Social Media: Misinformation and Content Moderation Issues for Congress

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Social media platforms disseminate information quickly to billions of global users. The Pew Research Center estimates that in 2019, 72% of U.S. adults used at least one social media site and that the majority of users visited the site at least once a week.

Some Members of Congress are concerned about the spread of misinformation (i.e., incorrect or inaccurate information) on social media platforms and are exploring how it can be addressed by companies that operate social media sites. Other Members are concerned that social media operators’ content moderation practices may suppress speech. Both perspectives have focused on Section 230 of the Communications Act of 1934 (47 U.S.C. §230), enacted as part of the Communications Decency Act of 1996, which broadly protects operators of “interactive computer services” from liability for publishing, removing, or restricting access to another’s content.

Social media platforms enable users to create individual profiles, form networks, produce content by posting text, images, or videos, and interact with content by commenting on and sharing it with others. Social media operators may moderate the content posted on their sites by allowing certain posts and not others. They prohibit users from posting content that violates copyright law or solicits illegal activity, and some maintain policies that prohibit objectionable content (e.g., certain sexual or violent content) or content that does not contribute to the community or service that they wish to provide. As private companies, social media operators can determine what content is allowed on their sites, and content moderation decisions could be protected under the First Amendment. However, operators’ content moderation practices have created unease that these companies play an outsized role in determining what speech is allowed on their sites, with some commentators stating that operators are infringing on users’ First Amendment rights by censoring speech.

Two features of social media platforms—the user networks and the algorithmic filtering used to manage content—can contribute to the spread of misinformation. Users can build their own social networks, which affect the content that they see, including the types of misinformation they may be exposed to. Most social media operators use algorithms to sort and prioritize the content placed on their sites. These algorithms are generally built to increase user engagement, such as clicking links or commenting on posts. In particular, social media operators that rely on advertising placed next to user-generated content as their primary source of revenue have incentives to increase user engagement. These operators may be able to increase their revenue by serving more ads to users and potentially charging higher fees to advertisers. Thus, algorithms may amplify certain content, which can include misinformation, if it captures users’ attention.

The Coronavirus Disease 2019 (COVID-19) pandemic illustrates how social media platforms may contribute to the spread of misinformation. Part of the difficulty addressing COVID-19 misinformation is that the scientific consensus about a novel virus, its transmission pathways, and effective mitigation measures is constantly evolving as new evidence becomes available. During the pandemic, the amount and frequency of social media consumption increased. Information about COVID-19 spread rapidly on social media platforms, including inaccurate and misleading information, potentially complicating the public health response to the pandemic. Some social media operators implemented content moderation strategies, such as tagging or removing what they considered to be misinformation, while promoting what they deemed to be reliable sources of information, including content from recognized health authorities.

Congress has held hearings to examine the role social media platforms play in the dissemination of misinformation. Members of Congress have introduced legislation, much of it to amend Section 230, which could affect the content moderation practices of interactive computer services, including social media operators. In 2020, the Department of Justice also sent draft legislation amending Section 230 to Congress. Some commentators identify potential benefits of amending Section 230, while others have identified potential adverse consequences.

Congress may wish to consider the roles of the public and private sector in addressing misinformation, including who defines what constitutes misinformation. If Congress determines that action to address the spread of misinformation through social media is necessary, its options may be limited by the reality that regulation, policies, or incentives to affect one category of information may affect others. Congress may consider the First Amendment implications of potential legislative actions. Any effort to address this issue may have unintended legal, social, and economic consequences that may be difficult to foresee.
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Introduction

Social media platforms have become major channels for the dissemination, exchange, and circulation of information to billions of users around the world. For years, Congress has been concerned with the use of the internet to host, distribute, and exchange potentially illegal, harmful, and objectionable content, including graphic sexual content, extremist content, content that may incite violence, and foreign propaganda. Attention has often focused on social media platforms, based on their ability to disseminate information quickly and widely and their use of algorithms to identify and amplify content that is likely to generate high levels of user engagement.¹

Some Members of Congress are concerned about social media dissemination of misinformation (i.e., incorrect or inaccurate information, regardless of its origin or the intent of the individual who disseminates it)² and are exploring how social media platform operators can stop or slow that dissemination via content moderation. Other Members’ interest in content moderation relates to concerns that platform operators are moderating content that should not be restricted. Both perspectives have focused on Section 230 of the Communications Act of 1934 (47 U.S.C. §230, hereinafter Section 230), enacted as part of the Communications Decency Act of 1996.³ Section 230 broadly protects interactive computer service providers,⁴ including social media operators, and their users from liability for publishing, and in some instances removing or restricting access to, another user’s content.

An example of the role social media can play in the dissemination of information and misinformation can be seen with the Coronavirus Disease 2019 (COVID-19) pandemic.⁵ The spread of COVID-19 misinformation has complicated the public health response to COVID-19.⁶

¹ Algorithms are computer processes that set rules for the data social media platforms receive. They help operators sort and prioritize content and can be used to tailor what a user sees at a particular time. For more information, see Appendix A.


⁴ 47 U.S.C. §230(f)(2) defines an interactive computer service as “any information service, system, or access software provider that provides or enables computer access by multiple users to a computer server, including specifically a service or system that provides access to the Internet and such systems operated or services offered by libraries or educational institutions.”

⁵ For example, the World Health Organization has described the “over-abundance of information—some accurate and some not”—that has accompanied the COVID-19 pandemic as an “infodemic.” World Health Organization, Novel Coronavirus (2019-NCoV) Situation Report-13, February 2, 2020, at https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200202-sitrep-13-ncov-v3.pdf.

⁶ One proposed definition of health misinformation is information about a health phenomenon that is “contrary to the ...
Public health communication plays a critical role in overcoming uncertainty and informing policy and individual decisions. This highlights the challenge of identifying misinformation during a pandemic caused by a novel virus, particularly because the scientific consensus is under constant revision and not always unanimous. It also highlights the challenge of determining the accuracy of information in conditions of uncertainty. In some cases, misinformation may be easily identified by the content moderators employed by social media operators as information that is verifiably false, while in others, what is accurate or inaccurate may be a matter of judgement based on available evidence.

This report explores the role that social media can play in the spread of misinformation—in addition to beneficial information—using the spread of incorrect or inaccurate COVID-19 information as an example. The report provides an overview of social media and content moderation. It focuses on three main factors that contribute to the amplification and spread of potential misinformation on social media—(1) the use of data mining and algorithms to sort, prioritize, recommend, and disseminate information; (2) the maximization of user engagement, and online advertising revenue for some social media operators, as the foundation of social media companies’ business models; and (3) the range of content moderation practices across social media platforms. It discusses options some Members of Congress have proposed to alter incentives surrounding social media moderation practices to address potential misinformation and concerns that other Members have raised about censorship. The report concludes with questions that Congress might consider as it debates whether or not to take legislative action.

Overview of Social Media

Distinguishing features of social media include the primacy of user-generated content, the use of algorithms by the social media operators to sort and disseminate content, and the ability of users to interact among themselves by forming social networks (see Appendix A for definitions of social media sites, users, algorithms, platforms, enabling infrastructure, and operators). Social media users are both the producers and consumers of content. They can post text, images, and videos and consume others’ content by viewing, sharing, or reacting to it. Users access social


8 Users can be individuals, organizations, government agencies, and private firms, including news media (e.g., Washington Post, Fox News, New York Times).


10 Users can share content on social media sites by posting and reposting content or by sharing the initial post to select individuals or to their entire network. Users can react to content by commenting on it or by “liking” it, indicating that the user supports “likes” the post. Some social media sites allow users to express different reactions as well. For example, Facebook allows users to select an emoji (an icon expressing the emotion of the user), including a thumbs-up, smiling face, frowning face, and a heart.
media platforms through internet-based interfaces, that is, websites or mobile applications (apps). Social media operators host user-generated content on their platforms and “organize it, make it searchable, and [ ... ] algorithmically select some subset of it to deliver as front-page offerings, news feeds, subscribed channels, or personalized recommendations.” The technical infrastructure of social media platforms enables connections to other sites, apps, and data, and may allow third-party developers to build applications and services that integrate with platforms, which could provide third-parties access to some user data and preferences.

