CHAPTER

6

STRENGTHENING DEMOCRACY THROUGH TECHNOLOGY

The Commission Finds:

▶ The rise of the internet, and especially its social media platforms, has connected diverse populations worldwide, expanded opportunities for free expression and enabled new forms of civic engagement. At the same time, the impact of social media platforms and major technology companies on our news and information ecosystems demands a re-examination of the roles of technology providers in a democracy.

▶ While not the only cause, the rise of the internet has deeply disrupted the way Americans find, consume and talk about news.

▶ The spread of misinformation and disinformation on the internet, foreign interference in U.S. elections and the abuse of social media platforms and their powerful targeted advertising tools by bad actors have fostered uncertainty about the reliability of online information. To rebuild user trust, major technology companies need to more actively and transparently combat problems such as disinformation, hate speech and other divisive content.

▶ Users' fear of losing control over personal information, and particularly of having it disseminated to unknown third parties, can lead to reduced trust in the disseminating entity. When that entity, whether an online social platform, digital portal or media outlet, has been a relied-upon source of information, it leads to reduced trust in media generally.

▶ In seeking solutions to the unique challenges of the internet ecosystem and the loss of trust in America's institutions, the following values are crucial: a platform-agnostic (even a technology-agnostic) approach; recognition of the continuing evolution of technology; retention of the best principles of openness, inclusion and free expression; and ensuring that the design and management of social media platforms align with democratic values.

▶ In several areas of concern, tensions between potentially conflicting values (e.g., between the interests of individual users and the interests of the community, between freedom and responsibility) need to be thoughtfully addressed.

The Commission Recommends:

Recommendation 5   **RESPONSIBILITY**

▶ Technology companies and online services that collect user data should become information fiduciaries, with duties to the user.

Recommendation 6   **TRANSPARENCY**

▶ Technology companies and online services should embrace transparency by providing more information about the impact of their advertising tools, the source and sponsorship of content online and the role that algorithms play in the flow of news and information.

    A. Support the development of tools to trace the origin of news stories and other online information.

    B. Disclose funding sources for online ads.

    C. Provide end users with information about how algorithms work and access to customized algorithms and news feeds.

Recommendation 7   **INNOVATION**

▶ Invest in new structures and technology-based solutions to address emerging problems.

    A. Develop metrics for the health of online dialogue.

    B. Develop techniques to discourage sharing of disinformation and/or anti-social content.

    C. Provide for data portability among social networks.

    D. Create a multi-stakeholder forum to develop and promote pro-social policies for tech providers.

The Crisis of Trust and Technology

Since its first commercial use nearly three decades ago, the internet has become a fundamental part of American society. Banking, education, work, travel, entertainment and personal relationships have all been touched or even transformed by the internet and internet-enabled technologies.

The internet has brought many benefits. It vastly expanded people's access to information, spurred the development of an array of innovative new services, connected diverse populations worldwide, empowered citizens to report on and debate events in close to real time, and enabled new forms of civic engagement.

However, the problems featured in headlines of 2017 and 2018—disinformation and hate speech, harassment and trolling, data breaches, foreign propaganda and Russian manipulation—have raised serious concerns about the larger implications of the online ecosystem on our democracy. A key focus of concern is the role of internet platforms (as explained in Chapter 3), particularly social media platforms, but the Commission's concerns extend to the entire media ecosystem.

In particular, we focus on major technology companies and social media platforms that are used for the discovery, dissemination and amplification of news and civic information. Whether primarily intended as a news source or inadvertently turned into one, they have become important conduits between producers of news and online users.

There is no question that the internet and platforms that operate on it have deeply disrupted existing media.

For most of American history, news media—first in print, later in radio and television—had a direct, one-way connection to their audiences. Today, however, a large and growing portion of the population, especially youth, gets its news online. In 2017, 43 percent of Americans reported that "they often got news online," just below the percentage who often get news from television (50 percent) and far surpassing those who often get news from radio (25 percent) or from print newspapers (18 percent).[213]

In contrast to its print or broadcast predecessors, online news is available instantaneously to all users in greater volume, from more sources. It presents new opportunities to engage with the content through sharing and commenting. The internet has, in effect, put a printing press—and more—in the hands of every user, thereby vastly expanding free speech. And on social media platforms, news is often part of a "feed" that mingles traditional reporting with commentary from users. This complicates the question of "what is news" by blurring the line between producers and consumers of news. Users of media are now "prosumers," as the futurist Alvin Toffler predicted 40 years ago.[214]

The Commission's primary concern in this chapter is with how online platforms and services may be eroding trust in media and democracy. Of particular concern is the spread of disinformation and the loss of trust emanating from misuse of information. Additional concerns include confusion over distinctions among different sources of news or between fact-based reporting and the expression of opinions about news events. And we are concerned about the role of filter bubbles and echo chambers that can exacerbate political polarization.

