.[146]

Portable algorithms have the potential to make a real difference, at least among those users who are savvy and conscientious enough to use them in a high-minded way. But it is also possible that consumer choice among sorting algorithms would descend into a classic Fox News–MSNBC dynamic that barely improved on the current situation. An algorithm's market supported by clickthrough advertising, in particular, would likely produce many of the same halls of mirrors that amplify tribal divisions today.

4. Address Behavioral Addiction

The targeted advertising business model discussed above gives tech companies incentives to ensure that users spend as much time "engaging" with their products as possible. Reports from inside and outside the companies in recent years have revealed that companies across the tech sector have

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142 *See* danah boyd, *Remarks at the EU Parliament Roundtable on Algorithmic Accountability and Transparency* (Nov. 7, 2016), https://www.marietjeschaake.eu/en/event-07-11-algorithmic-accountability-and-transparency.

143 EYAL, *supra* note 96, at 5.

144 Johnathan Zittrain (@zittrain), TWITTER (Nov. 15, 2016, 2:42 PM), https://twitter.com/zittrain/status/798597179770343424.

145 Ethan Zuckerman, *Facebook Only Cares About Facebook,* THE ATLANTIC (Jan. 27, 2018), https://www.theatlantic.com/technology/archive/2018/01/facebook-doesnt-care/551684 ("For Facebook, our revealed preferences—discovered by analyzing our behavior—speak volumes. The words we say, on the other hand, are often best ignored.").

146 *See* Oremus, *supra* note 93 ("Avid Twitter users swear by that platform's more straightforward chronological timeline, which relies on users to carefully curate their own list of people to follow. But there's a reason that Facebook's engagement metrics keep growing while Twitter's are stagnant. As much as we'd like to think we could do a better job than the algorithms, the fact is most of us don't have time to sift through 1,500 posts on a daily basis. And so, even as we resent Facebook's paternalism, we keep coming back to it.").

deliberately built their products to be as addictive as possible.[147] This is not just a matter of the products being so fun or useful that they are hard to put down. Instead, tech designers actually build features into their products for the sole purpose of driving compulsive use.[148]

These practices have received mounting criticism in the last year or so, culminating in an Apple shareholders' letter asking the company to roll out a less addictive iPhone.[149] The letter was concerned, in particular, with recent studies indicating that children and teenagers who use digital technologies heavily—a description that today includes most teenagers—face increased risks of adverse physical- and mental-health effects. It also reported that "78% of teens check their phones at least hourly and 50% report feeling 'addicted' to their phones" and that "social media sites and applications for which the iPhone and iPad are a primary gateway are usually designed to be as addictive and time-consuming as possible, as many of their original creators have publicly acknowledged."[150]

The problem of compulsive technology use extends to adults as well, and a series of studies has linked it to decreased individual wellbeing in a number of areas.[151] Set aside the questions about individual harm and personal responsibility; what is the effect of all this "engagement" on the public sphere?

a. *The Free Speech Case Against Compulsive Online Engagement*

The relationship between online addiction and the public sphere is in some ways ambivalent. Superficially, and within the conceptual framework of today's First Amendment doctrine, a widespread addiction to online engagement might even appear to constitute a positive development. Set aside the question of whether all this time posting and scanning through content feeds and sharing clickbait is physically or spiritually healthy; from the perspective of the public sphere, it is just "more speech" and there can never be too much. On this understanding, the interest in discouraging addiction would trade off against the interest in an "uninhibited, robust, and wide-open"[152] public sphere.

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147 *See supra* notes 82–89 and accompanying text.

148 EYAL, *supra* note 96, at 5.

149 Catherine Shu, *Two Large Apple Shareholders Say It Needs to Research the Impact of Smartphones on Kids*, TECHCRUNCH (Jan. 7, 2018, 11:48 PM), https://techcrunch.com/2018/01/07/two-large-apple-shareholders-say-it-needs-to-research-the-impact-of-smartphones-on-kids/.

150 *Id.* (footnote omitted).

151 *See* Holly B. Shakya & Nicholas Christakis, *A New, More Rigorous Study Confirms: The More You Use Facebook, the Worse You Feel*, HARV. BUS. REV. (Apr. 10, 2017), https://hbr.org/2017/04/a-new-more-rigorous-study-confirms-the-more-you-use-facebook-the-worse-you-feel.

152 N.Y. Times Co. v. Sullivan, 376 U.S. 254, 270 (1964).

But the concept that there is "no such thing as too much speech"[153] has always been subject to qualifications, and those qualifications are more significant today than ever before. The field of attention economics posits that "a wealth of information creates a poverty of attention."[154] Governments in twenty-first-century authoritarian states today rely less on traditional techniques of censorship by removal and increasingly on a strategy of flooding the zone with distractions that impair the public's ability to discern truth and build consensus.[155] It is a deeper and ultimately more sophisticated assault on the freedom of speech—one that perverts the underlying *physics* of speech without necessarily laying hands on any particular viewpoint or speaker.

Early data indicate that outrage is a uniquely potent driver of viral engagement online[156] and that "there is a serious risk that moral outrage in the digital age will deepen social divides."[157] Other studies reveal a dramatic decline in the average American's attention span since the emergence of smartphones and social media and report that the physical presence of smartphones—even when they are turned off—negatively affects cognitive capacity.[158] Studies of the 2016 election cycle have revealed that the top twenty fake news stories on Facebook generated more total engagement than the top twenty mainstream news stories.[159] Is it really so surprising that an omnipresent glow-screen optimized to study peoples' prejudices and push their buttons at all hours of the day—itself the stuff of late twentieth century science-fiction dystopias—would produce a febrile and delusive public discourse?

If state-engineered infoglut and private-platform-engineered infoglut produce similar distortions in speech's capacity to do its job, then the only real difference between the two phenomena goes to the identity and agenda

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153 Austin v. Mich. Chamber of Commerce, 494 U.S. 652, 695 (1990) (Scalia, J., dissenting) ("The premise of our system is that there is no such thing as too much speech—that the people are not foolish but intelligent, and will separate the wheat from the chaff."), *overruled by* Citizens United v. Fed. Election Comm'n, 558 U.S. 310 (2010).

154 Herbert A. Simon, *Designing Organizations for an Information-Rich World*, *in* COMPUTERS, COMMUNICATIONS, AND THE PUBLIC INTEREST 38, 40 (M. Greenberger ed., 1971).

155 TUFEKCI, *supra* note 18, at 228–29 ("To be effective, censorship in the digital era requires a reframing of the goals of censorship not as a total denial of access, which is difficult to achieve, but as a denial of attention, focus, and credibility. . . . [C]ensorship through information glut focuses on . . . weakening the agency that might be generated by information.").

156 William J. Brady et al., *Emotion Shapes the Diffusion of Moralized Content in Social Networks*, 114 PROC. NAT'L ACAD. SCI. USA 7313, 7316 (2017).

157 Crockett, *supra* note 111, at 771.

158 Adrian F. Ward et al., *Brain Drain: The Mere Presence of One's Own Smartphone Reduces Available Cognitive Capacity*, 2 J. ASS'N FOR CONSUMER RES. 140, 146 (2017), http://www.journals.uchicago.edu/doi/citedby/10.1086/691462.

159 Craig Silverman, *This Analysis Shows How Viral Fake Election News Stories Outperformed Real News on Facebook*, BUZZFEED NEWS (Nov. 16, 2016, 5:15 PM), https://www.buzzfeed.com/craigsilverman/viral-fake-election-news-outperformed-real-news-on-facebook?utm_term=.wiDwR8Ydz#.hx0V7J53D.

of the operator behind them. In one case, the ideas marketplace is scrambled by a government actor bent on undermining opposition and entrenching the status quo; in the other case, the ideas marketplace is scrambled by a private corporation looking to maximize advertising revenues. But if the effect is the same, or similar, then either case would seem to present a situation in which there is indeed such a thing as too much speech—that under a twenty-first-century set of technological conditions, the attributes "uninhibited, robust, and wide-open"[160] are no longer entirely positively correlated with each other.

From here several questions remain. First is the magnitude of the threat from information overload to free-speech values. This is of course an abstract point that does not lend itself to easy quantification. At some minimal level, the "threat" may be better understood as simple cultural change that should be adapted to rather than wished away. If the threat is severe, however,[161] then other questions arise concerning the *means* used to constrain the excess.

b. *Regulating Against Online Addiction*

Almost no precedent exists for regulating behavioral addiction. Gambling laws are the only real exception. Some states have "voluntary exclusion laws" that create a mechanism for residents to effectively blackball themselves from casinos within the jurisdiction.[162] In the case of social media products, various parental control apps already allow some degree of voluntary exclusion, though these controls are most likely too weak to frustrate the most strongly addicted users.[163] Perhaps platforms could be required to refuse access altogether to users who ask to be locked out permanently, though that option would come at too high a price for users who have come to depend on the platform for services such as voice calling, text messaging, or event organizing.

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160 N.Y. Times Co. v. Sullivan, 376 U.S. 254, 270 (1964).

161 Technology exists today to produce uncannily realistic videos of public figures reading scripts written by the user. The technology is improving quickly; it is not clear that forgeries will always be easy to detect. Suppose this capability becomes mainstream in a few years and that falsified videos of political candidates are endemic. *See* Thomas Kent, *Fake News Is About to Get So Much More Dangerous*, WASH. POST (Sept. 6, 2018, 6:24 PM), https://www.washingtonpost.com/opinions/fake-news-is-about-to-get-so-much-more-dangerous/2018/09/06/3d7e4194-a1a6-11e8-83d270203b8d7b44_story.html?utm_term=.812d0ca623f4.