Many social media operators do not charge their users to establish accounts and use at least some of their services. These operators rely on revenue from advertisements they serve to users and collect users’ data to target certain advertisements to specific users. User data includes information about personal characteristics, preferences, and opinions provided by users when setting up accounts, as well as information gleaned from posted content and online behaviors. The Interactive Advertising Bureau, an industry trade association, and the research firm eMarketer estimate that U.S. social media advertising revenue was roughly $36 billion in 2019, making up approximately 30% of all digital advertising revenue.

Social media sites benefit from network effects; that is, an increasing number of users increases the value of the site to other users. For example, an individual wishing to notify multiple acquaintances about moving to a new city may choose to share the news on a specific social media site if his or her acquaintances also use the site. Users may have accounts with multiple social media sites, such that increased usage of one site may reduce the amount of time the user spends on another. Therefore, social media operators have a strong incentive to capture as much of their users’ attention as possible. They commonly employ computational techniques to promote content that generates strong user engagement, which can be measured by the number of clicks on links or the amount of time spent reading posts. Some social media sites allow users to link to content provided on other sites, permitting users to share content with larger networks and potentially increasing traffic on the sites.

Social media operators may remove, slow the spread of, or offer warnings for content they deem objectionable. Social media operators are broadly protected from liability for publishing, and in some instances removing or restricting access to, another user’s content by Section 230. The authors of Section 230, former Representative Chris Cox and former Representative and current

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12 Some social media operators, such as LinkedIn and Reddit, offer a premium version of their site with additional services for a monthly fee. Others allow users (which do not include advertisers) to access all of their services without a monthly fee (e.g., Facebook, Twitter). A few operators, such as WeMe, obtain their revenue from subscription fees and from selling custom emojis rather than online advertising.
Senator Ron Wyden, have each stated that their intent was to enable free speech and allow interactive computer services to moderate content without government intervention. Section 230 has two relevant sections regarding content hosting and moderation: Section 230(c)(1), which states that interactive computer service providers and users may not “be treated as the publisher or speaker of any information provided by another” person; and Section 230(c)(2), which states that interactive computer service providers and users may not be “held liable” for any “good faith” action “to restrict access to or availability of material that the provider or user considers to be obscene, lewd, lascivious, filthy, excessively violent, harassing, or otherwise objectionable.”

**U.S. Social Media Use**

The Pew Research Center estimated that in 2019, 72% of U.S. adults, or about 184 million U.S. adults, used at least one social media site, based on the results of a series of surveys. This was up from 5% in 2005. Use varied by age, with the highest percentages using social media being among the 18-29 year old and 30-49 year old cohorts (see Figure 1). Another report estimates that in January 2020, there were roughly 230 million social media users in the United States of all ages (13 is a standard minimum age to register an account on many social media sites), and that users subscribed to an average of roughly seven social media accounts. The majority of U.S. social media users report visiting the sites weekly and many report visiting the sites daily.

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18 CRS Legal Sidebar LSB10484, *UPDATE: Section 230 and the Executive Order on Preventing Online Censorship*, by Valerie C. Brann et al.

19 CRS analysts calculated the 184 million U.S. adult figure using U.S. Census Bureau population estimates. The Census Bureau estimates that on July 1, 2019, there were 328,239,523 people in the United States and that 77.7% of these were 18 years or older. Census Bureau, *QuickFacts: United States*, at https://www.census.gov/quickfacts/fact/table/US/PST045219.


22 *Social Media Fact Sheet*. The Pew Research Center survey results indicate that 74% of Facebook, 63% of Instagram, 61% of Snapchat, 51% of YouTube, and 42% of Twitter users report daily use in 2019.
Media consumption, including social media use, has increased during the COVID-19 pandemic. This is likely a result, primarily, of entertainment venue closures and an increased amount of time spent at home as many employees and students shifted to remote work and school. The Nielsen Company reported a 215% increase in time spent on mobile devices accessing current news in the United States in March 2020 compared to the year before. Facebook reported an increase of over 50% in total messaging across its offerings globally from February 2020, before most countries in Europe and North America had closed schools, offices, and public venues, to March 2020, when shutdowns became widespread. In April 2020, Kantar, a data and market research firm that surveyed over 25,000 individuals in 30 global markets, reported that social media usage had increased globally by 61% over normal usage rates since the start of the COVID-19 pandemic.

Social media sites also serve as major venues for the circulation of digital content from both online-only and traditional print and broadcast news outlets. Prior to the COVID-19 pandemic, a 2019 Pew Research Center report found that 55% of surveyed U.S. adults reported accessing news through social media sites, and that 52% of U.S. adults reported using Facebook to access news. The report also states that 88% of U.S. adults were aware that social media operators...

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27 Elisa Shearer and Elizabeth Grieco, Americans Are Wary of the Role Social Media Sites Play in Delivering the News, Pew Research Center, October 2, 2019, at https://www.journalism.org/2019/10/02/americans-are-wary-of-the-role-
exert some control over the mix of news that users see on their sites, and that 62% believe that these operators have too much control over news content.  

Content Moderation

Social media operators maintain policies that prohibit users from posting certain content, such as content that exhibits graphic violence, child sexual exploitation, and harmful content or speech. An operator may temporarily or permanently ban users that violate its policies, depending on the operator’s perspective on the severity of the users’ violation(s). There is no uniform standard for content moderation, resulting in practices varying across social media sites. Some operators have chosen to release reports containing information on their content moderation practices, such as the amount of content removed and the number of appeals, but operators are not required to release this information.

Social media operators rely on several sources to identify content to flag or remove: (1) users, (2) content moderators, and (3) automated systems, also known as artificial intelligence (AI) technologies. Users can flag or mark inappropriate posts for content moderators to review and remove when applicable. Automated systems can also flag and remove posts. Content moderators, primarily contractors, may be able to identify nuanced violations of content policy, such as taking into account the context of a statement. For example, in the first quarter of 2020, AI technology flagged 99% of violent and graphic content and child nudity on Facebook for review before any user reported it. In contrast, Facebook’s AI technology identified only 16% of bullying and harassment content, suggesting content moderators are better able to identify this form of policy violation.

Some social media operators may be compelled to rely more heavily on AI technologies to moderate content. Some commentators have raised concern about whether repeatedly reviewing graphic, explicit, and violent materials harms content moderators’ mental health. For example, in 2020, Facebook reached a settlement in a class-action lawsuit filed by its content moderators

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28 Ibid.


31 For example, the latest reports released by Facebook and Twitter are available at https://transparency.facebook.com/community-standards-enforcement and https://transparency.twitter.com/en/reports/removal-requests.html, respectively.

32 Tarleton Gillespie, “Content Moderation, AI, and the Question of Scale,” Big Data & Society, vol. 7, no. 2, (2020): pp. 1-5, at https://doi.org/10.1177/2053951720943234. According to the article, only a few operators use machine learning techniques to identify new content that violates the social media sites’ policies. Most operators rely primarily on algorithms that are coded to identify specific phrases and images.

33 For example, according to a class-action lawsuit filed in September 2018 against Facebook and Pro Unlimited, Facebook had content moderators review more than 10 million potentially rule-breaking posts per week and sought to review all user-reported violations within 24 hours (Selena Scola v. Facebook Inc. and Pro Unlimited Inc., 18 CIV 05135 (San Mateo County Superior Court), at https://assets.documentcloud.org/documents/6889335/18-CIV-05135-Complaint.pdf). Social media operators do not publicly disclose the number of content violations that are flagged by users, content moderators, and AI technologies.


35 Ibid.
who claimed to have experienced post-traumatic stress disorder from reviewing content on its sites; Facebook agreed to pay $52 million to its content moderators.\(^36\) During the COVID-19 pandemic, some content moderators worked remotely, but privacy and security concerns meant some of the content moderation was done by automated systems.\(^37\) These systems can quickly review large volumes of content “when scale problems make manual curation or intervention unfeasible.”\(^38\)

By relying more heavily on automated systems, social media operators may mistakenly remove or fail to remove content. Thus, some operators have stated that no account would be permanently suspended solely by an automated enforcement system during the COVID-19 pandemic.\(^39\) For example, Facebook’s automated systems have reportedly removed ads from small businesses, mistakenly identifying them as content that violates its policies and causing the businesses to lose money during the appeals process.\(^40\) A wide range of small businesses have reportedly been affected by these mistakes, including a seed company for sharing a photo of Walla Walla onions as being overtly sexual and a solar roof company that used acronyms that are similar to cryptocurrency tokens.\(^41\) In 2019, Facebook restored 23% of the 76 million appeals it received, and restored an additional 284 million pieces of content without an appeal—about 2% of the content that it took action on for violating its policies.\(^42\) During the COVID-19 pandemic, the amount of content removed by Facebook and the amount restored without an appeal increased for some categories—such as hate speech, bullying, and harassment—and decreased for other categories, such as adult nudity and sexual activity.\(^43\)

Some social media operators have altered their content moderation practices over time. For example, in 2019, Twitter and Instagram released new policies to reduce bullying and hate speech on their sites.\(^44\) Some of these changes may have partially been in response to criticism social media operators received for allowing certain content on their sites, such as hate speech against Rohingya Muslims in Myanmar that spread on Facebook.\(^45\) Some operators have reportedly


\(^{41}\) Ibid.