Social Media and Democracy

While recommending steps to address these problems, the Commission also understands that social media platforms and other internet-based capabilities, whatever their faults, can continue to make an important contribution to society. Ethan Zuckerman of MIT, an adviser to the Commission, describes seven things social media can do to strengthen democracy:[215]

Social media can

- **Inform us**
- **Amplify important voices and issues**
- **Be a tool for connection and solidarity**
- **Be a space for mobilization**
- **Be a space for deliberation and debate**
- **Be a tool for showing us a diversity of views and perspectives**
- **Be a model for democratically governed spaces**

Realizing these goals will require a reimagining of how online intermediaries may better align with core democratic values. The Commission encourages all participants in the media ecosystem, and particularly providers and distributors of news, to identify which pro-democratic values they are pursuing[216] and to develop metrics that allow them (and the public) to track their success in living up to those values.

Freedom vs. responsibility. Pro-democratic values necessarily include free and open expression, a basic tenet of the First Amendment. Every generation faces the problem of applying the underlying principles of the First Amendment to new technologies. And while these freedoms protect speakers, they do not absolve them from moral, if not legal, responsibilities. Thus, the Hutchins Commission in 1949 urged press leaders to act responsibly before governments felt the need to regulate them. This theme of freedom versus responsibility— doing the right thing—plays an important role in our consideration of the ways to increase trust in the entire media ecosystem.

The Commission recognizes that the ways in which online media operate, and the nature of their impact on society, are directly related to the incentives that drive their behavior. Social media platforms, for example, have financial incentives that tie advertising revenues to the amount of time that users spend with a site's content, i.e., time that eyeballs are potentially attuned to advertisers. This leads to designing online sites in ways that encourage users to share content with others, including provocative misinformation. As Facebook CEO Mark Zuckerberg has put it:

> One of the biggest issues social networks face is that, when left unchecked, people will engage disproportionately with more sensationalist and provocative content. This is not a new phenomenon. It is widespread on cable news today and has been a staple of tabloids for more than a century. At scale it can undermine the quality of public discourse and lead to polarization. In our case, it can also degrade the quality of our services.[217]

As noted earlier, in the current media environment, content that is provocative and divisive— even inaccurate—often spreads fastest and farthest. Given this backdrop, the Commission seeks strategies that would instead reward the dissemination of accurate, pro-social content and thwart propaganda.

Section 230 of the Communications Decency Act. In the United States, Section 230 of the Communications Decency Act (CDA) has played an important role in allowing internet-based services that host the posting and sharing of user-generated content the freedom to grow. This legal provision, enacted in 1996, allows "interactive computer services" to determine which content provided by others to include or exclude from their services without incurring liability for exercising editorial discretion.[218]

Given the enormous growth of the internet over the past 20 years, and the emergence of large entities within it, this is no longer an infant industry, nor does it need legislative impetus for growth. And there is a much greater awareness today of the potential to use the internet to spread disinformation.

Congress has passed legislation that removes full Section 230 protections for content that supports sex trafficking,[219] and has never offered protection against claims for the unauthorized use of copyrighted material.[220] In addition, there have been proposals in Europe for new limits on online content. For example, the European Commission is considering a requirement that sites take down terrorist content within one hour of being notified by authorities, while France has passed new restrictions on hoaxes and fake news online.[221]

There will undoubtedly be further debate in the U.S. about the proper application of Section 230. U.S. Senator Mark Warner, a Virginia Democrat, has issued a white paper identifying many potential ways to regulate online services, including amending Section 230 to remove its protections with respect to illegal or tortious expression.[222] The Commission has heard arguments for imposing more liability on online services to prevent defamatory utterances, disinformation or otherwise-actionable material that threatens individuals or the democracy itself. And it understands that there can be difficulties in enforcing the few rules that users do have at their disposal.[223]

But the Commission also recognizes that without this protection, social media platforms and other internet-based services would likely have incentives to block lawful speech too aggressively because it might incur liability. And they have already seen allegations of political bias in performing their editorial roles.