162 *See* Keith C. Miller, *The Utility and Limits of Self-Exclusion Programs*, 6 U. NEV. LAS VEGAS GAMING L.J. 29, 31 (2015).

163 *See* Hayley Tsukayama, *Experts Grade Apple's and Google's New Tools to Fight Smartphone Addiction*, WASH. POST (June 7, 2018), https://www.washingtonpost.com/news/the-switch/wp/2018/06/07/experts-grade-apples-and-googles-new-tools-to-fight-smartphone-addiction/?utm_term=.3931a5a7219d.

Users with a more moderate technology habit, on the other hand, would more realistically benefit from a less-addictive design. Twitter might be required to disclose to the user how much time was spent in the last session, for instance. Phone app designers generally might be required to turn off notifications as a default setting or to provide conspicuous access to settings or software resources designed to limit overuse.[164]

Today it is hard to imagine how a review scheme would capture the various design features that make a tech product addictive—choices that range from the use of "pull-downs"[165] to reciprocal social obligations to lively color schemes. But the idea may seem strange largely because tech products are still relatively novel and unregulated. After all, the Food and Drug Administration ("FDA") today places restrictions on tobacco products and advertising that are similarly specific—prohibitions on fruity flavorings, for instance, and on product sponsorship of sporting events.[166]

5. Force Platforms into a Pay-for-Use Business Model

Finally, it is worth considering a hypothetical that is somewhat remote, but nevertheless appropriate on a long timescale: what if the major social platforms were simply prohibited from either selling ad space or dealing in user data for advertising purposes? To complete the picture, suppose that this policy also forbade social platforms to provide clients with data analytics and audience-optimization services.

First of all, social platforms would be forced to turn to users for financial support. Generally speaking, this support could come in two forms: a subscription model[167] (like Netflix, cable television, or Amazon Prime) or a per-use model based on micropayments[168] (more or less like the post office).

Various hybrid forms, combined with some level of free use, could be desirable. An unmodified subscription model—say, a $5 monthly payment

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164 The Center for Humane Technology, a nonprofit organization, is developing a set of voluntary design standards along these lines. *The Problem*, CTR. HUMANE TECH., https://humanetech.com/problem/ (last visited Sept. 16, 2018).

165 Tristan Harris, *The Slot Machine in Your Pocket*, SPIEGEL ONLINE (July 27, 2016, 5:25 PM), http://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html.

166 For advertising restrictions, see 21 C.F.R. § 1140.16 (2018). The Family Smoking Prevention and Tobacco Control Act bans the sale or distribution of tobacco products flavored with "an herb or spice, including strawberry, grape, orange, clove, cinnamon, [etc.] . . . that is a characterizing flavor of the tobacco product or tobacco smoke." 21 U.S.C. § 387g(a)(1)(A) (2012).

167 *See* Matthew Lynn, *If You Want Your Business to Get Ahead, Get a Subscription Model*, THE TELEGRAPH (Aug. 17, 2018, 6:30 PM), https://www.telegraph.co.uk/business/2018/08/17/want-business-get-ahead-get-subscription-model.

168 *See* Julia Greenberg, *Would You Pay 25 Cents to Read an Article? Blendle Certainly Thinks So*, WIRED (Mar. 23, 2016, 6:00 AM), https://www.wired.com/2016/03/pay-25-cents-read-article-blendle-certainly-thinks.

to maintain an account—would undermine the platform's utility as a network by narrowing the user base. Relatively ambivalent users would drop out. Instead, a platform would have to provide some level of free service—it might be free, for instance, to lurk on the news feed and "like" other users' posts, but actual posting or sharing might require a subscription. This is basically how LinkedIn works.[169] For users who post only occasionally, some form of low-cost "postage" through a micropayment system could provide an effective form of price discrimination.

Some forms of advertising on social media would no doubt evade whatever definition of "advertising" the regulator came up with. And some of this gray-area advertising would probably remain constitutionally protected even if the Supreme Court someday withdrew First Amendment protections for commercial speech. Merchants today, for example, pay social media "influencers" to glorify their products in online reviews and elaborate, fetishistic product "unboxing" videos.[170] That kind of business would probably continue, but it hardly matters. The advertising itself is not the crisis; the crisis consists in the social warping that sets in when the entire infrastructure of online expression is *optimized* for advertising.

Facebook, in other words, would continue to capture some indirect benefits from advertising. It would collect postage or subscription fees from influencers who wished to reach mass audiences of "friends" with product placement messages. But so long as all users were subject to a similar fee structure, this income stream would not provide Facebook with the same acute incentives to drive excessive user engagement toward any particular type of content.

"Postage" would carry an additional benefit as well: namely, that the introduction of transaction costs into the system would deter at least some amount of thoughtless or compulsive posting and sharing. Under the "hook" model, social platforms strive to make the "action" step as quick and frictionless as possible. Thoughtless action produces more data, and a more frenzied "community" provides Facebook with more "external triggers" to keep users on the app or in the site. Naturally, however, it corrodes the quality of the discourse if, as reported, "a majority (59%) of the URLs mentioned on

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169 A LinkedIn Premium account lets users see who has accessed their pages. *Who's Viewed Your Profile—Basic and Premium Features*, LINKEDIN, https://www.linkedin.com/help/linkedin/answer/4508/who-s-viewed-your-profile-basic-and-premium-features?lang=en (last visited Sept. 7, 2018).

170 Kate Talbot, *How to Nail Your 2018 Influencer Marketing Strategy*, FORBES (Dec. 22, 2017, 10:48 AM), https://www.forbes.com/sites/katetalbot/2017/12/22/how-to-nail-your-2018-influencer-marketing-strategy/#5bcb4fea24bf ("'YouTube has become a powerful tool to educate and inform potential customers for us. Influencers are a big part of our social strategy because the act of an influencer unboxing a meal kit has led our customers to follow suit. It's so fun to watch the user-generated videos and share in their excitement, as they unbox ingredients to cook healthy, delicious meals.'" (quoting Sean Timberlake, senior content marketing manager at Sun Basket, a meal kit delivery service)).

Twitter are not clicked at all"[171] or if users impulsively pick a lot of fights that they regret seconds or minutes later.

Even a tiny amount of transactional friction—a penny, for instance—could make a significant difference on this front. Behavioral economists refer to a phenomenon known as the "zero price effect" that dramatically increases demand for a good or service that is priced at *exactly* zero as opposed to slightly more than zero.[172] If the zero price effect holds in the social media setting—that is, if users are posting radically more material for free than they would if it cost them a penny[173]—then one might argue that the free "service" is instead "using" them.[174]

Moving away from an advertising-supported social model and toward one based on user subscriptions or micropayments would probably reduce the amount of overall expression online. This is not necessarily a bad thing; by removing the platforms' incentives and dampening their ability to "drive" user engagement through tracking and psychological manipulation, a paid model may well promote more user freedom.

D. *Reinforce Traditional Media Institutions*

A final set of reforms might aim to improve the currently weak position of actual content producers—journalists, in particular—in a market defined by platformed distribution.

The major news-aggregating social platforms did not create the difficulty that publishers today face in seeking compensation online. On the whole, however, publishers are in an even weaker position in today's social-platform-driven market than they were in the open web market of the early 2000s—and that is despite early optimism that the targeting services offered

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171 Maksym Gabielkov et al., *Social Clicks: What and Who Gets Read on Twitter?*, 44 ACM SIGMETRICS PERFORMANCE EVALUATION REV. 179, 182 (2016) (emphasis omitted).

172 John M. Newman, *Antitrust in Zero-Price Markets: Foundations*, 164 U. PA. L. REV. 149, 184–85 (2015) ("Recent behavioral economics research has demonstrated that when consumers are faced with a choice between a zero-priced option and a positively priced option, 'the demand for the cheaper good increases, and more importantly, the demand for the more expensive good may decrease as consumers switch from the more expensive good to the cheaper one.' This effect holds true even where a standard cost–benefit analysis, or even an alternative 'ratio-based' cost-benefit analysis, would seem to favor choosing the positively priced product." (quoting Kristina Shampanier et al., *Zero as a Special Price: The True Value of Free Products*, 26 MARKETING SCI. 742, 745 (2007))).

173 *See id.* at 186 ("Consumers' skewed preference for zero-price products can cause them to engage in behavior that appears to be wasteful or inefficient. Individuals may overconsume or even hoard resources available to them at a price of zero.").

174 *See* Randal C. Picker, *Online Advertising, Identity and Privacy* 16 (John M. Olin Program in Law & Econ., Working Paper No. 475, 2009) ("When consumers pay for content, they are the patrons served by content producers. If consumers don't pay for content, the advertisers are the patrons and it is their interests that will be served.").

by Facebook, Google, and other platforms might help publishers to recover lost advertising revenue.