\(^{43}\) These trends are based on comparing the numbers listed for the first and third quarters of 2020. Ibid.


\(^{45}\) Tom Miles, “U.N. Investigation Cite Facebook Role in Myanmar Crisis,” \textit{Reuters}, March 12, 2018, at
reconsidered their approach to trade-offs between free expression and safety, such as taking a harder line with removing misinformation.\textsuperscript{46} For example, Facebook partners with third-party fact-checkers to review and rate the accuracy of articles and posts, placing those identified as false lower in users’ news feeds.\textsuperscript{47} In addition, Facebook includes information about the publisher of articles posted on its site and displays articles from the third-party fact-checkers below posts on the same topic. Twitter labels content containing misleading information or disputed claims that it determines to be “moderately harmful,” while removing misleading content that it determines to be “severely harmful.”\textsuperscript{48} These actions were taken voluntarily by Facebook and Twitter. Currently, the decision to moderate, or to not moderate, certain content is at the discretion of each operator.

Misinformation can spread on social media sites, even with content moderation techniques implemented by operators. Misinformation can spread before moderators discover, review, and remove the content. To add further complication, users can share content across social media platforms, meaning content can spread on another platform even after the original content is removed. Users who recontextualize the original problematic content, for example, through reposting content or posting screenshots of it, may complicate an operator’s enforcement of its policies. In addition, some operators may choose not to remove some content that violates its policies. For example, Facebook’s CEO Mark Zuckerberg stated on a post, “A handful of times a year, we leave up content that would otherwise violate our policies if the public interest value outweighs the risk of harm.”\textsuperscript{49}

Through their content moderation practices, social media operators may remove content that some users find valuable. Some commentators and legislators have raised concern that these operators are removing too much content, including content from whistleblowers.\textsuperscript{50} As social media sites have grown in popularity, they have created some unease that companies determine what speech is acceptable.\textsuperscript{51} However, as private companies, social media operators are generally able to determine what content is allowed on their sites.\textsuperscript{52}

### Social Media Networks and Algorithms

Social media platforms are shaped by the structures of their user networks and computational tools, such as algorithmic filtering, that operators use to manage large volumes of user-generated
content continually posted on their sites and increase user engagement with content.\(^{53}\) Both network structure and computational tools are intended to increase the number of users and user engagement.\(^{54}\) These components allow operators to increase their revenue, particularly for those that have online advertisements on their platforms, but may also increase the spread of misinformation that increases user engagement. Each social media operator balances incentives to moderate and prioritize content to increase user engagement and its revenue.

### Network Structure

Social media users can establish connections to other users of a site, creating social networks or communities that can be based on common interests, relationships that exist offline, employment, or other factors. The structure of these networks affect how individuals search for one another and how connections are initiated and established,\(^{55}\) which can also depend on the level of privacy offered by the operator and chosen by each user. For example, some social media sites allow users to choose whether to make their profiles open to the public or only to those who have established connections by mutual consent.

On some social media sites, users can limit the content that they see through the networks they choose to build. Each user can choose to follow or stop following other users, including those who post content that the user disagrees with. Thus, social media sites can facilitate “echo chambers” or “filter bubbles,” where a user’s ideas are reiterated and reinforced by others while other ideas may be excluded.\(^{56}\) Some research has shown that the overlap of networks (i.e., those with common followers) increases the likelihood that two users will share content through the network, although this effect depends on the novelty of the content.\(^{57}\) Echo chambers can enhance the spread of information, including but not limited to misinformation, particularly before the information “goes viral” (i.e., spreads rapidly on the internet).\(^{58}\)

Social media operators often have economic incentives to encourage users to expand their networks, as the value of a site to a user increases as more users join or increase their activity on

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53 Michael Bosetta, “The Digital Architectures of Social Media: Comparing Political Campaigning on Facebook, Twitter, Instagram, and Snapchat in the 2016 U.S. Election,” *Journalism & Mass Communication Quarterly,* vol. 95, no. 2 (2018), pp. 471-496. The article includes *datafication* as a separate category and includes a fourth component—*functionality*—which includes aspects such as the graphical interface. While these may be important aspects of the social media structure, it is less relevant to the spread of misinformation, and thus not discussed in this report.


the site. Some social media sites recommend connections based on peripheral connections (i.e., someone who is a friend of one of the user’s friends) and often allow users to search for others, using their name, email address, occupation, or other information. Expanding the number of users increases the number of possible connections and recommendations, which can encourage even more individuals to join, exposing more users to advertisements that generate revenue for the social media operator.

Algorithmic Filtering and Prioritization

Social media sites contain large amounts of content. Over the last decade, decreased costs of social media enabling infrastructure have made it possible for operators to increase the amount of user-generated content that they maintain. Operators use algorithms to sort, index, curate, and prioritize user content, as well as to suppress illegal and other content the operator chooses to moderate. Social media operators can change or refine their algorithms to meet evolving business goals in response to internal incentives (e.g., maximizing engagement, increasing advertising revenue) and external pressures (e.g., user complaints, stakeholders), affecting what users see, what content is privileged and promoted, and what content rapidly spreads across the platform (i.e., “goes viral”). Specifics about the algorithms that social media operators use are considered proprietary and are not publicly available, although there is a general understanding of how these algorithms work.

Each user’s activities are quantified and used to determine the selection, sequence, and visibility of posts. For example, Facebook states that its News Feed prioritizes recent content that is found to be relevant to the user, based on factors such as previous engagement with the content provider. The algorithms also may prioritize content that is likely to sustain user engagement—such as sharing, commenting on, or reacting to content—rather than the content’s veracity. According to a Wall Street Journal article, slides presented by an internal Facebook team to company executives in 2018 stated, “Our algorithms exploit the human brain’s attraction to divisiveness,” and warned that the algorithms would promote “more and more divisive content in

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an effort to gain user attention and increase time on the platform." These tools are designed to increase user engagement and keep users on the platform for longer periods, which can help social media operators attract more users and increase their profits.

Some social media operators have made changes to their algorithms. For example, in 2018, Facebook started prioritizing “meaningful posts,” or those shared by family and friends rather than news organizations and brands. Some social media operators allow users to personalize which content is prioritized. On May 31, 2019, Facebook launched the tool “Why am I seeing this post?” It allows users to see why the content was posted on their news feed—such as whether the post is from someone in their network or if they have previously interacted with similar posts—and allows users to adjust their preferences, such as prioritizing posts from specific people or pages.

On Twitter, users can prioritize content through their searches or lists they have created, and can opt to see content in reverse chronological order only from accounts that a user follows. Users can also choose to follow certain “topics,” which allows users to follow the most popular conversations about a specific topic. Information on how these changes are incorporated into the algorithms is not publicly available.

Users can try to use the algorithms on social media to make their content go viral. They can partner with “influencers,” that is, users with a large number of followers, and try to have their content reposted by popular accounts. Social media sites also benefit from content going viral, which could attract more users and encourage users to spend more time on their sites.

Internet bots—software applications that can perform automated tasks such as rapidly posting, liking, and recirculating content on social media sites using inauthentic accounts—can affect the prioritization of content on social media sites and may be used to spread misinformation. Bots can post or amplify content by engaging with it. For example, a bot may be programmed to search for and respond to posts containing specific words or phrases. This can cause algorithms to display content that may not be relevant or authentic, leading to misinformation and the spread of fake news.