Internet platforms and social media sites are at once the curators, moderators and transmitters of information. Because of this complex role, solutions to future threats to American democracy will not come easily.

During the period of the Commission's deliberation, we have seen the major online services acting more forcefully against harmful speech via enforcement of their terms and conditions. In several instances, however, these actions have led to protests that they were insufficient, biased, overly broad or unjustified.

The Commission does not take a position on amending Section 230, as more time and reflection are needed. Given the tension of values that it involves, any consideration of changing this provision should be done deliberately, focusing directly, specifically and narrowly on the speech involved and the potential consequences either way.[224]

The values of free expression, of an open internet free to evolve, of responsibility to users and to the democracy, and of inclusion, must remain guiding principles as governments and private companies adapt to and address the internet of today.

Our Challenge

As the Commission developed its recommendations, some of the most challenging questions it considered include:

- What function or purpose do, or should, social media platforms have in our lives?

- Who decides who, or what information, is trustworthy?

- Who is to blame for the lack of trust?

- Do social media or other institutions have a responsibility to work against political or social polarization? How?

- How can platforms inspire users/citizens/consumers to place trust in the news and information they receive, and encourage them to engage in meaningful civic discourse?

Values to consider. To address the unique challenges posed by the internet ecosystem and the erosion of trust in our nation's institutions (including the Fourth Estate), the Commission adopted several values that informed its considerations:

A platform-agnostic (even a technology-agnostic) approach. While certain platforms may have been in the spotlight during 2017 and 2018—namely Facebook, Twitter, Google and YouTube— recommendations for the future of the internet must address the whole scope of services and sites that users engage with online. Recommendations must take into consideration their implications for services of different sizes, with different resources, and serving different communities.

A recognition of the continuing evolution of technology. The internet of today is not the internet of the past, nor will it be the internet of 5, 10 or 20 years from now. Just as it has changed dramatically since its inception, the internet will continue to evolve in unforeseen ways over the coming years.

A commitment to retain the principles of openness, inclusion and free expression. Given the unpredictable future of the internet, users need a set of core values that can guide efforts to shape constructive online experiences. For example, those attempting to combat mis-, dis- and malinformation[225] cannot lose sight of the values that make a free and open internet possible, namely a commitment to freedom of expression, in the U.S. and abroad.

Responsibility to the broader society. Continuing the theme of responsibility throughout this report, each stakeholder should realize its responsibility to the broader society and to individuals.

Recommendation 5   RESPONSIBILITY

Technology companies and online services that collect user data should become information fiduciaries, with duties to the user.

As users spend more and more time online, platforms and publishers are able to accumulate large amounts of information about users' interests and behaviors. This information helps them tailor messages to users and is sometimes shared with advertisers and others for that purpose.

This new paradigm offers benefits for both users and platforms: users get access to a global audience and free, high-quality online services, while platforms generate revenue by monetizing user data through advertising and other means. For consumers, however, the willingness to allow such personal-data gathering requires a belief that such entities will protect them against harm and improper use of the data.

As social networks and other online service providers aggregate extensive data on their users, points of tension, discomfort and even abuse have become evident. This is particularly concerning in a world in which users' experiences are mediated by a handful of powerful entities.

One flashpoint involves the failure to fully protect data generated by users as they interact with online services. A stream of high-profile security breaches, allegations of discrimination and revelations of questionable business practices has put data from hundreds of millions of users at risk and challenged users' trust in the platforms that define their experiences online.

The trouble does not end with the use of personal information. The tremendous power of technology companies and online services opens the door to other potential overreaches or under-performances, such as the failure to neutralize political disinformation campaigns during the 2016 U.S. presidential election cycle. What if, in the future, intermediaries were to use their control over content feeds and their data-based insights into user preferences to steer electoral or civic outcomes to their own liking?

Other than sector-specific privacy protections, legal responsibility in the United States to protect user data has been light. For the most part, protections for user-provided data are based on contractual agreements usually found in a company's terms of service.[226]

By contrast, individuals give their banks, lawyers and physicians access to sensitive personal information every day, but those relationships are subject to extensive legal protections and regulations. Trust in those professionals, in other words, is robustly supported by deeply institutionalized codes and legal protections that impose and enforce meaningful standards. Although users continually expose sensitive data to online intermediaries, those entities do not have similar codes of protection for users.

Some new models for addressing the protection of data are emerging. One is a proposal for a new system of data ownership called Solid, proposed by World Wide Web founder Tim Berners-Lee.[227] Others are attempting to develop a blockchain-based approach for protecting identity on the web.[228] The Commission encourages the thinking and experimentation behind these and other new technology approaches. Here we address in more detail a new legal approach that could complement privacy legislation.