The classic problem of selling informational goods is that fixed costs run high and marginal costs approach zero.[175] Efficient markets tend to bid prices down to marginal cost, heedless of the fixed costs that have already been paid.[176] Creators wind up investing heavily in goods that they then give away for free. Copyright mitigates this problem to some extent by giving the creator a monopoly over "expressive" dimensions of the work, but other aspects of the work—"ideas" and "facts" in particular—may be copied freely.[177] This disjunction falls heavily on the work of investigative reporters, who sink high costs into the work of investigation and then discover "facts" that others are free to give away.[178]

The lack of a formal intellectual property right over these facts, however, did not prevent newspapers from making outsized profits through most of the twentieth century.[179] The reason is that technological limitations—in particular the high fixed costs associated with printing and distribution—created barriers to entry that sheltered major news organizations from upstart competition.[180] The same fixed costs created steep economies of scale for pre-Internet media firms—first newspapers and later the early electronic media of radio and television broadcasting.[181]

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175 *See* YIMING LIU, SELLING BYTES: A SURVEY OF ISSUES IN DIGITAL AND VIRTUAL GOODS 2 (2011), http://people.ischool.berkeley.edu/~yliu/papers/digital_goods.pdf.

176 *See* N. GREGORY MANKIW, PRINCIPLES OF MICROECONOMICS 283 (Jack W. Calhoun et al. eds., 6th ed. 2012).

177 Amy B. Cohen, *Copyright Law and the Myth of Objectivity: The Idea-Expression Dichotomy and the Inevitability of Artistic Value Judgments*, 66 IND. L.J. 175, 195–98 (1990).

178 JAMES T. HAMILTON, DEMOCRACY'S DETECTIVES: THE ECONOMICS OF INVESTIGATIVE JOURNALISM 179 (2016) ("It has always been cheaper to repeat the news than to make it. The nature of facts as public goods, so that my consumption of a fact does not prevent you from consuming that very same fact, and so that you can consume the fact even if you have not paid for it, often tilts news outlets to reproduce the essential elements of stories generated by others. . . . In a world where facts are readily repeated and repurposed, what seems remarkable is not the low level of investigative reporting but rather that any investigative work is done at all.").

179 John Morton, *Why Are Newspaper Profits So High?*, AM. JOURNALISM REV. (Oct. 1994), http://ajrarchive.org/article.asp?id=69 ("The corporations I follow include those whose newspaper operating profit margins (the percent of each dollar of revenue remaining after operating expenses are deducted) ranged from a low of 7.1 percent at Times Mirror Co., owner of the Los Angeles Times, Baltimore's Sun, Newsday, the Hartford Courant and smaller newspapers, to a high of 34.6 percent at the Buffalo News, the sole newspaper owned by Berkshire Hathaway.").

180 Comment, *Local Monopoly in the Daily Newspaper Industry*, 61 YALE L.J. 948, 959–1001 (1952).

181 *Id.* at 974 ("The cost structure of daily press operations favors the daily with greater circulation."); *see also* Morton, *supra* note 179 ("[A] successful newspaper cannot help having higher profit margins than most other businesses because newspapers, to use economic jargon, are more 'vertically integrated' than most other businesses.").

The Internet has brought down all of the fixed costs, except for those involved with the creative process itself. The cost of printing and distributing copies is very low.[182] As for advertising, the fixed costs remain significant, but it no longer makes sense for online media operations to cover most of them in-house. Instead, online publications rely on third-party advertising platforms whose scale permits them to provide behavioral targeting services. These platforms now act as an intermediary between advertiser and publisher, providing data analytics services and a portion of the ad revenue in exchange for ad space on the website. The effect has been to reduce the minimum efficient scale for publishers, which, as one would expect, has produced a media market with more offerings at lower prices.

This is a mixed blessing at best. Operations that *curate* journalistic work, or comment on it, or at times simply invent stories from whole cloth can run at such low cost that they can survive—for now—on online ad revenues alone.[183] Few traditional news organizations involved in investigative reporting can survive on such a diet, which amounts to a thin gruel in comparison to the advertising revenues publishers brought in during the twentieth century. Behavioral targeting has improved the situation somewhat, but the major advertising platforms' dominant market position—Facebook and Google alone control over half the market[184]—has enabled them to force publishers to accept a fractional cut of the ad money received.

The result is well known. The leanest and meanest online sources have gobbled up the business for most newspapers, forcing them either to close shop or to cut reporting staff to the bone. For the most part, only the widest-circulation newspapers—regional or national publications such as the *Chicago Tribune* or the *New York Times*—thrive in today's market, and they survive largely on a far-flung base of subscribers who no longer subscribe to a local paper.[185]

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182 *See generally Website Hosting*, GODADDY, https://www.godaddy.com/hosting/web-hosting (last visited Aug. 13, 2018) (explaining that GoDaddy charges $2.49 per month for "economy" sites on up to a $14.99 per month plan for "multiple complex sites with high-res photos and video" and "heavy traffic").

183 RICARDO GANDOUR, A NEW INFORMATION ENVIRONMENT: HOW DIGITAL FRAGMENTATION IS SHAPING THE WAY WE PRODUCE AND CONSUME NEWS 36 (2016) ("[A]ll of the new entrants put together do not offset the losses of major metropolitan newspapers, like the *Washington Post* and the *Los Angeles Times*, which together have lost nearly 1,000 journalists and have severely cut back on business coverage. It is the difference between journalism on an artisanal scale and an industrial one." (quoting DEAN STARKMAN, THE WATCHDOG THAT DIDN'T BARK: THE FINANCIAL CRISIS AND THE DISAPPEARANCE OF INVESTIGATIVE REPORTING 291 (2014))).

184 *Why Washington Is Turning on Silicon Valley*, *supra* note 39.

185 *See* Zuckerman, *supra* note 145.

1. Local News Deserts

This hollowing out has led, first, to a decline in the overall volume and quality of local investigative reporting.[186] Traditional newspapers were able to cover the costs of these efforts primarily because they were able to bundle accountability reporting with content such as sports and entertainment news that was much more likely to draw readers and advertisers. The whole paper was delivered in a literal bundle, after all; advertisers who wanted space next to the funny pages had to buy into the whole project.[187]

This cross-subsidization model is in some sense highly inefficient. The newspapers used their monopsony power over the sports page, the home and gardens page, and access to the classifieds, to overcharge advertisers and use the surplus to subsidize journalism that advertisers did not care about.[188] Readers, meanwhile, may have had more interest in the produce of newspapers' investigative reports, but they would surely have paid less for a newspaper that merely passed along other newspapers' scoops without incurring editorial expenses.[189] Such an option, of course, was unavailable only because of the newspaper market's naturally monopolistic nature. But today's a la carte alternative, one in which publishers compete against each other to place individual articles and videos through Facebook's News Feed algorithm and Google's search-sorting algorithm,[190] imposes costs of its own—not just in terms of quality, but in terms of character.

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186 Benjamin Mullin, Vicki Krueger & Kelly McBride, *What Does the Great Newspaper Squeeze of 2016 Mean for Investigative Journalism?*, POYNTER INST. (Nov. 3, 2016), http://www.poynter.org/2016/what-does-the-great-newspaper-squeeze-of-2016-mean-for-investigative-journalism/437557 ("If you're at The New York Times or The Washington Post or a national broadcast network, you still have pretty decent resources devoted to investigative journalism. In markets like Columbus, Ohio and Indianapolis and Louisville and Kansas City and St. Louis, a lot of the investigative firepower has been lost just because of the staff cuts.").

187 GEORGE BROCK, OUT OF PRINT: NEWSPAPERS, JOURNALISM AND THE BUSINESS OF NEWS IN THE DIGITAL AGE 98–99 (2013) ("The business survives if the bundle of income exceeds the bundle of costs. . . . [B]undles of news have survived but individual stories, videos and links are shared as individual fragments, if the publisher allows it. The overall effect was to expose journalism to direct valuation. . . . Asking readers and viewers to pay for news journalism directly and at the cost it takes to produce did not work. And it never has.").

188 ANGELA PHILLIPS, JOURNALISM IN CONTEXT: PRACTICE AND THEORY FOR THE DIGITAL AGE 109 (2015).

189 That is the assumption, at any rate, behind the common-law "hot news" misappropriation tort. *See* Nat'l Basketball Ass'n v. Motorola, Inc., 105 F.3d 841, 853 (2d Cir. 1997) ("If [investigative journalists] were not assured of property rights in the news they pay to collect, they would cease to collect it. The ability of their competitors to appropriate their product at only nominal cost and thereby to disseminate a competing product at a lower price would destroy the incentive to collect news in the first place. The newspaper-reading public would suffer because no one would have an incentive to collect 'hot news.'").

190 FRANK PASQUALE, THE BLACK BOX SOCIETY 95 ("Users have abandoned old *sources* of content for new ways of *searching* for it. The huge user bases that result mean that both content providers and advertisers want to seize places at the top of Google's (or Facebook's or Apple's) users' front pages.").

2. Ideological Siloing

For most of the twentieth century, media consumption was highly geographically dense.[191] In other words, the geographical radius of distribution scaled with the number of consumers. Within these constraints, few newspapers had incentives to offer a highly differentiated product. With respect to ideological slant, newspapers had a strong incentive to provide "straight" news aimed at the median reader that would drive off as few subscribers as possible.[192] This "straight" news, meanwhile, could be bundled with commentary by an ideologically slanted editorial board.