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73 Fake, or inauthentic, accounts are profiles impersonating other individuals or organizations. An internet bot is software that runs automated computer programs over the internet, generally capable of performing simple, repetitive tasks faster than an individual can. Some websites use a “Completely Automated Public Turing to tell Computers and Humans Apart,” or CAPTCHA test, to try to identify internet bots. More information on CAPTCHA tests is available at https://www.cloudflare.com/learning/bots/how-captcha-works/.
used by social media operators to inadvertently prioritize misinformation. Users and social media operators can recognize some internet bots based on various factors, such as the syntax used, the user’s profile, or abnormal account activity.74 Some users may choose not to engage with this content by not sharing or reposting it, and some social media operators remove this content. However, bots are becoming more sophisticated, making it more difficult for users and content moderators to recognize them, particularly if a post has already gone viral. Users may inadvertently share or like content created or shared by an internet bot.75 Studies have indicated that bots can contribute to the long-term spread of misinformation.76

Online Advertising

Social media operators have economic incentives to increase user engagement on their sites, particularly operators that rely on online advertising revenue. These operators can increase their revenue by amplifying content that is more likely to be shared and commented on, which could include misinformation. As a user spends more time scrolling through posts or newsfeeds, social media operators can expose that user to more advertisements and collect more data about the user. This increases the likelihood that the user will click on at least one advertisement and allows operators to build better profiles of the user’s characteristics and revealed preferences. These advertisements are often displayed as posts, generally distinguishable through labels such as “sponsored.”

Advertising sales are the primary source of revenue for most social media operators. In 2019, online advertising globally provided about 98% ($70 billion) of Facebook Inc.’s annual revenue,77 84% ($135 billion) of Google’s,78 and 87% ($3 billion) of Twitter’s.79 Facebook CEO Mark Zuckerberg highlighted the importance of advertising in prepared remarks to the House Committee on the Judiciary, Subcommittee on Antitrust, Commercial, and Administrative Law, stating, “Facebook supports its mission of connecting people around the world by selling ads.”80 According to an Interactive Advertising Revenue report, revenue from advertising on social media in the United States increased from about $2.9 billion in 2012 to $35.6 billion in 2019 (Figure 2), and is projected to continue increasing.81 Based on this data, social media made up

77 Facebook Inc. SEC Form 10-K for the year ending December 31, 2019, p. 56.
78 The percentage is calculated by dividing Google advertising revenue by Google’s revenues, not Alphabet’s (Google’s parent company) total revenues. Alphabet Inc. SEC Form 10-K for the year ending December 31, 2019, p. 29. YouTube, owned by Google, generated roughly $15 billion in revenue.
79 Twitter Inc. SEC Form 10-K for the year ending December 31, 2019, p. 39.
about 29% of total U.S. internet advertising revenue in 2019. eMarketer estimates that video ads on social media will make up one-third of all U.S. digital ad spending in 2020, and projects that spending on social media sites will increase 20.4% in 2020.\textsuperscript{82}

**Figure 2. Social Media Advertising Revenue**

<table>
<thead>
<tr>
<th>Year</th>
<th>First 6 months</th>
<th>Last 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>$16.5</td>
<td>$19.1</td>
</tr>
<tr>
<td>2018</td>
<td>$13.1</td>
<td>$15.8</td>
</tr>
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<td>$7.0</td>
</tr>
<tr>
<td>2013</td>
<td>$1.9</td>
<td>$2.6</td>
</tr>
<tr>
<td>2012</td>
<td>$1.2</td>
<td>$2.9</td>
</tr>
</tbody>
</table>


*Note*: Revenue includes social media networking and gaming websites and apps across all devices, including desktop computers, laptops, and mobile devices.

Collecting user data allows operators to offer different advertisements based on its potential relevance to different users.\textsuperscript{83} The data amassed by social media operators enables them to build complex profiles and sell advertising space targeting specific user categories to companies, organizations, and political campaigns.\textsuperscript{84} It also gives established social media operators an advantage over market entrants, as entrants are likely to have less user data and therefore may be less able to help advertisers target users with precision.

Social media operators place ad spaces in a marketplace that runs an instantaneous auction with advertisers that can place automated bids. Some operators run their own advertising marketplaces. For example, Facebook and LinkedIn provide ad managers for businesses on their respective


social media sites. Others, such as Twitter, partner with third-party advertising services such as Google Doubleclick Bid Manager and the Trade Desk.

Based on the auction results and user profiles, different users may receive different ads. Targeted advertising has made it possible for marketers to customize their messages and reach potential consumers more easily and quickly, advertising products differently to each individual. Advertising rates can be tied to the number of users of a social media site, how much time users spend engaging with content, and how often advertisements are viewed. Thus, social media operators with large user bases and track records of high engagement may be able to charge higher fees. According to the Interactive Advertising Bureau, in 2019, the majority of advertisers on the internet made payments based on a performance pricing model, such as a cost-per-click or a share of revenue. This could mean that social media operators following this pricing model are unable to obtain revenue from advertisements that users do not click.

Some social media sites allow advertisers to pay to promote their posts. For example, Facebook allows users, including commercial entities, to “boost” a post by turning it into an advertisement that can be spread to those who do not follow their accounts, increasing the likelihood that the post is shared, liked, or commented on. Some social media sites—including Twitter and Facebook—allow users to opt out of targeted ads. However, while this means that users may not see targeted ads, it does not change the number of ads the user sees and does not ensure that a social media operator is no longer collecting the users’ data.

Example of Misinformation and Social Media: COVID-19 Misinformation in 2020

During 2020 in the absence of a vaccine that can inoculate individuals against the COVID-19 virus, behavioral interventions such as self-quarantining, social distancing, mask wearing, and hand washing—plus policy interventions like testing, contact tracing, and office closures—were implemented in efforts to slow the spread of the virus. These interventions rely on timely public

85 Details on advertising on Facebook and LinkedIn are available at https://www.facebook.com/business/help/2000008400444554 and https://business.linkedin.com/marketing-solutions/ads, respectively.
86 Additional information on turning off targeted ads for Twitter and Facebook is available at https://business.twitter.com/en/help/troubleshooting/how-twitter-ads-work.html and https://www.facebook.com/help/568137493302217, respectively.
87 For more information on how the digital advertising marketplace operates, see CRS In Focus IF11448, How Consumer Data Affects Competition Through Digital Advertising, by Clare Y. Cho.
health communication. Some collective behaviors, such as preventive measures to slow the spread of COVID-19, are disseminated and adopted, in part, through reinforcement and affirmation provided during social contact, including social media.\textsuperscript{94} For example, individuals may be more or less likely to adopt mitigation measures if they see others supporting and engaging in these measures or rejecting them online. The circulation of COVID-19 information on social media sites that may be incomplete, inaccurate, or misleading could be detrimental to public health and make efforts to address the pandemic or achieve public acceptance of a vaccination more challenging.\textsuperscript{95}

Public health crises typically drive people to seek information.\textsuperscript{96} In the United States, online searches for information about COVID-19 increased dramatically following the first reported U.S. cases in late January 2020.\textsuperscript{97} A June 2020 survey found that 55\% of U.S. adults between 18 and 24 years old relied on social media, such as Facebook, YouTube, Instagram, and Twitter, for COVID-19 information, as did 47\% of 25-44 year olds, 31\% of 45-64 year olds, and 21\% of individuals over 65.\textsuperscript{98}

In 2020, a range of information about COVID-19, its origin, means of transmission, treatments, and mitigation measures has been disseminated through social media. Some of this information has been accurate based on the state of knowledge at the time of original publication, and some has been incomplete, inaccurate, or misleading.\textsuperscript{99} Some information that was previously believed to be accurate was subsequently judged to be inaccurate, due to the evolution of scientific consensus of what is known about the pandemic as new evidence becomes available.

\textsuperscript{94} Douglas Guilbeault, Joshua Becker, and Damon Centola, “Complex Contagions: A Decade in Review,” in Complex Spreading Phenomena in Social Systems: Influence and Contagion in Real-World Social Networks, ed. Sune Lehmann and Yong-Yeol Ahn (Cham, Switzerland: Springer, 2018), pp. 3-25. The authors note that “the properties of social networks that have been shown to accelerate the spreading dynamics of disease diffusion—such as small world topologies, weak ties, and scale-free degree distributions—can also be used to make inferences about the role of networks in the domains of social and political behavior.”