Information fiduciaries. Yale law professor Jack M. Balkin and Harvard law professor Jonathan Zittrain, a member of the Commission, propose a new model for the relationship between users and online services that collect information about those users. It is founded on an institutionalized form of accountability analogous to that found between doctor and patient, lawyer and client, or banker and account holder.[229] They argue "that many online service providers and cloud companies who collect, analyze, use, sell, and distribute personal information should be seen as information fiduciaries toward their customers and end users."[230]

A fiduciary is a person or business with an obligation to act in a trustworthy manner in the interest of another. Fiduciaries have standards of responsibility to use what they know for the user's benefit and not their own, especially when the two may be in conflict. Banks, lawyers and physicians are all fiduciaries, as are many corporate officers and real-estate agents, among others. The specific mechanics of an information fiduciary, however, would be substantially different from those of more traditional fiduciaries.

"Facebook is not your doctor or lawyer," writes Balkin. "YouTube is not your accountant or estate manager. We should be careful to tailor the fiduciary obligations to the nature of the business and to the reasonable expectations of consumers. That means that social media companies' fiduciary duties will be more limited."[231] Even so, the Commission sees this as a promising area for instilling trust, not only in online media but in all collectors of personal data.

Scope and structure of the fiduciary duty. Balkin and Zittrain's framework defines three central duties:

> *The duty of care.* The information fiduciary is obligated to collect and store user data in accordance with security best practices. At a minimum, if a user's data is breached, misused or otherwise compromised, the fiduciary must inform the user as quickly and completely as possible. Beyond that, the duty will need further refinement since concerns over personal information are more cultural and nuanced than for other areas where the idea of a fiduciary has been employed, and scale and diversity of users makes it difficult to determine the best interest of each user.

> *The duty of loyalty.* The information fiduciary may not collect, manage or retain a user's data in a way that will compromise the interests of the user for the fiduciary's own benefit. This could include financial, physical and privacy-based forms of harm, among others.[232]

> *The duty of confidentiality.* The information fiduciary may only sell, exchange or otherwise transfer user data to any other person or entity in accordance with the Duties of Care and Loyalty. Any entity to which the information fiduciary does disclose user data must be contractually bound to these same duties.

There would undoubtedly be times where an information fiduciary's conduct falls into gray areas with respect to these duties. But this already happens frequently in law, medicine and accounting. Just as evolving bodies of case law or advisory opinions lend additional clarity to fiduciary duties in those fields, so too would courts, professional associations or government agencies help to define the duties in applying fiduciary principles to collectors of information.

The information-fiduciaries proposal has the potential to protect users' control and ownership over their personally identifying information in a manner well suited to the American context. The European Union's 2018 General Data Protection Regulation statutorily provides many of these same protections. But the United States has thus far approached the legal framework around privacy rights with greater caution.

The U.S. Congress is likely to consider comprehensive privacy legislation that may address broader issues of user control. The concept of fiduciary duty, already solidly established within American jurisprudence, could provide a complementary model.[233]

Adopting and enforcing the information fiduciaries framework. The concept of information fiduciaries could be implemented in different forms—legislative, contractual or otherwise. Ideally, all data-collecting entities dealing with sensitive user data—platforms, providers and media companies—would voluntarily adopt the duties of information fiduciary. Imposing regulation from above would require more political capital than might be available and could lead to drawn-out legal battles. Voluntary adoption encouraged by regulation could result in a flexible regulatory structure focused on engaging data collectors as partners rather than as adversaries.

Zittrain and Balkin suggest that the approach of the Digital Millennium Copyright Act (DMCA), if adapted to information fiduciaries, could accomplish this purpose.[234] The DMCA offered companies the opportunity to accept (opt into) a set of intellectual-property rules defined by the government in return for exemptions and protections against highly variable state-level rules. In other words, the proposal to establish information fiduciaries could provide online companies with a clearer, more predictable and legally safer alternative to a patchy and constantly changing regulatory environment in which professional norms have not taken root.

Enforcement of an information-fiduciaries framework could be carried out under existing regulatory structures. One option might consider breaches of the fiduciary's duties to be unfair or deceptive practices under the Federal Trade Commission Act, allowing FTC enforcement. Alternatively, fiduciary agreements between users and data collectors could enable users whose contractual rights are breached to recover damages from the offending party through standard legal tools, including class-action lawsuits.