It is no surprise that the journalistic norms of impartiality and neutrality took off as they did against the backdrop of these material incentives.[193] Today, those norms have frayed considerably, and their decline closely tracks the lifting of material constraints by electronic media.[194] Cable television, XM Satellite Radio, and the Internet have all allowed publishers to reach low-density nationally or internationally-flung audiences at increasingly small operational scales. That trend was well underway before today's behavioral targeting algorithms supercharged the ideological polarization of the market. And to further upset the old model, modern social-media platforms have broken up the bundle by serving up an eclectic mix of individual stories and headlines in-site and removed from their original context. As one technology commentator puts it, this a la carte model has essentially reduced publishers to ghostwriters for Facebook and Twitter.[195]

Such operations face incentives that basically invert those of an old-time local newspaper. Any attempt to replicate the old strategy of bundling genres for a general market becomes pointless. Far better to offer a single, highly differentiated product and offer it at the price point that maximizes profit. That is what Fox News, MSNBC, Breitbart News, and the Huffington Post do.[196] The smaller the circulation and the farther the reach, the more bespoke the product. The incentive to bundle and moderate has been replaced by incentives to target and intensify. The drive for profit once reinforced norms of objectivity and neutrality; today it strains them.

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191 *See* C. EDWIN BAKER, ADVERTISING AND A DEMOCRATIC PRESS 16–22 (1994).

192 *See id.* at 29–30 (tying the decline of partisan papers to increased monopolization and a need to achieve the widest possible circulation).

193 *Id.*

194 AMY GAJDA, THE FIRST AMENDMENT BUBBLE: HOW PRIVACY AND PAPARAZZI THREATEN A FREE PRESS 122–55 (2015).

195 Josh Constine, *Twitter and Facebook Are Turning Publishers into Ghost Writers*, TECHCRUNCH (Oct. 15, 2015), https://techcrunch.com/2015/10/15/smart-pipes-and-dumb-content/.

196 *See, e.g.*, Christopher Caldwell, *Twenty Years of Fox News—and "Post-Truth Politics"*, FIN. TIMES (Sept. 23, 2016), https://www.ft.com/content/0acbe884-7feb-11e6-8e50-8ec15fb462f4.

3. Support Publisher Independence

Perhaps there is a market solution to the economic plight of online publishers, but it is hard to imagine what it could be. It is also hard to imagine that better behavior by the online platforms would improve the situation all that dramatically. It would help, for instance, if Facebook exposed publishers to less risk by tinkering constantly with its News Feed algorithm.[197] It might also help if third-party advertising platforms were forced to return a higher ratio of their earnings to the publishers who ultimately placed the ads.[198] But such marginal changes would not address the basic issue: namely, that online publishers no longer have reliable readers bookmarking and returning to their sites. Instead, sixty-two percent of Americans get their news from social media, which "has placed media in a state of abject financial dependence on tech companies."[199]

Many online publications today, anticipating a further collapse in advertising revenue, have moved toward a subscription-based model.[200] For these publications, the redevelopment of a subscription base promises not only to raise revenue but also to insulate them from fickle and corrosive incentives to produce viral content.[201] A problem with this development, of course, is that the readership for paywalled publications is necessarily smaller and wealthier than it would be if it were distributed for free. It also seems likely, though not certain, that niche publications would fare better than general-interest publications—and, if this is the case, then a paywall renaissance may not do much to reestablish local newspapers or a widely read mainstream media.

If it becomes clear that the advertising model no longer supports media organizations in the age of free, aggregated content, then regulators who want to see a robust and diverse press will probably have to turn to some sort of subsidy. These subsidies could come in the form of more public broadcasting, or even selective grants. But a more creative and less content-discriminatory policy might involve a widespread and content-neutral structural subsidy.

If one makes the determination that user subscriptions are necessary to fund quality journalism, for instance, and that a broader base of Americans should have access to these high-quality outlets, then one might provide a

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197 *See* Langvardt, *supra* note 40.

198 *See* Frank Pasquale, *A "Content Loss Ratio" for Cable Companies?*, MADISONIAN (Jan. 4, 2010), http://madisonian.net/2010/01/04/a-content-loss-ratio-for-cable-companies. He later proposed applying tariff rate regulations to large internet platforms in PASQUALE, *supra* note 190, at 196–97.

199 FRANKLIN FOER, WORLD WITHOUT MIND: THE EXISTENTIAL THREAT OF BIG TECH 6–7 (2017).

200 *See, e.g.*, Tom Taulli, *Why Your Company Needs to Go All-In on the Subscription Model*, FORBES (May 29, 2018, 10:36 PM), https://www.forbes.com/sites/tomtaulli/2018/05/29/why-your-company-needs-to-go-all-in-on-the-subscription-model/#150378403ca4.

201 *Id.*

matching subsidy, on a content-neutral basis, to online publishers that (1) did not place advertisements and (2) charged a reasonable subscription fee. A policy that sought to address the local news drought specifically might provide an additional bonus to publishers that achieved high market saturation within a geographical radius.

Such policies, incidentally, would not be so different in spirit—or even in form—from the old postal subsidies that Congress has extended to newspapers in various forms since the Founding.[202] One nineteenth-century policy, for instance, promoted local journalism by extending free postage to newspapers making deliveries within their own county.[203] Another policy required publications to produce "a legitimate list of subscribers" to qualify for low-rate postage.[204]

The point here would not be to finance "excellent" journalism; in all likelihood, the subsidies just described would probably wind up underwriting a good deal of nonsense. Instead, the point would be to ensure that profit remains possible in a critical market that is no longer capable of sustaining itself.

III. HOW SHOULD FIRST AMENDMENT DOCTRINE ADJUST?

This Article now turns to the First Amendment, and some preliminary thoughts on how the doctrine might adapt to the existence of modern online platforms. These are broad outlines rather than a fully realized vision. To the greatest extent possible, this Article extrapolates only as much as is necessary from the following point: that apex platforms should not be considered mere market participants, but "nonstate regulators."

A. *The Largest Platforms Are "Nonstate Regulators"*

Platforms such as Facebook and Google enjoy state-like powers by virtue of their scale and concentration, yet they are unchecked and largely uncheckable. First, the Constitution does not control nonstate actors.[205] Second,

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202 C. Edwin Baker, *Turner Broadcasting: Content-Based Regulation of Persons and Presses*, 1994 SUP. CT. REV. 57, 105–11 (1994).

203 *Id.* at 106 ("Legislation in 1845 provided free postage for newspapers within thirty miles of where they were published. This was changed to free delivery for weekly papers in their home county in 1851, a privilege briefly withdrawn in 1873 but quickly restored for all in-county newspapers in 1874."); *id.* at 106 n.149 (noting that free in-county postage for local newspapers ended in 1962).

204 *Id.* at 108. This law was upheld under a First Amendment challenge in *Enterprise, Inc. v. United States*, 833 F.2d 1216, 1217 (6th Cir 1987).

205 Christopher Dunn, *Column: Applying the Constitution to Private Actors*, N.Y. CIV. LIBERTIES UNION (Apr. 28, 2009), https://www.nyclu.org/en/publications/column-applying-constitution-private-actors-new-york-law-journal.

it is unclear to what extent statutory checks against speech platforms could even survive First Amendment review.

Prior to online platforms, there was no clear candidate for a private entity that similarly combined state-like powers with thoroughgoing constitutional protection—save, arguably, for churches. It is a novel problem, and existing doctrine offers no answers.

That is where the "nonstate regulator" concept comes in. It would include entities that have two essential qualities. First, they are private entities outside the reach of direct constitutional restriction. But second, their power and scale are sufficiently state-like that extraordinary concerns arise when they exercise power in ways that the Constitution would not allow a state actor.

These "extraordinary concerns" would elevate the government's interest in regulating the nonstate regulator and, with it, the government's chance of surviving heightened constitutional scrutiny. The government would enjoy more latitude to enact policies addressed to the "extraordinary concerns" so long as the means-ends fit was adequate. Poorly drawn policies, however, or policies that were not addressed to the "extraordinary concerns" would remain as vulnerable to First Amendment attack as they are today. In effect, the nonstate regulator analysis would selectively downgrade the largest platforms' First Amendment shield without removing it entirely.

This system would establish an inverted parallelism between nonstate and governmental regulators. The governmental regulator's sovereignty would continue to draw on enumerated and implied constitutional powers; the nonstate regulator's legal "sovereignty" would draw from its appropriately limited constitutional rights. The governmental regulator's sovereignty would continue to be checked by judicial review; the nonstate regulator's "sovereignty" would be checked by governmental regulators. The Constitution, and the First Amendment in particular, would inform the scope of the checking function in both cases.

1. Why Not Just Call Social Platforms State Actors?

In some limited instances, the speech governance decisions of online platforms may qualify as state action. A platform may qualify as a state actor, for instance, if the state deputizes it as an enforcer of some law or regulation—though litigation in those cases would be more properly directed to the state itself as the maker of that law or regulation.[206] It is also possible that a privately owned online platform might someday become significantly

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206 *See* John Fee, *The Formal State Action Doctrine and Free Speech Analysis*, 83 N.C. L. REV. 569, 589–96 (2005) (pointing out that the Court has defaulted to this approach in Establishment Clause cases).

"entwined" somehow—bound up in a "nexus"—with some governmental process.[207] This entwinement could implicate a platform as a state actor.

In most situations, though, it probably does not make sense to think of privately owned social platforms as state actors for purposes of the First Amendment. There are at least two reasons for this.