While personal information-seeking online can contribute to healthy behaviors by informing decisions, a 2020 multinational study has found that exposure to incomplete, inaccurate, or misleading COVID-19 information demotivates individuals from seeking additional potentially beneficial health information. In June 2020, the Harvard Kennedy School’s Shorenstein Center on Media, Politics, and Social Policy found that social media exposure is associated “with misperceptions regarding basic facts about COVID-19” and “behaviors and attitudes that potentially magnify the scale and lethality of COVID-19.” Exposure to inaccurate or unclear COVID-19 information may impact the efficacy of public health campaigns. Exposure to information on social media sites can occur both through active information seeking as well as through passive acquisition, or incidental exposure, especially to content promoted in a social media user’s feed.

Misinformation may spread rapidly on social media platforms. Research using Twitter data from 2006-2017 has indicated that rumors or claims containing inaccurate information “diffuse significantly farther, faster, deeper, and more broadly” on social media than those containing accurate information. A June 2020 study by the Oxford Internet Institute found that users shared YouTube videos containing COVID-19 misinformation nearly 20 million times between October 2019 and June 2020, generating 71 million reactions (e.g., commenting, reposting) on Facebook, Twitter, and Reddit. These figures exceed the 15 million shares and 42 million reactions and comments generated by all YouTube videos posted during the same period by the top five English-language news broadcasters (as measured by number of subscribers) combined.

The study examined over 1 million COVID-19 videos on YouTube, identified the videos that YouTube had removed for containing misinformation, and tracked their dissemination. The study found that Facebook was the most significant channel for the removed videos’ circulation, highlighting the importance of cross-platform information dissemination.

To address perceived COVID-19 misinformation, some social media operators have implemented content moderation strategies, such as tagging or removing information they deem to be inaccurate or misleading.

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misinformation and promoting information about the pandemic from sources that they consider reliable.\textsuperscript{107} Many social media operators updated their public-facing policies and documented the actions that they are taking to address misinformation. On March 16, 2020, Facebook, Google, LinkedIn, Microsoft, Reddit, Twitter, and YouTube released a joint statement that they would be combating fraud and misinformation about COVID-19.\textsuperscript{108} Facebook Inc. reported that from April 2020 through June 2020 it took down 7 million posts containing, what they identified as, misinformation about COVID-19 from its social media sites Facebook and Instagram, as well as putting warning notes on 98 million additional posts that were misleading but not deemed harmful enough to remove.\textsuperscript{109} Twitter has started adding labels for claims it deems disputed or misleading, and removing information that its moderators consider likely to lead to severe harm, based on internal determination in consultation with “trusted partners.”\textsuperscript{110} The shift to automated content moderation using machine learning and artificial intelligence tools at Facebook, Google, and Twitter during the COVID-19 pandemic may have led to some illegal material (e.g., sexually explicit content, content that violates copyright law) remaining online in certain areas and unproblematic content being taken down.\textsuperscript{111}

Some social media operators started prioritizing COVID-19 information from recognized health authorities. On March 18, 2020, Facebook launched a COVID-19 Information Center, which provides real-time updates from national health authorities, such as the Centers for Disease Control and Prevention, and global organizations. When the COVID-19 Information Center launched, Facebook featured it at the top of users’ news feeds.\textsuperscript{112} YouTube is working to raise the profile of sources of information it deems authoritative across its site, including on its Home Page and in search results.\textsuperscript{113}

These efforts reflect recent attempts by some social media operators to prioritize content about the COVID-19 pandemic that they deem authoritative to counter perceived misinformation. Currently, each social media operator develops and institutes content moderation policies tailored to what they determine to be the needs of its individual services. The development and application of content moderation policies is strictly the purview of each social media operator, and therefore differ widely in scope and operation. Members of Congress have expressed a range of views about the discretionary nature of the development and application of these policies. Some Members have argued in hearings that they are developed opaquely and applied arbitrarily,


\textsuperscript{108} Microsoft owns LinkedIn; Google and YouTube have the same parent company, Alphabet. Catherine Shu and Jonathan Shieber, “Facebook, Reddit, Google, LinkedIn, Microsoft, Twitter, and YouTube Issue Joint Statement on Misinformation,” TechCrunch, March 16, 2020, at https://techcrunch.com/2020/03/16/facebook-reddit-google-linkedin-microsoft-twitter-and-youtube-issue-joint-statement-on-misinformation/.


others claim that some social media operators do not act quickly or decisively enough to moderate potential misinformation, while still others find that they are overly zealous in moderating certain content and engage in censorship.114

Context for Congressional Consideration

Companies that provide content, applications, and services over the internet, including social media operators, are generally not regulated by most federal agencies.115 However, there are laws and regulations that do apply to specific internet content and federal agencies can hold individuals and companies accountable for violating them.116 Although the Federal Communications Commission (FCC) currently classifies broadband-internet access services as an information service, subjecting these service providers to a regulatory framework,117 it currently does not regulate internet applications or content.118 Efforts by some Members of Congress to address their concerns about social media operators’ content moderation practices—ranging from operators not doing enough to mitigate the spread of misinformation to operators censoring speech—have focused on revising Section 230.

Currently, social media operators will likely fall within the definition of interactive computer services in Section 230(f)(2), which includes any “information service, system, or access software provider that provides or enables computer access by multiple users to a computer server.” Thus they may be protected from liability for publishing, and in some instances removing or restricting access to, another person’s content. Additionally, social media operators could be exercising constitutionally protected rights when they moderate content.119

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115 For more information about the regulatory landscape, see CRS Legal Sidebar LSB10309, Regulating Big Tech: Legal Implications, coordinated by Valerie C. Brannon.

116 For example, the Federal Trade Commission (FTC), which is authorized in 15 U.S.C. §45 to protect consumers from deceptive and unfair acts or practices in or affecting commerce, has conducted investigations and filed charges against companies for conducting deceptive practices on the internet. The FTC also regulates operators of commercial websites and online services directed to children under 13, such as ensuring parental consent is obtained, as required by the Children’s Online Privacy Protection Act (15 U.S.C. §§6501-6506).

117 In its 2015 Open Internet Order, the FCC stated it would not regulate individuals and corporate entities providing content on the internet. There has been considerable debate as to how extensive the FCC’s regulatory authority of broadband internet access service should be, specifically whether it should be classified as an information service and regulated under Title I or a telecommunications service and regulated under Title II of the 1934 Communications Act. More information is available in CRS Report R40616, The Net Neutrality Debate: Access to Broadband Networks, by Angele A. Gilroy.

118 Federal Communications Commission, In the Matter of Protecting and Promoting the Open Internet, paragraph 382.GN Docket No. 14-28, released March 12, 2015. Although the FCC opened a rulemaking to clarify the meaning of Section 230, thus far, the FCC has not taken any measures to suggest that it will start regulating internet content on a regular basis.

119 CRS Report R45650, Free Speech and the Regulation of Social Media Content, by Valerie C. Brannon.
**Federal Proposals to Amend Section 230**

On May 28, 2020, President Trump issued an executive order instructing federal agencies to take certain actions with respect to Section 230, such as clarifying the scope of the immunity provision for online platforms. In accordance with the executive order, the National Telecommunications and Information Administration (NTIA) filed a petition with the FCC on July 27, 2020 that the Secretary of Commerce was requesting a rulemaking to clarify provisions of Section 230, including the circumstances under which an interactive computer service restricting access to content would not receive immunity. The use of the phrase “restricting access” in the executive order and NTIA petition mirrors the original language used in Section 230 that covers content moderation. In addition, on September 23, 2020, the Department of Justice sent draft legislation to Congress to reform Section 230 by narrowing the scope of liability protection. On October 15, 2020, FCC Chairman Ajit Pai released a statement that the FCC would be moving forward with rulemaking to clarify the meaning of Section 230, after the FCC’s general counsel concluded that the FCC has the legal authority to interpret Section 230. However, FCC Chairman Ajit Pai stated that he would not be moving forward with rulemaking on Section 230 during the remainder of his tenure as FCC Chairman.

In the 116th Congress, several bills were introduced to amend Section 230, primarily to clarify the liability protections interactive computer services receive for hosting or removing specific types of content (see Table B-1 in Appendix B), in addition to legislation focused, in part, on addressing COVID-19 misinformation (see Table B-2 in Appendix B). Some proposals to amend Section 230 would have narrowed the scope of liability protection, such as to only protect the removal of certain, specified categories of content. Other legislation would have allowed social media operators to be held liable for not removing objectionable content under certain conditions or in a timely fashion.

The 117th Congress may introduce bills that were introduced in the 116th Congress or new bills that amend Section 230. When this report was published, the 117th Congress had introduced one bill to amend Section 230: H.R. 285.