EVERY GENERATION FACES THE PROBLEM OF APPLYING THE UNDERLYING **PRINCIPLES OF THE FIRST AMENDMENT TO NEW TECHNOLOGIES.**

Recommendation 6   **TRANSPARENCY**

Technology companies and online services should embrace transparency by providing more information about the impact of their advertising tools, the source and sponsorship of content online and the role that algorithms play in the flow of news and information.

As the online ecosystem grows in importance and complexity, users express increased anxiety in trying to understand the origin of information and who is paying for its dissemination. The following three recommendations aim to build user trust by increasing the transparency of online services whenever they provide news and advertising. Just as the Commission recommends radical transparency for the news ecosystem in Chapter 5, it recommends this principle as well for online media.

A. Support the development of tools to trace news story origins.

One of the distinctive characteristics of the internet and social media is how quickly and easily information is shared or amplified. This is particularly true for appealing or provocative content. However, as stories spread, the original source of the information, along with its context—nuances or even key facts—may become obscured. For users, this obfuscation makes it harder to assess the trustworthiness of news and information online. For content creators, particularly news outlets, this modern-day version of the game of "Telephone" makes use of derivative works without necessarily giving credit to the original source.

The process of amplification is particularly worrisome when it comes to disinformation, false information that is created and distributed with the deliberate intention to cause harm. A 2018 study, which analyzed more than 100,000 news stories and rumors shared on Twitter over 11 years, found that the most popular false stories reached up to 100 times as many people as the most popular true stories. The authors concluded that "falsehood diffused significantly farther, faster, deeper and more broadly than the truth in all categories of information." This discrepancy was strongest for false political news.[235]

To address this range of issues, particularly the spread of disinformation, it is critical to support the development of frameworks that enable researchers, journalists and end users to better track and understand the source of information online.

The Commission considers two potential paths: disclosure and tracking. Disclosure permits content contributors to declare who they are and allows others to assess and verify these sources. Such a system would identify online information as authoritative through consensus and would identify not only what is reliable but what is unreliable.

Researchers and nonprofits are working on methods to address this challenge. One is the Trust Project, which has developed a schema to enable author and publisher declarations that are machine readable and that provide meta-data that can be used by intermediaries to rate the reliability of these sources. Disclosure is not required, as there is value at times in anonymity, but a lack of disclosure could prompt online users to treat the material skeptically.

As for tracking, the Commission supports the research toward automated systems that can determine the original source of a story and provide an analysis of how it was spread. This type of system, coupled with human oversight, could be useful in combating the spread of misinformation and disinformation by identifying those responsible for disseminating false or deceptive content, even unintentionally.[236]

The Commission does not take a position on any particular technology that could help identify original sources, but understands that solutions will likely begin as research projects before being implemented at scale. We encourage such research and the sharing of relevant non-personally identifiable information with researchers for that purpose.

As tools such as these are developed, the Commission is cognizant of the importance of protecting the identities of sources that wish to remain anonymous. For example, it would be dangerous to be able to trace stories back to certain sources, such as whistleblowers, confidential sources or dissidents who may be put in jeopardy if their identities were revealed.

Finally, the Commission cautions against the adoption of systems that might offer incentives for content creators to rush stories online—in order to be recognized as the first source—without first verifying their accuracy. The Commission strongly believes in the need for truthful information. The reason for supporting the development of technologies to disclose the sources of information is to encourage the distribution of truthful content from the beginning.

B. Disclose funding sources for online ads.

Online advertising in the U.S. is an $88 billion industry, with continued growth expected across all formats and platforms (e.g., mobile, social media, audio and video).[237] In an environment in which so much content and so many services are provided to users at no cost, it is revenue from digital ads that supports free online media. Key to its success is the ability for advertisers to reach consumers and for consumers to receive advertising messages.

Unlike with offline advertising, online platforms, publishers and ad networks are able to collect and analyze copious amounts of individual user data to increase the accuracy and efficiency of targeting ads to the right eyeballs. This is a double-edged sword. While ads are efficiently reaching prime targets—say, those looking for a hotel in a particular city—the digital advertising business faces an increasing number of technical, political and ethical challenges.