First, social platforms rely almost entirely on self-help—sometimes algorithmic, sometimes human—to regulate speech. This self-reliance marks a sharp distinction from *Marsh v. Alabama*,[208] in which the Supreme Court reversed a criminal trespass verdict against a man who wished to distribute religious literature in a company town,[209] and *Shelley v. Kraemer*,[210] in which the Court declined to enforce a racially discriminatory housing covenant.[211] So long as recourse to law is unnecessary for social platforms to carry their designs into effect, it would be difficult to design a formal definition of state action that would include the platforms' work without including everything else that goes on in the economy.

Second, the formal, conventional definition of state action actually serves a useful purpose with respect to online platforms: it screens out a problem that courts lack the institutional capacity to solve.[212] If social platforms became state actors for First Amendment purposes, then it would, a fortiori, fall to courts to ensure that online platforms' design choices conformed with some kind of First Amendment standard. The technical nature of the questions involved would entangle courts in work that is much better suited for an agency.[213]

2. How Are Social Platforms "Regulators?"

Assuming social platforms are not state actors, however, does not make them ordinary private actors. The "big five" technology companies[214] obviously possess a lot of market power; they are monopolists, at least in a colloquial sense. But similar oligopolies have existed before in electronic media; the "big three" television networks of ABC, NBC, and CBS, in particular, possessed immense power.

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207 *See, e.g.*, Brentwood Acad. v. Tenn. Secondary Sch. Athletic Ass'n, 531 U.S. 288, 291 (2001) (finding a private athletic association regulating Tennessee public and private high schools, with significant involvement in governance by state officials, was a state actor for First Amendment purposes).

208 326 U.S. 501 (1946).

209 *Id.* at 506, 509.

210 334 U.S. 1 (1948).

211 *Id.* at 19–20.

212 Martha Minow, *Alternatives to the State Action Doctrine in the Era of Privatization, Mandatory Arbitration, and the Internet: Directing Law to Serve Human Needs*, 52 HARV. C.R.-C.L. L. REV. 145, 165 (2017).

213 *See* Langvardt, *supra* note 40, at 1368, 1376–78.

214 The "big five" are Amazon, Facebook, Google, Microsoft, and Apple.

Part of the difference is just a matter of degree. Facebook really does monopolize its own social "lane" in a way that none of the major networks monopolized television.[215] Its nearest competitor, Twitter, lags far behind in social reach and does not offer an equivalent product.[216] These two companies corner the social media market; other social products, such as Instagram, are Facebook subsidiaries.[217]

Facebook's reach is vertical as well. The product combines homepage building, news feed capability, messaging, voice calls, videochat, live videocasting, television, social behavioral advertising, and web-wide login credentialing.[218] The platform's substantial network effects allow it to expand its market share in each of these areas constantly.

Another difference with the television networks is a difference not of scale but of kind. This difference arises from the platforms' relationship with the general population. The major broadcast networks exert power over the national discourse by editing and promoting their own messages. The social platforms, by contrast, insinuate themselves into informal, personal relationships by providing a centrally managed infrastructure for casual social interaction. "Offline" channels of communication comprise a shrinking and increasingly irrelevant haven that is already far smaller than it once was.[219]

If you are not convinced that Facebook's rules are regulations, suppose that Google bought Facebook. There is no indication that this development is coming around the corner, but there is no law of nature that says it *could not* happen at some point in the next ten or twenty years. Or suppose that Google+, Google's failed social networking service, had taken off a few years ago and displaced Facebook, making Google the platform for search, social, advertising, navigation, translation, and so on.[220] The Google–Facebook conglomerate is a near miss that society has so far avoided because of ordinary business contingencies. It is hardly a science-fiction scenario, and it is not radically different from the tech market already in existence.

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215 *See* David Meyer, *What to Know About 'Freedom from Facebook,' the New Progressive Campaign to Break Up the Social Media Giant*, FORTUNE (May 21, 2018), http://fortune.com/2018/05/21/facebook-monopoly-breakup-progressive-campaign-ftc.

216 *See* Roettgers, *supra* note 19; Spangler, *supra* note 19.

217 Snapchat is a holdout, but it has only 173 million daily active users versus Instagram's 500 million, and Facebook's platform now offers similar functionality. Keith J. Kelly, *Instagram's Monthly Users Hit 800M, Pummeling Snapchat*, N.Y. POST (Sept. 25, 2017, 4:14 PM), https://nypost.com/2017/09/25/instagrams-monthly-users-hit-800m-pummeling-snapchat.

218 *See Basic Page Information*, FACEBOOK, https://www.facebook.com/help/127563087384058 (last visited Aug. 31, 2018).

219 *See* Janna Anderson & Lee Rainie, *The Negatives of Digital Life*, PEW RES. CTR. (July 3, 2018), http://www.pewinternet.org/2018/07/03/the-negatives-of-digital-life/.

220 *See* Seth Fiegerman, *Inside the Failure of Google+, A Very Expensive Attempt to Unseat Facebook*, MASHABLE (Aug. 2, 2015), https://mashable.com/2015/08/02/google-plus-history/#yLPd7OQIfsqP.

Disregarding the actual science-fiction scenarios, moreover, would be irresponsible given how quickly they are approaching. Smart phones probably represent a transitional technology on the way to a much more pervasive mobile device. Google Glass and the Microsoft HoloLens already offer Internet-connected "augmented reality" heads-up displays that lay text, video, and audio annotations over the user's experience of real space—for example, by identifying products or people that the user is looking at.[221] Facebook bought the virtual-reality company Oculus VR, makers of a popular gaming headset, a few years ago.[222]

These devices have not caught on yet, but there is no reason to think they never will. There is even less reason to think that the software and the networks that enable these devices will somehow escape the regulatory reach of the platforms that today are pushing them to market and that run search and social today.[223] In a recent event, Mark Zuckerberg placed augmented and virtual reality capabilities prominently in Facebook's ten-year "roadmap."[224] The company announced at the same event that it is "exploring a silent speech system with a team of more than 60 scientists that would let people type 100 words per minute with their brain."[225]

At risk of speculation, consider the fate of offline media after the ten-year roadmap's vision has been fulfilled. It is only reasonable to suppose that targeted advertising will be part of the vision. Users will access Facebook for free on their augmented–reality devices, and the company will continue to collect behavioral data. It will then place ads in augmented space. It may even go so far as to erase handbills and posters from real spaces and replace them with advertisements that are more relevant to the user.

The technology already exists.[226] Consumer adoption of AR viewers is the only missing ingredient. Why *wouldn't* Google or Facebook do this?

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221 *See* Steven Levy, *The Race for AR Glasses Starts Now*, WIRED (Dec. 16, 2017, 7:15 AM), https://www.wired.com/story/future-of-augmented-reality-2018/.

222 Jessica Conditt, *Facebook's Plans for Oculus Are Finally Taking Shape*, ENGADGET (Apr. 19, 2017), https://www.engadget.com/2017/04/19/facebooks-plans-for-oculus-are-finally-taking-shape/.

223 *Id.* ("Facebook Spaces is precisely what Zuckerberg laid out from the beginning. It's a way to share an experience with a friend, even if that person lives across the world, and even if your adventure is as simple as taking a photo together. Spaces lays the foundation for grander features like playing games together in VR, and its goal is clear: Blur the line between hanging out in reality and 'hanging out' on Facebook (where algorithms and advertisers can more easily find you).").

224 *Id.*

225 Jon Swartz, *Facebook Has a Plan to Let You Type with Your Brain*, USA TODAY, Apr. 19, 2017, https://www.usatoday.com/story/tech/news/2017/04/19/facebook-says-s-working-telepathy-protyo-type/100624554.

226 *See People Will Soon Be Doing Graffiti in Augmented Reality, and No One Knows How to Police It*, QUARTZ (Sept. 16, 2017), https://qz.com/1072528/the-next-trend-in-street-art-will-be-graffiti-in-augmented-reality; Jay Samit, *Augmented Reality: Marketing's Trillion-Dollar Opportunity*, ADAGE (Jul. 18, 2017), http://adage.com/article/deloitte-digital/augmented-reality-marketing-s-trillion-dollar-opportunity/309678; Andrew Webster, *Stiktu Augmented Reality App Makes Graffiti Social*, THE VERGE (Jun. 13, 2012, 10:46 AM), https://www.theverge.com/2012/6/13/3082734/stiktu-social-augmented-reality.

Granted, the difference between a private actor with regulatory power and one without it is ultimately a matter of degree. Yet it seems that there must be some point of sudden, radical escalation—a "singularity," to adapt a phrase from tech culture[227]—past which it is much more natural to say we are living *within* the platform than to say we are choosing to contract with it. Such a platform would be every bit as much a regulator of human behavior as, say, the Department of Transportation. The only question is whether today's platforms are there yet or not.

B. *Content and Viewpoint Discrimination by Platforms as Nonstate Regulators Should be Disfavored but Not Constitutionally Prohibited*

This point follows from the "nonstate regulators" discussion above in Section III.A. It has three immediate implications:

(1) Nonstate regulators should be free to regulate as they wish in the absence of contrary statutory or regulatory prohibitions.

(2) Efforts by the government to deputize nonstate regulators in content-discriminatory programs should receive extra scrutiny due to the danger of severe overbreadth in execution.

(3) Government should be entitled to advance at least an important interest in avoiding excessive social reliance on content- and viewpoint-based regulation of speech by nonstate regulators.[228]

This final point deserves some elaboration.