**Commentary from Stakeholders on Amending Section 230**

Some stakeholders, which include academics and researchers, have provided various justifications for amending Section 230, including censorship concerns due to the market

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125 For a summary of various Section 230 reform proposals, see Paul M. Barrett, Regulating Social Media: The Fight
dominance of major technology firms and their role as gatekeepers to other media,126 and concerns that judicial interpretations can leave “victims of online abuse with no leverage against site operators whose business models facilitate abuse.”127 Others highlight the general lack of transparency that surrounds social media operators’ content moderation decisions.128 A 2018 Georgettown Law Technology Review article recommends pairing Section 230 liability protections with new public obligations for social media operators, including transparency and moderation standards, advisory oversight from regulators, and regular legislative review of Section 230.129

Others have expressed skepticism about legislative changes to Section 230 intended to either expand or restrict social media operators’ content moderation practices.130 Amending Section 230 to encourage moderation of misinformation and other objectionable content, or to limit the liability protections afforded interactive computer services for removing content, could affect all interactive computer services (e.g., search engines, internet service providers, video sharing sites, website comment sections) and their users, unless new legislative language explicitly specifies a subset of interactive computer services and users. Therefore, some stakeholders assert that legislative action in either direction may have unintended consequences. For example, social media operators may adjust their content moderation practices, ranging from aggressively screening content to not moderating any legal content, including content that may be considered

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objectionable or obscene to most users. Increased exposure to liability may also threaten competition, as start-up firms may not have the resources to address legal challenges.\textsuperscript{131} Several stakeholders propose the establishment of a new federal agency to provide regulatory oversight of social media operators, promote competition, and protect consumer data privacy.\textsuperscript{132} Others have examined the broader regulatory and legal landscape shaping the current social media platform content moderation debate beyond Section 230. A 2019 essay published by the Hoover Institution acknowledges that the private companies that operate interactive computer services currently hold a great deal of control over speech on their platforms, and notes that the First Amendment may protect their moderation decisions.\textsuperscript{133} It proposes several potential solutions, although it notes that many of these are untested and would face legal scrutiny, depending on how they are designed. The proposed solutions include defining rules for operators based on size and reach; allowing users to customize algorithmic filtering or curation settings; and opening the raw, unsorted, and uncurated content feeds of dominant platforms to allow others to build customizable services that users may choose based on their content preferences.\textsuperscript{134}

Considerations for Congress

Among the overarching questions regarding misinformation and content moderation practices on social media are the following:

- Should Congress or the Executive Branch take action to address misinformation or content regulation?
- Is action necessary to reduce the spread of misinformation or to prevent censorship?
- If action to address the spread of misinformation and prevent censorship is deemed necessary, which institutions, public and private, should bear responsibility for it?
- Who defines misinformation, how, for what purpose, and under what authority?

While Congress may choose not to take any actions to address social media operators’ content moderation practices, if it chooses to, there are a range of potential legislative actions it could take, from legislation designed to support existing practices to regulation of social media operators.


\textsuperscript{134} Ibid.
Potential Legislative Actions

Congress may decide, possibly in light of free speech concerns, that no legislative action should be undertaken to either restrict certain types of content or to require private sector actors to carry content. Social media operators could adjust their own moderation policies and voluntarily address the spread of misinformation. Social media operators regularly refine their algorithms to adjust which content they prioritize and moderate. Absent additional regulation, social media operators may or may not adjust their operations to curtail the spread of what they deem misinformation in response to their users, advertisers, government bodies, and other external stakeholders.

Some social media operators may develop tailored approaches to prevent the spread of misinformation on their sites. However, each operator’s approach may vary in scope and efficacy, potentially achieving success in some cases while failing in others. These efforts may also be unevenly applied, resulting in the circulation of misinformation as content moves across platforms that employ uncoordinated approaches to dealing with content. Congress could consider whether it could take complimentary actions, such as requiring some or all social media operators to regularly publish detailed content moderation transparency reports (similar to or beyond what some operators already do voluntarily). This may encourage a positive balance between the speech rights of users and social media operators. One action that has been proposed is to mandate that social media users disclose their identity. If Congress decides to pursue similar measures, it could weigh prospective benefits with the potential privacy implications and the possible effects on speech. Such measures may help address inauthentic online behavior and the spread of perceived misinformation by bots, but may not address its spread by other users.

Congress may consider whether the prevalence of misinformation on social media platforms is sufficiently detrimental to public well-being to warrant legislative action, given the large role that platforms play in hosting speech and information exchange among hundreds of millions of Americans. However, any legislation that attempts to formally define misinformation, as distinct from other forms of speech, may be contested.

Amending Section 230 to address misinformation on interactive computer services—either to increase or limit moderation—could affect not only social media platforms, but also many other types of entities, potentially including search engines, internet service providers, video sharing sites, dating sites, travel sites, and the comment section of websites. If Congress intends any changes to Section 230 to apply only to social media platforms, it may need to develop a definition of “social media platforms” that distinguishes these platforms from other interactive computer services and that seeks to prevent circumvention of the application of this definition by nominal changes in the way individual firms operate their businesses.

Congress may choose to regulate social media companies’ content moderation practices, particularly if it believes these companies will not alter their practices in response to pressure from users and competitors. If there were numerous social media sites that were considered to be interchangeable, users displeased with the types of content allowed or suppressed on one site would be able to move to another site. However, large social media operators may be considered natural monopolies that benefit from incumbency advantages, including network effects and economies of scale, that make it difficult for new firms to enter and compete in the market, limiting the number of social media sites users can choose from. Although the initial fixed cost of

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135 47 U.S.C. §230(f)(2) defines an interactive computer service as “any information service, system, or access software provider that provides or enables computer access by multiple users to a computer server, including specifically a service or system that provides access to the Internet and such systems operated or services offered by libraries or educational institutions.”
creating a website is low, developing the underlying infrastructure—such as systems to moderate content and to collect, process, and store user data—and obtaining enough users to benefit from network effects can be costly and create natural barriers to entry. In addition, users may be unwilling to join more than a certain number of social media sites, and the amount of time each user can spend on a site is naturally constrained by other activities. As social media operators compete for more users and their time by offering new features and other amenities, a few operators may eventually dominate.

Historically, some natural monopolies have been considered public utilities and regulated as such, often through the establishment of both common carriage rules and the establishment of regulatory federal and state agencies that act on the public’s behalf. Similarly, federal regulatory oversight of social media operators could be established through the creation of a federal agency, commission, federal agency program, interagency activity, or program at a current agency. If it were to pursue this course, Congress would need to specify the entity’s jurisdiction, specific objectives, and the authorities it would exercise. These could include standards for content moderation practices and user privacy. The entity may be required to establish an appeals process and potential remedies for individuals and entities who feel that regulations and laws have been misapplied and that they have suffered harm as a result. Congress may also consider the effects—intended or otherwise—that public-sector action may have on the general availability of information, its quality, public safety, speech rights, competition, and privacy.

There may be concerns about whether any entity tasked with addressing misinformation adequately represents the diverse population of the United States and its interests, whether it balances the equities of relevant public and private stakeholders and citizens, and whether it adequately balances the public interest need to minimize the negative effects of misinformation with the protection of First Amendment rights and other civil liberties.

Antitrust actions to break up the largest social media operators and promote more venues for speech might increase the number of social media sites offered to users, which could result in operators competing with content moderation practices. However, it is unclear if, absent any other changes, increasing the number of social media outlets will address the spread of misinformation. In a market with a larger number of operators, social media platforms may develop content moderation policies with varying approaches to defining and moderating misinformation to distinguish themselves from competitors; what may be considered misinformation on one platform may not be on another. Antitrust actions could be accompanied by legislative actions, such as requiring certain content to be moderated or not moderated, content moderation transparency reports, and inauthentic behavior disclosures. Nevertheless, a limited number of operators may continue to dominate, particularly if the social media market is susceptible to natural monopolies.

Congress may choose to direct a federal entity to engage in advisory rather than regulatory actions. Such activities could include conducting or commissioning formal studies to identify the scale and scope of misinformation spread through social media, developing interagency plans to address misinformation, supporting authoritative information sources that social media operators could voluntarily link to, and engaging with the private sector to establish content moderation transparency and reporting guidelines.