Political ads. Investigations since the 2016 U.S. presidential election have raised concerns about who funded certain online political ads and the impact of this content in undermining traditional democratic norms. In response, Twitter, Facebook and Google have launched separate efforts to require disclosures about funding of political ads,[238] with a goal of increasing transparency and strengthening protection of elections. The Commission supports these initiatives, as well as efforts in Congress (such as the Honest Ads Act[239]) and at the Federal Elections Commission (for example, proposed rules for disclosure requirements[240]) for more information about the sponsorship of political ads. The Commission also supports greater disclosure regarding how ads intended to affect voting behavior or attitudes toward a specific issue are targeted.

Commercial ads. Taking this further, and consistent with the theme of radical transparency throughout this report, the Commission recommends that all digital advertising be clearly identified as such and that all online media make available to consumers information regarding their advertising funding sources. This requirement should apply not only to display-type ads but also to native advertising, in which online publishers accept payment for sponsored content that looks similar to independently produced editorial or entertainment content.

For this recommendation, the Commission draws its precedent from Section 317 of the Communications Act. That provision requires broadcasters to clearly disclose to listeners or viewers if matter has been aired in exchange for money, services or anything else of value.[241] We urge policymakers to modernize the law to apply to digital media.

We recognize that some are wary of increased regulation, particularly if it may restrict First Amendment-protected speech. However, the Supreme Court has generally found that advertising disclosure rules do not violate the First Amendment. Even in the *Citizens United* case, the Court assumed that the government could require disclosure of sponsors.[242]

Some on the Commission would apply this requirement only to political ads, which is certainly the most important category from the standpoint of trust and democracy. We suggest the broader measure here (1) to remove the decision-making about what is "political," and (2) to signal that in order to foster trust, the principle is worth applying across the board. We also realize that regulation incurs costs that burden businesses. We do not imagine an extensive regulatory regime, but rather a simple requirement of disclosure. If this is burdensome to small businesses, there could be an exemption for entities that earn less than a certain amount of annual revenue.

Advertiser choice. Finally, the Commission looks to sponsors to exert responsibility by choosing not to place their ads next to content that is damaging to the democracy, such as terrorist recruiting, voter manipulation and disinformation. Most advertisers shy away from controversial advertising, maybe overly so. But they should have a choice and not be penalized for exercising it.

Currently, brands buy digital advertising (or use third parties that place ads for them) according to reach (number of users exposed to an ad) and key words (particular characteristics of users or their interests). Sometimes they pay a premium to avoid sites that contain content they do not want to associate with. The Commission understands that using a formulaic algorithm for ad placement is highly efficient and that there can be costs associated with deviating from it. But we also believe that the inadvertent placement of an advertiser's message next to content that offends the sponsor's values can be harmful to the advertiser's brands and can provide an undeserved revenue source for dubious content. As so much of the digital advertising dollar is concentrated in a few services, the Commission urges those entities to enable their advertisers to opt out of being associated with noxious content without undue costs.

C. Provide end users with information about how algorithms work, and access to customized algorithms and news feeds.

Because of the vast scale of the social media platforms, many decisions about the content that users see are made by algorithms that embody judgments about which content is important or likely to be of interest to users. These platforms make extensive use of algorithms that customize news feeds to individual interests, while search engines rely on algorithms to determine which content is provided in response to user queries.

Many of the concerns expressed about the influence of platforms on civic conversations focus not on the blocking or censorship of content, but on the promotion or de-prioritization of content by algorithms designed to provide users with content of most interest to them.

The Commission understands that the platform companies are constantly revising and improving their algorithms. For example, Facebook has experimented with suggesting alternative content that users might be interested in seeing.[243] As digital services offer customized user experiences, there is a need to clarify the principles for algorithms that determine the content that users see. Specifically, digital service providers should consider the following questions:

- Are we clear about which content is personalized, and to what extent it is personalized?

- Can we provide users with greater clarity about why and how it is customized?

- Can users be given the ability to control that customization?

In employing algorithms that determine such content, providers should offer a clear explanation (in layman's terms) of what is personalized and to what extent, what causes certain content to be recommended, and what a user can do to control this customization. This procedure would present an opportunity to help users understand how customization works (glass-box approach). It also would allow users to adjust the parameters that determine which content appears in their feeds, and which results are shown first (open-box approach).

By clearly articulating the principles behind customized or personalized algorithms and providing end users with the ability to adjust their own feeds, digital services can give users a better understanding of how filter bubbles work and perhaps diminish their impact. We encourage development of these principles and techniques at company and research laboratories.

| Recommendation 7 | **INNOVATION** |

Invest in new structures and technology-based solutions to address emerging problems.