The traditional justification for the strong presumption against content discrimination comes from Professor Geoffrey Stone's classic article on the subject.[229] Even though content-discriminatory laws may have the effect of restricting less speech than content-neutral laws, Professor Stone argued, they nevertheless pose an enhanced risk of ideological distortion in the public sphere.[230] Content discrimination is also a reasonably good proxy for an impermissible governmental motive to suppress "bad" or "wrong" ideas—at

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227 *See generally* RAY KURZWEIL, THE SINGULARITY IS NEAR (2005) ("The Singularity" refers to a sudden, radical escalation of technological power—in most tellings, after computers become intelligent enough to develop newer, more intelligent generations of computers.).

228 *See supra* Section III.A.

229 Geoffrey R. Stone, *Content Regulation and the First Amendment*, 25 WM. & MARY L. REV. 189, 194 (1983).

230 *Id.* at 217–18.

worst, words coming out of the mouths of political dissidents.[231] Such an intent would conflict with all three of the canonical justifications for a free speech principle. First, the government's selective intervention may have the effect of substituting official judgment for "the best test of truth," which is the ability of an idea to get itself accepted in the marketplace.[232] Second, an official attempt to prune the record will interfere with democratic decisionmaking processes. Finally, restricting citizens' access to a wide range of perspectives will tend to limit autonomy and the search for personal fulfillment.[233]

No clear reason exists why these concerns about governmental content discrimination would not apply with proportional force to nonstate regulators. A massive nonstate regulator that systematically favored Democratic over Republican messages, for example, or that suppressed discussion of the investigation of Russian interference in the 2016 election, would produce distortive effects similar to a governmental program of the same nature.

A possible objection at this point is to say that the nonstate regulator would leave alternative channels of communication to users who dissented from the ideological slant. Such an objection probably reflects at least some reservations about the validity of the nonstate regulator concept itself as applied to contemporary platforms. Many of those objections, however, would likely melt away if the dominant online platforms were even larger and more inclusive, as in the Google–Facebook hypothetical discussed above.

The fact that some alternative channels of communication continue to exist, moreover, should not alter the analysis. Note that a state regulation that discriminates on content raises the same concerns about improper motive even if the scope of application is modest. And in the case of the largest platforms, the scope of application is enormous and the alternative channels are closing off as the platforms take on a wider range of capabilities.[234]

If, then, the risks of content or viewpoint discrimination by a nonstate actor are essentially the same as if the government was regulating, then it is reasonable to say that the government must have at least an important, and perhaps a compelling, regulatory interest in keeping that content or viewpoint discrimination within acceptable bounds. The critical point here is to recognize that governmental restraint no longer equates to a lightly regulated speech environment. To the contrary, an absence of governmental intervention may result in privatized regulations that are even more invasive.

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231 *Id.* at 228.

232 *Id.*

233 *Id.* at 227–28.

234 Facebook has been copying Snapchat's functionality, for instance, and is moving into augmented reality. *See* Paresh Dave, *Facebook's Been Copying Snapchat. But Here's Its Plan to Get Ahead*, L.A. TIMES (Apr. 18, 2017, 2:10 PM), https://www.latimes.com/business/technology/la-fi-tn-facebook-messenger-20170417-story.html.

This Article has detailed three broad policy approaches to the problem. The first approach would be relatively targeted: the government would simply lay down a rule (or, more likely, a monitoring program) to limit platforms' content-moderation practices directly.[235] Policies placing substantive limits on algorithmic sorting would fall into a similar class. Troublingly, each of these policies would probably involve the government itself in no small amount of content discrimination. Yet these direct limits on platforms' abilities to discriminate based on content would be about as "narrowly tailored" to the problem of excessive content moderation as possible. The question at this point becomes whether the governmental interest in promoting content and viewpoint neutrality by nonstate regulators qualifies as "compelling": in other words, whether the government may use content discrimination to fight a nonstate regulator's content discrimination. The Author's reluctant answer to this question is "yes," on the grounds that the state is, at least in theory, politically accountable. A nonstate regulator cannot make that claim.

The next two approaches to the problem are structural and their efficacy even more speculative.[236] But at best these content-neutral solutions seem substantially healthier than an approach centered on aggressive content moderation. If content moderation is the equivalent of medication, these structural solutions are intended as the equivalent of exercise and a healthy diet. Both have their place, but it is a good thing if the latter can offset reliance on the former.

One class of structural solutions would regulate the platform's business model and operational design in the hopes of creating an environment that was less prone to polarization and toxic virality.[237] A second class of solutions would work outside the platform, attempting to promote publisher-subscriber relationships as a stabilizing force.[238] At best, these structural policies might tamp down the most dysfunctional aspects of the online public sphere without resorting to blunt-force content regulation. There would still be a role for content moderation even in this best-case scenario, but perhaps a more limited one. Problems, such as the false news crisis, could hopefully be left to counterspeech without resorting to a content-moderation-based solution.

No one can say how successful these structural solutions might be. These policies are therefore vulnerable to objections regarding the means-ends fit. They may require a period of New Deal–like experimentation to determine which architectural rules work and which do not. But that is arguably a justification for deference, rather than caution.

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235 *See supra* Section II.B.

236 *See supra* Sections II.C & II.D.

237 *See supra* Section II.C.

238 *See supra* Section II.D.

C. *Reject the Hyperneutral Approach to Computers and Expression*

Courts have shown a studied blindness in recent decades to differences in "value" among different types of expression.[239] In the context of computer code and data, lower courts have taken a hyperneutral approach that vastly inflates the expressive stakes in contexts that are essentially nonexpressive.[240] To make matters worse, the Supreme Court's zeal for neutrality has led it to spot invidious content and viewpoint discrimination even in cases that pose a negligible danger of actual ideological suppression.[241] Most regulation of software or data in this hyperneutral regime, and by implication most regulation of online platforms, would at least in theory receive strict scrutiny.

Beginning in the mid-to-late nineties, lower courts considering export restrictions on cryptography software adopted a theory that programming languages, by virtue of their being languages, are also "speech" for First Amendment purposes.[242] This theory makes little sense once one acknowledges Fred Schauer's point that utterances of natural language—*actual spoken speech*—do not automatically fall under the First Amendment.[243] Courts nevertheless coalesced around the theory over the next few years, forming a body of precedent that Justice Kennedy quoted approvingly in the data-

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239 *See* Kyle Langvardt, *A Model of First Amendment Decision-Making at a Divided Court*, 84 TENN. L. REV. 833, 838–42 (2017) (discussing the principle that "speech is speech").

240 Kyle Langvardt, *The Doctrinal Toll of "Information as Speech"*, 47 LOY. U. CHI. L.J. 761, 769–75 (2016).

241 *See* Genevieve Lakier, Reed v. Town of Gilbert, Arizona*, and the Rise of the Anticlassificatory First Amendment*, 2016 SUP. CT. REV. 233, 237 (2016) ("[T]he mere fact that a law employs content distinctions is not enough to create a presumption of bad intent. . . . [The] Court's embrace of an anticlassificatory test of content-based lawmaking is likely to result in the invalidation of a good many laws that are not in fact the product of a discriminatory purpose and that do not otherwise pose a significant threat to First Amendment interests.").

242 These courts divided on the question of whether First Amendment coverage reached object code as well as source code. *See, e.g.*, Junger v. Daley, 209 F.3d 481, 485 (6th Cir. 2000) ("Because computer source code is an expressive means for the exchange of information and ideas about computer programming, we hold that it is protected by the First Amendment."); United States v. Elcom Ltd., 203 F. Supp. 2d 1111, 1126 (N.D. Cal. 2002) ("While there is some disagreement over whether object code, as opposed to source code, is deserving of First Amendment protection, the better reasoned approach is that it is protected. Object code is merely one additional translation of speech into a new, and different, language."); Universal City Studios, Inc. v. Reimerdes, 111 F. Supp. 2d 294, 326–27 (S.D.N.Y. 2000), *aff'd sub nom.* Universal City Studios, Inc. v. Corley, 273 F.3d 429 (2d Cir. 2001) ("It cannot seriously be argued that any form of computer code may be regulated without reference to First Amendment doctrine.").

243 Frederick Schauer, *The Politics and Incentives of First Amendment Coverage*, 56 WM. & MARY L. REV. 1613, 1619 (2015) ("If the coverage of the First Amendment were even close to the ordinary meaning of the word "speech," then vast segments of human life would remain shielded by the First Amendment from regulation or other legal consequences. To provide just a few examples, the laws dealing with contracts, wills, trusts, gambling, warranties, and fraud all involve legal regimes that specify consequences, including negative ones, for using certain words—speech—in certain ways, but routinely present no First Amendment issues whatsoever.").

mining case *Sorrell v. IMS Health Inc.*[244]: "'[t]he First Amendment protects even dry information, devoid of advocacy, political relevance, or artistic expression.'"[245]

An array of litigants, often represented by the info-libertarian Electronic Frontier Foundation ("EFF"), have pressed the "computer code is a language" theory aggressively in various credulity-testing contexts.[246] When the Department of Justice sought to have Apple code a backdoor into its cryptography software, Apple's early briefs on the question pushed back on First Amendment grounds: to write the code would amount to a form of compelled speech.[247] Another EFF brief resisted the regulation of Bitcoin in New York on the grounds that the cryptocurrency's distributed ledger, the blockchain, consisted of code.[248] And the theory makes it into court: at the time of this writing, there is ongoing litigation in the Fifth Circuit challenging the Department of State's power to restrict the download of 3D-printable handguns.[249] The gunmakers' attorneys argue that the downloadable blueprints are core "speech about guns."[250]

What makes these pretentious theories especially fishy is that they seem to imply that software regulation should essentially always receive strict scrutiny. Any regulation of *some* software as opposed to *all* software, after all, must discriminate at a technical level on the "content" of the code. The

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244 564 U.S. 552 (2011).