**Concluding Thoughts**

If Congress chooses to address the spread of misinformation on social media or content moderation practices generally, it might consider the intended scope of proposed actions, under what conditions they would be applied, and the range of potential legal, social, and economic
consequences, both intended and unintended, that may result. It might consider whether any action that it takes imposes costs, monetary or otherwise, that further entrenches the market power of incumbent operators. It might also consider how U.S. actions, such as regulating social media companies’ content moderation practices, would fit within an international legal framework. Major social media operators are multinational corporations, and the internet provides access to their websites worldwide, unless governments erect firewalls to block access. Crafting legislation to address the activities of U.S.-based social media sites in other countries may be difficult, particularly if another country seeks to impose obligations that are in conflict with U.S. law. Conversely, it may not be possible for U.S. legislation to regulate the internal activities—such as algorithms or content moderation practices—of foreign-based social media platforms.
Appendix A. Social Media Definitions

This report considers social media to include online sites that allow users to access interactive services, create and engage with content, and connect with other users; the networks of social media users associated with specific sites; the software and hardware infrastructures that enable the provision and operation of social media sites and their interoperability with external data and services; and the structures and policies of corporations governing the social media sites and infrastructures they operate.

Social Media Site

This report defines a social media site as an internet-based interface that allows users to develop individual and group profiles; make, share, view, and interact with content; connect with other users; and join affinity groups.136 Users post and access content through a website or application on a computer or mobile device. Many interactive computer services, such as those designed to allow users to arrange dates, provide travel information, or offer recommendations about businesses or professional services, share some but not all of these characteristics, and are not considered social media sites for purposes of this report.

Social Media User

Social media users are individuals who have registered an account with at least one social media site. As of January 2020, there were an estimated 3.8 billion social media users globally out of an estimated 4.5 billion internet users.137 In the United States, research firm Dataportal estimates 70% of the total population were active social media users as of the start of 2020, based on reported potential advertising reach of social media platforms.138

Social Media Algorithm

Social media operators use algorithms to tailor some of what each user sees at a particular time on their sites. These algorithms are used to predict the relevance of content to specific users, based on past user behavior, and other factors. Algorithms help social media operators with the logistics of sorting the massive amount of content that users post and to prioritize content based on estimation of relevance for dissemination. Each social media operator determines relevance differently based on the user and usage data it collects and weighs. The data includes contacts and interaction with contacts, specific content read or watched, the amount of time spent reading and watching specific content, specific content liked and shared, and subscriptions to topical or thematic content categories and groups. As data collection grows, the social media providers constantly refine and adjust their algorithms. Social media operators are able to sell narrowly targeted advertising based on their ability to reach specific users.

Social Media Platform

The term social media platform refers to the technical infrastructure of social media that, in addition to allowing users to post and interact with content and establish social networks, enables connection to other sites, applications, and data, and allows third-party developers to build applications and services that integrate with the platform. Application programming interfaces regulate and facilitate data exchange between applications making “a website programmable by offering structured access to its data and functionality and turn[ing] it into a platform that others can build on.”

Social Media Enabling Infrastructure

Social media enabling infrastructure consists of the distributed architecture of hardware and software that enables the provision of social media sites. This infrastructure may be owned by social media operators or third-party providers, and includes data centers containing the computer systems that serve, store, and process data and telecommunication systems that aid the flow of information to, from, and within a social media network. This infrastructure enables social media operators to host content; provide content recommendations; deliver content to users with minimal delay; and store, mine, and share user and partner data. Social media operators rely heavily on public and private telecommunication networks to provide content and exchange data with end users.

Social Media Operator

Social media operators are the companies that operate social media sites. For example, the top nine social media sites, among others, as ranked by percentage of U.S. adults who reported using them in a June 2019 survey conducted by the Pew Research Center, were YouTube, Facebook, Instagram, Pinterest, LinkedIn, Snapchat, Twitter, WhatsApp, and Reddit. Each is operated by a corporate entity headquartered in the United States. Alphabet Inc., parent of Google LLC, owns YouTube. Facebook Inc. owns its namesake service, as well as Instagram and WhatsApp. Pinterest Inc., Twitter Inc., and Reddit Inc. operate their respective namesake services. The Microsoft Corporation owns LinkedIn. Snap Inc. operates Snapchat. Each of these companies is publicly traded, with the exception of Reddit Inc., which is privately held.