Many problems in the digital ecosystem have arisen as the result of poorly understood or unintended consequences of new technology-based capabilities. It is difficult if not impossible for technology developers to anticipate all future consequences of a design, particularly as the internet continues to evolve.

The previous recommendations in this chapter rely mainly on institutional and social responses to problems. The Commission believes, however, that problems caused by technology can also be addressed by methods that make creative use of technology itself. We encourage research into the following ideas.

A. Develop metrics for the health of online dialogue.

A high-level goal for the Commission is to move the internet, social media platforms and other online services toward being a more positive force in supporting democracy. The Commission is aware of activities underway to develop healthier social interactions and metrics to measure these interactions. Such metrics would define and measure the impact of news media outlets and social media platforms on the health of civic dialogue. These measures should be maintained by independent third-party auditors (such as scholars or nonprofit organizations) with the mission of encouraging online providers to support balanced information and promote healthy democratic discourse.

MIT Professor Deb Roy, a member of this Commission, has proposed an initial set of metrics intended to "measure aspects of the health of the public sphere."[244] These indicators focus particularly on the nature of communications on both digital and broadcast media between groups with different, often opposing, social or political perspectives:

- Shared attention: Is there overlap in what we talk about?

- Shared reality: Are we using the same facts?

- Varied perspectives: Are we exposed to different opinions?

- Receptivity: Are we open, civil and listening?

The Commission encourages the development of metrics that will foster more civil and productive dialogue, whether online or not. This includes further experimentation by the platform companies, or by influential actors such as media brands, social media influencers and advertisers that may wish to associate their messages with pro-social content. The aim is to reprioritize a system's design goals from the beginning to align better with promoting healthy civic discourse.[245]

B. Develop techniques to discourage sharing of disinformation and anti-social content.

Because it is human nature to be drawn to stories that are provocative or highly emotionally charged, disinformation (which is often deliberately constructed around these attractive features) tends to be shared more quickly and spread more widely than true information. One potential remedy the Commission recommends is to educate users about the dangers of spreading disinformation and encouraging them to resist the temptation to do so. The Commission endorses an Ad Council initiative to create a campaign on this theme.

Another, complementary approach would be to build mechanisms into social media networks that act to diminish the spread of false information. Some platforms have been attempting to do this. For example, after a year of testing the use of "disputed flags" to mark stories identified by third-party fact checkers as false, Facebook discontinued this approach. The company found that it "inadvertently buried critical information that explained the inaccuracies, and could backfire by entrenching a person's false beliefs."[246] More recently it has started to experiment instead with suggesting "related articles" that were deemed more factual, and found that it did lead to less sharing of false stories. Other techniques that have been proposed include slowing down sharing and retweets of disputed content, and development of a reputation system that would rate users on the frequency with which they shared content deemed to be false.

Finding techniques that effectively combat disinformation and are acceptable to users may be difficult. Particularly challenging is to develop methods—based on either machine or human judgment—that can reliably distinguish between accurate and inaccurate information. The Commission recommends continued research by technology companies, academics and journalists to develop such techniques.

C. Provide for data portability among social networks.

Since its inception, the World Wide Web has evolved from an open and decentralized architecture to a more consolidated and centralized state. A 2017 study from MIT's Digital Currency Initiative noted that "even though the internet was built on distributed protocols, the web needed to consolidate around a few curated service platforms in order to become practical for everyday people to use. This trend towards consolidation has serious implications for two key functions of the web: publishing and discovery of content."[247]

The popularity of a small number of publishing and discovery platforms has had great benefits for usability. But this consolidation may also be limiting innovation and diversity within the universe of internet platforms, including social networks. Existing social networks benefit heavily from network effects. On joining the most popular networks, users have potential access to millions of existing users, while on joining a new social network, they might have access only to a few hundred. A major barrier to users' trying a new social network is the prospect of losing the benefit of the time and effort previously invested in the existing network.

To explore ways that social networks can better support democratic values, the Commission encourages an environment where new social networks are more likely to find audiences, and where users can more easily participate in a variety of social networks. While major internet platforms generally allow users to access and/or export their data (posts, photos, videos),[248] establishing a right for users to own their own data and social graph (their existing online relationships) would make it easier for new networks to emerge and operate alongside existing ones.