245 *Id.* at 570 (quoting IMS Health Inc. v. Sorrell, 630 F.3d 263, 271 (2d Cir. 2010)).

246 *See, e.g.*, Corey Mitchell, *States Could Allow Students to Learn Coding Instead of Foreign Languages*, EDUC. WEEK (June 3, 2016, 11:04 AM), http://blogs.edweek.org/edweek/learning-the-language/2016/06/states_consider_allowing_stude.html.

247 Matthew Panzarino, *Apple Files Motion to Vacate the Court Order to Force It to Unlock iPhone, Citing Constitutional Free Speech Rights*, TECHCRUNCH (Feb. 25, 2016), https://techcrunch.com/2016/02/25/apple-files-motion-to-dismiss-the-court-order-to-force-it-to-unlock-iphone-citing-free-speech-rights. The regulation of cryptography raises some more substantive issues about the freedom of expression as well, but these anonymity-related concerns do not lock as squarely into the more well-worn grooves of First Amendment doctrine.

248 Electronic Frontier Foundation & the Internet Archive, Comment Letter on DFS-29-00015-P: N.Y. Dep't of Financial Servs. on BitLicense Proposal, at 12–13, 16 (Oct. 21, 2014), https://www.eff.org/document/bitlicense-comments-eff-internet-archive-and-reddit ("While digital currencies are most commonly thought of as means of payment, at their very essence, digital currency protocols are code. And as courts have long recognized, code is speech protected by the First Amendment."); *see also* Rainey Reitman, *EFF, Internet Archive, and Reddit Oppose New York's BitLicense Proposal, EFF* (Oct. 21, 2014), https://www.eff.org/press/releases/eff-internet-archive-and-reddit-oppose-new-yorks-bitlicense-proposal.

249 In 2016, the court denied the plaintiffs motion for a preliminary injunction. Def. Distributed v. U.S. Dep't of State, 838 F.3d 451 (5th Cir. 2016). The court then denied the petition for rehearing en banc. Def. Distributed v. U.S. Dep't of State, 865 F.3d 211, 213 (5th Cir. 2017) (mem.). The Supreme Court then denied certiorari. 138 S. Ct. 638 (2018) (mem.). The litigation is continuing in the Western District of Texas.

250 *E.g.*, Memorandum of Points & Authorities in Support of Plaintiffs' Motion for Preliminary Injunction at 14–16, 23, *Def. Distributed v. U.S. Dep't of State,* 121 F. Supp. 3d 680 (W.D. Tex. 2015) (No. 1:15-CV-372), 2015 WL 11022446.

Digital Millennium Copyright Act, for example, bans the distribution of software designed to circumvent copy protection controls;[251] it does not address screensavers, flight simulators, or spreadsheet software. That is a content distinction that ostensibly would trigger strict scrutiny.

Courts have historically dealt with this kind of problem by pretending that the content-discriminatory statute under consideration was actually content-neutral. In *City of Renton v. Playtime Theaters, Inc.*,[252] the Supreme Court upheld a zoning ordinance directed at adult movie theaters under a time-place-manner, intermediate-scrutiny analysis.[253] This was despite the fact that the ordinance clearly made content distinctions on its face.[254] The Court, in what Justice Kennedy would later accurately describe as "something of a fiction,"[255] rationalized that "the Renton ordinance is aimed not at the *content* of the films shown at 'adult motion picture theatres,' but rather at the *secondary effects* of such theaters on the surrounding community."[256] Courts considering the constitutionality of content-discriminatory laws aimed at computer code have borrowed explicitly from *Renton*'s "secondary effects" approach as a way to avoid applying strict scrutiny in cases where doing so would be absurd.[257]

Yet in 2015's *Reed v. Town of Gilbert*,[258] the Court seems to have closed this pressure valve by holding that strict scrutiny always applies in cases of facial content discrimination; whether the government is motivated by disagreement with the message is no longer supposed to matter.[259] The purity test for a sufficiently neutral law—neutral enough, that is, to receive only intermediate rather than strict scrutiny—has never been more stringent.

Take these two overpowered doctrines and put them together—first, the doctrine that code is speech, and second, *Reed*'s doctrine that technical content discrimination always triggers strict scrutiny—and online platforms have what they need to make a very aggressive opening bluff.

But there is no need for tech platforms to rely exclusively on "the rule that information is speech."[260] Even if courts move away from that doctrine, tech platforms can fall back on a set of First Amendment arguments that are less aggressive but more grounded in the larger world of First Amendment

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251 17 U.S.C. § 1201(a)(2) (2012).

252 475 U.S. 41 (1986).

253 *Id.* at 54.

254 *Id.* at 47.

255 City of Los Angeles v. Alameda Books, Inc., 535 U.S. 425, 448 (2002) (Kennedy, J., concurring).

256 *Renton*, 475 U.S. at 47.

257 Def. Distributed v. U.S. Dep't of State, 121 F. Supp. 3d 680, 693 (W.D. Tex. 2015), *aff'd sub nom.* Def. Distributed v. U.S. Dep't of State, 838 F.3d 451 (5th Cir. 2016); Universal City Studios, Inc. v. Reimerdes, 111 F. Supp. 2d 294, 329 (S.D.N.Y. 2000), *aff'd sub nom.* Universal City Studios, Inc. v. Corley, 273 F.3d 429 (2d Cir. 2001).

258 135 S. Ct. 2218 (2015).

259 *Id.* at 2228.

260 Sorrell v. IMS Health Inc., 564 U.S. 552, 571 (2011).

litigation. In particular, they can be expected to defend their content moderation policies and their sorting algorithms as untouchable editorial choices similar to those of a newspaper.[261] This "editorial" theory has so far met with success in litigation concerning search engine results.[262]

An overriding focus on doctrinal neutrality has made sense for several decades now. It is a prophylactic principle. A body of First Amendment doctrine that relies heavily on a two-tier or multi-tier approach may enable an ad hoc approach in which judges design doctrine to satisfy ideological or cultural prejudices. A long-run decision not to inquire into the *weight* of the speaker's speech interest, and instead only to ask whether the speaker is speaking, provides insurance against illiberal decisionmaking in an area of law where it is often necessary to protect the voices of marginal or even contemptible people. And a decision to define speech as broadly as possible, even so far as to include utterances that lack any clearly discernable message, guards against the possibility that judges might mistake the horizons of their own imagination for the outer boundary of human culture. The price of this approach is to overprotect speech, which has for a long time proved to be a good bargain.

But the bargain is breaking down as the buffer of overprotection expands. This is especially true in the case of the code-as-speech argument. When that argument was devised two decades ago, it was against the backdrop of a very different understanding of the nature of the Internet and its role in society. First, technological limitations biased Internet use in the 1990s heavily toward low-power applications, and text in particular. The primitive state of the art, if nothing else, made it easy to see the Internet as a quintessentially expressive technology, a successor to the printing press. But as bandwidth, processing power, memory, and peripheral devices improve, it is becoming clearer that the Internet is not merely a technology for expression, but it is also a general-purpose social and economic infrastructure.

Second, most public discussion about the Internet, until relatively recently, has assumed the Internet is an unregulable space that creates expressive freedom by design.[263] The system's potential as a matrix of control has only slowly become apparent to all but the closest observers. Once it is understood that the Internet can be used just as effectively for censorship as it can for expression, it makes less sense to indulge a hyper-neutral formalism

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261 *See* Miami Herald Pub. Co. v. Tornillo, 418 U.S. 241, 244, 258 (1974) (striking down Florida statute granting a "right of reply" to political candidates personally attacked in newspaper editorial pages).

262 *See* e-ventures Worldwide, LLC v. Google, Inc., No. 214-cv-646-FtM-PAM-CM, 2017 WL 2210029, at *3–4 (M.D. Fla. Feb. 8, 2017); Zhang v. Baidu.com Inc., 10 F. Supp. 3d 433, 438 (S.D.N.Y. 2014); Langdon v. Google, Inc., 474 F. Supp. 2d 622, 629–30 (D. Del. 2007).

263 In 2000, for example, President Clinton made fun of Chinese efforts to suppress online speech. "Good luck," he said; "that's sort of like trying to nail Jello to the wall." Bethany Allen-Ebrahimian, *The Man Who Nailed Jello to the Wall*, FOREIGN POL'Y (Jun. 19, 2016, 6:08 PM), http://foreignpolicy.com/2016/06/29/the-man-who-nailed-jello-to-the-wall-lu-wei-china-internet-czar-learns-how-to-tame-the-web/.

that pretends computer code is expressive like a book and search engine results are expressive like the *Washington Post*.[264] The *arguably* expressive nature of platform management should not give tech monopolies an unchallengeable license to regulate speech that is *plainly* expressive.

Somehow, courts must begin to discriminate between highly expressive uses of technology and barely expressive or nonexpressive uses of technology. One approach, as Professor Ashutosh Bhagwat has urged, would gauge expressiveness relative to some overarching theory of free speech. Professor Bhagwat argues that speech is "at heart a right to engage in joint political or democratic activity"[265] and that the degree of First Amendment coverage should reflect this vision. Courts could take a similar approach with respect to other canonical theories too, whether the "search for truth" theory, the "self-fulfillment" theory, or more recent theories such as Professor Seana Shiffrin's "thinker-based" First Amendment.[266]

Or courts might avoid such a commitment to theory altogether, and instead commit to a rough but workable line-drawing approach. Professor Tim Wu, for example, has argued for a First Amendment "functionality doctrine" in which protection is withheld from purely functional implementations of computer code.[267]

D. *The First Amendment Does Not Require Value-Neutrality in Structural Regulation of Online Media.*

Save for scattered references to the marketplace of ideas, courts have mostly avoided deep engagement with any particular philosophical justificatory theory of free speech. There is no official account of why speech is valuable or how it is supposed to work. At some level the relative absence of theory from the Supreme Court's First Amendment decisionmaking probably reflects a simple judicial minimalism. But the Court's lack of commitment to a clear set of First Amendment values, over time, has come to reflect a value of its own: namely, a strong commitment to neutrality where speech is concerned. Committing to a theory of the First Amendment, after all, means that some speech will make it into the circle of justification and other speech will be excluded. Today, the First Amendment's coverage is so eclectic that none of the canonical theories—truth, democracy, individual autonomy—can account for all of it.

Congress should nevertheless have the latitude to identify and pursue its own set of free-speech values when it regulates the structure of online media.

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264 *See Zhang*, 10 F. Supp. 3d at 438.

265 Ashutosh Bhagwat, *When Speech Is Not "Speech"*, 78 OHIO ST. L.J. 839, 874 (2017).

266 Seana Valentine Shiffrin, *A Thinker-Based Approach to Freedom of Speech*, 27 CONST. COMMENT. 283, 285 & n.4 (2011).

267 Tim Wu, *Machine Speech*, 161 U. PA. L. REV. 1495, 1518 (2013).

Courts evaluating structural regulation of broadcast and cable have historically recognized an interest in promoting a wide diversity of content and voices.[268] That is a value choice. The greater manipulability of online communications platforms opens new value choices. Congress might favor architectures that promote deliberation, or that promote speed; that promote local-scale conversations, or that promote national-scale conversations; that promote confrontation, or that promote group privacy; that promote human agency, or that promote informational virality.

These kinds of choices will inevitably have second-order effects on content, much as structural regulations of cable service providers that mandate carriage of local and public broadcasters have second-order effects on content. Here as there, though, the second-order effects on content do not justify the application of strict scrutiny.[269] So long as the government is not intervening specifically to suppress particular topics or viewpoints, a more deferential standard should apply.

Someone—today it is private actors—is always making wide-scale decisions about Internet architecture, and the most consequential of these decisions will invariably incline online culture toward one set of communications values or another. Facebook's "like" button, as Zeynep Tufekci has observed, is a structural feature motivated by values, with second-order effects on content.[270] The presence of a "like" button is good for advertisers and for friendliness; the absence of a "dislike" button is bad for activists and for bullies.[271] Small as it is, this is a cultural question that belongs to political processes rather than to judicial or managerial ones.

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268 Marvin Ammori, *Another Worthy Tradition: How the Free Speech Curriculum Ignores Electronic Media and Distorts Free Speech Doctrine*, 70 MO. L. REV. 59, 65 (2005) ("[The case law on electronic media] focuses on speech as it occurs in modern society—largely through electronic media—and on individuals' actual power to communicate. Its primary aim is speech diversity, not government distrust." (footnote omitted)).

269 In *Turner Broadcasting System, Inc. v. FCC*, Justice O'Connor's dissent acknowledged the plain fact that requiring cable operators to carry public and local broadcasting would affect content and that this effect was by design. 512 U.S. 622, 674–75 (1994) (O'Connor, J., dissenting). Justice Kennedy's majority opinion avoided strict scrutiny by arguing that Congress' objective was content neutral. *See id.* at 655 (majority opinion). On the question of formal content neutrality, Justice O'Connor probably had the better of the argument, and it is not clear at all that Justice Kennedy's analysis would survive contact with the unbending *Reed v. Gilbert* approach that emerged decades later. Yet Justice Kennedy reached the right result, if for the wrong reason. As Professor C. Edwin Baker argued in his analysis of the case, the better rationale for intermediate scrutiny has to do with the structural nature of the regulation. C. Edwin Baker, *supra* note 202, at 88 ("Suppression of media entities' content is objectionable—as is structural regulation aimed at undermining their constitutional role[s]. However, structural regulation of the media is not only inevitable but it should be praised when wisely designed to enhance the quantity or quality of their participation. That is, content-motivated structural regulation of the media is generally permissible and will often be affirmatively desirable.").

270 TUFEKCI, *supra* note 18, at 128.

271 *Id.*

If Congress has a legitimate interest in protecting expression online, and if regulating architecture is the preferable way to do so, then it is hard to see how or why the political system should do so blindly, without any vision of what kind of future we want.

CONCLUSION

The Internet has brought epochal change to the public sphere, and with it a new class of crises. Most of the hypothetical reforms discussed in this Article are, needless to say, extremely unrealistic in the current political environment.[272] But that has more to do with immediate political dysfunction than anything else. Over the long run, it is hard to believe that political institutions in a well-functioning democracy would ignore problems such as the implosion of the publishing industry and its sudden and near-total replacement with a communications infrastructure that is primed for polarization, conspiracism, and sabotage. At a minimum, one would think that a well-functioning democracy might consider some form of product regulation to protect children from addictive products that are said to endanger their mental health[273] and that obviously interfere with their education.[274]

One would also hope that a liberal society with a less fatalistic attitude about politics would eventually turn away from our increasing privatization of censorship.[275] Today's nonstate regulators enjoy fiat censorship powers that would be anathema to the First Amendment if they were exercised by the government. It is troubling that the public increasingly demands more rather than less of this kind of intervention in the presence of new and serious speech threats. The danger of value drift—a slippage from the platforms' pseudo–First Amendment moorings toward a more primitive, self-interested, or ideocratic standard—is far too grave and too probable to be ignored.

It may take a major shift in the American political agenda—perhaps something on the order of a new "constitutional moment" following a major technology-driven crisis[276]—to provoke the kinds of changes discussed in

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272 The most realistic set of reforms, by far, are those that would compel platforms to moderate more online speech.

273 Jean M. Twenge, *Have Smartphones Destroyed a Generation?*, THE ATLANTIC (Sept. 2017), https://www.theatlantic.com/magazine/archive/2017/09/has-the-smartphone-destroyed-a-generation/534198/.

274 France has apparently adopted a law banning smartphones from public school classrooms. Henry Samuel, *France to Impose Total Ban on Mobile Phones in Schools*, THE TELEGRAPH (Dec. 11, 2017, 4:01 PM), http://www.telegraph.co.uk/news/2017/12/11/france-impose-total-ban-mobile-phones-schools.

275 For a related argument, see Bambauer, *supra* note 57, arguing that governmental decisions to censor material should take hold through politically accountable processes rather than collateral censorship and other "soft" techniques.

276 The coming automation of the trucking industry may be a leading indicator on this front. *See* Finn Murphy, *Truck Drivers Like Me Will Soon Be Replaced by Automation. You're Next*, THE GUARDIAN

this Article. In particular, it would require a changed political rhetoric that characterizes unchecked platform power as a serious threat to human freedom—one just as significant as the unchecked power of an overweening state.

There will also need to be a willingness on the part of public regulators to experiment with new forms of regulation—regulation that at times may seem less like archetypal "government work" and more like the work of a tech company.[277] It is an odd thought today; U.S. Representative Adam Schiff recently remarked in an interview on the Russian ads fiasco that "Congress is not going to legislate an algorithm."[278] But there is not really any reason why Congress or an agency *could not* regulate an algorithm if it developed the skill set, and it is hard to imagine that the government will simply abstain forever from regulating online platforms as tech companies acquire more and more power.

Finally, the Supreme Court will need to adapt its jurisprudence to the emergent consensus about the power of online platforms. That would mean abandoning formal ways of thinking about platforms primarily as editors of an expressive program that users may buy or reject within a free-market framework. In the place of those ideas, the Court would have to adopt a more pragmatic stance—one that recognized the dominant platforms in effect as centralized nonstate regulators of whole categories of social and economic activity. Those entities may not violate the First Amendment when they mismanage speech, but they pose an urgent, unprecedented threat to the values the First Amendment is supposed to protect. If Congress should intervene to protect the marketplace of ideas in its second century, the Court must make sure that the First Amendment—of all things—does not stand in the way.

(Nov. 17, 2017, 3:00 AM), https://www.theguardian.com/commentisfree/2017/nov/17/truck-drivers-automation-tesla-elon-musk.

277 BuzzFeed News reports that "[U.S. Representative Adam] Schiff, a top leader of the US government's investigation into Russia's chaos campaign, dismissed any notion that legislators would pass laws that might restrain the massive computational engines that power Facebook's feed, Twitter's timeline, and Google's search. Said Schiff, 'Some of this may be beyond our regulatory reach. . . . We only have a dim understanding of how the technologies work.'" Alex Kantrowitz, *Congress Can Crack Down on Tech Companies, But It Can't Do Much to Their Algorithms*, BUZZFEED NEWS (Nov. 6, 2017, 5:57 PM), https://www.buzzfeed.com/alexkantrowitz/congress-can-crack-down-on-tech-companies-but-it-cant-do?utm_term=.ap2Npq2Po#.qf2KYmZko.

278 *Id.*