Concerns. The Commission recognizes that some of these proposals may lead to more personalized silos rather than fewer. We also recognize that there is a tension between the rights of individuals and their connections within social networks, and that any data portability solutions must protect the privacy of friends and other connections. However, creating more opportunities for new networks to emerge lessens the pressure to break up existing platforms, as some critics have called for.[249]

The Commission has differences of opinion on these questions, including whether control over the internet is too concentrated and, if so, what should be done about it. We urge serious and thoughtful consideration of the appropriate application of self-regulation, regulation and antitrust laws to all media, whether print, broadcast or internet. In this case, reducing the barriers to entry could result in a more competitive media ecosystem.

Nonprofit social networks. Finally, we recognize that the free market may not create all the forms of networks that would benefit democratic and open societies. The Commission supports the concept of charitably funded nonprofit internet platforms and social networks for specific purposes. These might include social networks that aggressively enforce anti-bullying rules to protect those who have suffered online harassment, or a locally focused social network that strives to create dialogue among neighbors who are politically divided. Much as a healthy media ecosystem needs both for-profit and nonprofit players, the internet market deserves the same.

D. Create a multi-stakeholder forum to develop and promote pro-social policies for technology providers.

The internet represents a particularly daunting challenge to society to understand the full range of its effects. In short, the internet challenges all of our institutions. It is heartening to see a number of the largest media companies and online services acknowledging that they need to be more proactive in addressing unintended but nevertheless negative effects of their operations.

But they are not—and should not be—alone. Individual users have a large stake in the services on which they depend. Civic organizations, journalists, advocacy groups and academic institutions can offer expertise in analyzing how the ecosystem functions, identifying negative effects and generating ideas for remedies to the problems that may arise. And government has the ultimate power to mandate change, consistent with the Constitution.

The Commission believes that representatives of all sectors, including members of the online industry, and particularly its largest members, have an opportunity and a responsibility to work together to ensure that all operate in ways that support the healthy functioning of a democratic society. These stakeholders include news organizations, academics, NGOs and consumer advocacy groups. They have the opportunity and responsibility, as well, to minimize anti-social effects of the services they offer. As these issues relate closely to restrictions of speech, it is better that the solutions come from a broad swath of the ecosystem. This includes critical discussions on issues such as the application of CDA Section 230, mentioned earlier.

One issue of particular concern to this Commission is the role of the internet in transforming how news is distributed, monetized and consumed. Social media platforms have become a major conduit for news for millions of users. Given their importance, there should be better collective understanding of the algorithms that play a major role in determining what news users see and in making decisions that impact the overall flow of news and information.[250]

A multi-stakeholder forum could greatly help technology companies, news organizations and consumers develop a better understanding of each other's needs and find mutually beneficial approaches related to how news is disseminated. A multi-stakeholder approach is particularly appropriate for dealing with the complexity and magnitude of challenges like these. As Graham Brooke, director of the Digital Forensic Research Lab at the Atlantic Council, noted, finding effective solutions will "involve a society-wide reckoning with the problem of the vulnerabilities that the internet has uncovered in democratic society."[251]

One precedent for such an undertaking is the Global Network Initiative (GNI), a "multi-stakeholder platform" launched in 2008 to provide "a concerted and coordinated effort drawing on the perspectives, leverage, credibility and expertise of many different stakeholders

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[to address] the challenge of protecting digital rights globally."[252] GNI's membership consists of technology companies (including Facebook, Google and Microsoft), academic organizations, NGOs and investors in Africa, Latin America, the Middle East, Europe and the U.S. The initiative promotes a set of principles and guidelines for "responsible company decision-making in support of free expression and privacy rights." It also advocates internationally with governments to adopt laws and policies to protect these rights.[253]

Another potential model is PledgeLA, a regional initiative launched in Southern California in the fall of 2018 that involves more than 80 high-tech venture-capital investors and entrepreneurs. With sponsorship from Los Angeles Mayor Eric Garcetti and funding from the Annenberg Foundation, the initiative's members have committed themselves to three goals: "to increase our community engagement...to actively and continuously improve equity, diversity and inclusion at all levels of our organizations and in our investment decisions...[and] to hold ourselves accountable by measuring and transparently reporting on our progress."[254]

The Commission recommends that an ongoing forum be established to develop and promote trust-building initiatives and to support the adoption of pro-social policies by platforms, online services and other media entities. One possibility would be to expand the mandate of an existing group such as the GNI to embrace this broader agenda. Another, lesser preferred possibility would be to create a new organization with a new mandate. In either case, such a forum would call on the expertise of industry members while also taking advantage of the more varied perspectives of external groups. While it might initially focus on domestic issues, this effort might well expand to take on a broader international focus, just as the GNI does.