Appendix B. Section 230 and COVID-19 Misinformation Legislation

Table B-1. Selected Legislation on Section 230 Introduced in the 116th Congress

<table>
<thead>
<tr>
<th>Legislation</th>
<th>Title</th>
<th>Section on Section 230</th>
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<tbody>
<tr>
<td>H.R. 4027</td>
<td>Stop the Censorship Act</td>
<td>Would have amended Section 230(c) to limit the scope of liability protection for restricting access to only content that is unlawful.</td>
</tr>
<tr>
<td>H.R. 4232</td>
<td>Protecting Local Authority and Neighborhoods Act</td>
<td>Would have amended Section 230(c) to state that the bill would not affect enforcement of laws related to leasing and renting property.</td>
</tr>
<tr>
<td>H.R. 492</td>
<td>Biased Algorithm Deterrence Act of 2019</td>
<td>Would have amended Section 230(c) to remove liability protection from social media services if the service or its algorithm does any of the following: (1) displays user-generated content in an order that is not chronological; (2) delays the display of such content relative to other content; or (3) hinders the display of such content for reasons other than to carry out the user’s direction or to restrict material that the provider or user considers obscene, lewd, lascivious, filthy, excessively violent, harassing, or otherwise objectionable.</td>
</tr>
<tr>
<td>H.R. 7808</td>
<td>Stop the Censorship Act of 2020</td>
<td>Would have amended Section 230(c) to limit the scope of liability protection for restricting access to content that is unlawful or promotes violence or terrorism, rather than objectionable content.</td>
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<tr>
<td>H.R. 8454</td>
<td>Eliminating Abusive and Rampant Neglect of Interactive Technologies (EARN IT) Act of 2020</td>
<td>Would have amended Section 230(e) to state that the bill would not affect enforcement of child sexual exploitation laws and protect interactive computer service providers from liability for certain encryption technologies.</td>
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<tr>
<td>H.R. 8515</td>
<td>Don’t Push My Buttons Act</td>
<td>Would have amended Section 230(c) to remove liability protection from interactive computer services that collect information about users’ habits, preferences, or beliefs and that use an automated function to deliver content to the user based on the information collected about each user.</td>
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<tr>
<td>H.R. 8517</td>
<td>Protect Speech Act</td>
<td>Would have amended Section 230(c) to provide liability protection for interactive computer services that restrict access to content that (1) is obscene, lewd, lascivious, filthy, excessively violent, promoting terrorism or violent extremism, harassing, promoting self-harm, or unlawful; or (2) violates the applicable terms of service or use. The liability protections would not have applied to other actions taken by interactive computer services. The bill also specified instances in which a person or entity could be held liable for information provided by another person or entity.</td>
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<tr>
<td>H.R. 8596</td>
<td>Limiting Section 230 Immunity to Good Samaritans Act</td>
<td>Would have amended Section 230(c) to provide liability protection only if interactive computer services adopt and maintain terms of service that describe any policies related to restricting access to material. The provider would also have been required to design and operate the terms of service in “good faith,” or with fair dealing standards without fraudulent intent.</td>
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<tr>
<td>Legislation</td>
<td>Title</td>
<td>Section on Section 230</td>
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<tr>
<td>H.R. 8636</td>
<td>Protecting Americans from Dangerous Algorithms Act</td>
<td>Would have amended Section 230(c) to remove liability protection from interactive computer services that use algorithms or other computational process to rank or alter the delivery or display of information, except for those sorted chronologically, alphabetically, by user rating, or randomly.</td>
</tr>
<tr>
<td>H.R. 8719</td>
<td>Curbing Abuse and Saving Expression in Technology (CASE-IT) Act</td>
<td>Would have amended Section 230(c) to remove liability protection for interactive computer services that create, develop, posts, materially contributes to illegal content, or induces another person to do so. The bill would also have removed liability protection from interactive computer services that knowingly permits or facilitates certain contact between adults and minors and content that is indecent, obscene, or otherwise harmful to minors.</td>
</tr>
<tr>
<td>H.R. 8896</td>
<td>Abandoning Online Censorship (AOC) Act</td>
<td>Would have repealed Section 230.</td>
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<tr>
<td>H.R. 8922</td>
<td>Break Up Big Tech Act of 2020</td>
<td>Would have amended Section 230(c) to remove liability protection from interactive computer services that sell advertising based on users’ personal characteristics, (2) place items into the stream of commerce, (3) collect data for commercial purposes, and (4) use a design that adds to the service. The bill would also have removed liability protections from social media services that display user-generated content in an order other than chronological order.</td>
</tr>
<tr>
<td>S. 1914</td>
<td>Ending Support for Internet Censorship Act</td>
<td>Would have amended Section 230(c) to provide liability protection only if the interactive computer service receives an immunity certification from the Federal Trade Commission. To receive the immunity certification, the interactive computer service would have been required to prove that it does not moderate information in a politically biased manner.</td>
</tr>
<tr>
<td>S. 3398</td>
<td>Eliminating Abusive and Rampant Neglect of Interactive Technologies (EARN IT) Act of 2020</td>
<td>Would have amended Section 230(e) to remove liability protections of online service providers regarding claims alleging violations of child sexual exploitation laws.</td>
</tr>
<tr>
<td>S. 3983</td>
<td>Limiting Section 230 Immunity to Good Samaritans Act</td>
<td>Would have amended Section 230(c) to provide liability protection only if the interactive computer service adopts and maintains terms of service that describes any policies related to restricting access to material. The interactive computer service would have been required to design and operate the terms of service in “good faith,” or with fair dealing standards without fraudulent intent.</td>
</tr>
<tr>
<td>S. 4062</td>
<td>Stopping Big Tech’s Censorship Act</td>
<td>Would have amended Section 230(c) to provide liability protection only for interactive computer services that take reasonable steps to prevent or address the unlawful use or publication of information. The bill would have removed liability protection for interactive computer services that restrict access to content unless the action is taken in a viewpoint-neutral manner, only limits the time, place, or manner in which the material is available, and there is a compelling reason for restricting access. The bill also requires that interactive computer services clearly explain the practices used to restrict access.</td>
</tr>
<tr>
<td>S. 4066</td>
<td>Platform Accountability and Consumer Transparency (PACT) Act</td>
<td>Would have amended Section 230(c) to include an intermediary liability standard on notification of illegal content or activity.</td>
</tr>
<tr>
<td>Legislation</td>
<td>Title</td>
<td>Section on Section 230</td>
</tr>
<tr>
<td>-------------</td>
<td>-------</td>
<td>------------------------</td>
</tr>
<tr>
<td>S. 4337</td>
<td>Behavioral Advertising Decisions Are Downgrading Services (BAD ADS) Act</td>
<td>Would have amended Section 230(c) to remove liability protection from interactive computer services that serve or deliver advertisements based on users’ personal characteristics.</td>
</tr>
<tr>
<td>S. 4534</td>
<td>Online Freedom and Viewpoint Diversity Act</td>
<td>Would have amended Section 230(c) to limit the scope of liability protection to restricting access to content that promotes self-harm, terrorism, or is unlawful, rather than objectionable content.</td>
</tr>
<tr>
<td>S. 4632</td>
<td>Online Content Policy Modernization Act</td>
<td>Would have amended Section 230(c) to limit the scope of liability protection to restricting access to content that promotes self-harm, terrorism, or is unlawful, rather than objectionable content.</td>
</tr>
<tr>
<td>S. 4756</td>
<td>Don’t Push My Buttons Act</td>
<td>Would have amended Section 230(c) to remove liability protection from interactive computer services that collect information about users’ habits, preferences, or beliefs and that use an automated function to deliver content to the user based on the information collected about each user.</td>
</tr>
<tr>
<td>S. 4758</td>
<td>See Something, Say Something Online Act of 2020</td>
<td>Would have amended Section 230(e) to remove liability protection for failure to take reasonable steps to prevent or address suspicious transmission activity.</td>
</tr>
<tr>
<td>S. 4828</td>
<td>Stop Suppressing Speech Act of 2020</td>
<td>Would have amended Section 230(c) to limit the scope of liability protection to restricting access to content that is unlawful or promotes violence or terrorism, rather than objectionable content.</td>
</tr>
<tr>
<td>S. 5012</td>
<td>Holding Sexual Predators and Online Enablers Accountable Act of 2020</td>
<td>Would have amended Section 230(e) to state that the bill would have no effect on sexual exploitation and other abuses of children laws.</td>
</tr>
<tr>
<td>S. 5020</td>
<td>N/A</td>
<td>Would have repealed Section 230.</td>
</tr>
<tr>
<td>S. 5085</td>
<td>N/A</td>
<td>Would have repealed Section 230.</td>
</tr>
</tbody>
</table>

**Source:** CRS, using Congress.gov.

**Notes:** This listing includes bills whose major purposes included changing 47 U.S.C. §230. The table does not include bills that made only passing reference to Section 230. N/A indicates that a title was not available when the list was compiled on January 5, 2021.
### Table B-2. Selected Legislation Addressing COVID-19 Misinformation Introduced in the 116th Congress

<table>
<thead>
<tr>
<th>Legislation</th>
<th>Title</th>
<th>Section on COVID-19 Misinformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H.R. 133</td>
<td>Consolidated Appropriations Act</td>
<td>Authorized funding for public awareness campaigns to improve information about COVID-19 vaccines, including countering misinformation.</td>
</tr>
<tr>
<td>H.R. 6599</td>
<td>COVID Research Act of 2020</td>
<td>Would have provided coordination of research and development for pandemic disease prediction, forecasting, computing, and other purposes, including identifying challenges and developing strategies to address misinformation.</td>
</tr>
<tr>
<td>H.R. 6800; H.R. 8406; H.R. 925</td>
<td>Health and Economic Recovery Omnibus Emergency Solutions (HEROES) Act</td>
<td>Would have called for a study on the current understanding of the spread of COVID-19-related disinformation on the internet and social media platforms. It would have authorized $1 million for the National Science Foundation to contract with the National Academies of Science, Engineering, and Medicine to conduct the study.</td>
</tr>
<tr>
<td>H.R. 7484</td>
<td>Preventing China from Exploiting COVID-19 Act</td>
<td>Would have assessed the means and methods used by China to disseminate misinformation on social media platforms and through other English-based media.</td>
</tr>
<tr>
<td>H.R. 7546</td>
<td>Minority Community Public Health Emergency Response Act of 2020</td>
<td>Would have authorized appropriations for grants to provide public education related to the COVID-19 pandemic, including responses to misinformation.</td>
</tr>
<tr>
<td>H.R. 8061</td>
<td>Community Immunity During COVID-19 Act of 2020</td>
<td>Would have amended Sec. 317 the Public Health Service Act to authorize grant funding to combat misinformation on the safety of vaccines, including those licensed to prevent, mitigate, or treat COVID-19.</td>
</tr>
<tr>
<td>H.R. 8395</td>
<td>COVID-19 Disinformation Research and Reporting Act of 2020</td>
<td>Would have authorized $1 million for the National Science Foundation to contract with the National Academies of Science, Engineering, and Medicine to study the role of misinformation on the public response to COVID-19 and the role of social media in disseminating misinformation and disinformation.</td>
</tr>
<tr>
<td>H.R. 8966</td>
<td>COVID-19 Vaccine Awareness Support Act of 2020</td>
<td>Would have authorized funding for public awareness campaigns to improve information about availability of COVID-19 vaccines, including countering misinformation and disinformation.</td>
</tr>
<tr>
<td>S. 3669</td>
<td>COVID-19 International Response and Recovery Act of 2020</td>
<td>Would have authorized $10 million to the U.S. Agency for Global Media to enhance investigative and specialized reporting on COVID-19, expand efforts to counter COVID-19 disinformation in its media markets, increase staff training, and increase staff and resources to provide appropriate research and support.</td>
</tr>
<tr>
<td>S. 4262</td>
<td>COVID-19 Health Disparities Action Act of 2020</td>
<td>Would have called for public awareness campaigns to dispel misinformation about COVID-19 symptoms, testing, or treatment.</td>
</tr>
<tr>
<td>S. 4499</td>
<td>COVID-19 Misinformation and Disinformation Task Force Act of 2020</td>
<td>Would have established a federal interagency COVID-19 misinformation and disinformation task force.</td>
</tr>
<tr>
<td>Legislation</td>
<td>Title</td>
<td>Section on COVID-19 Misinformation</td>
</tr>
<tr>
<td>-------------</td>
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</tr>
<tr>
<td>S. 4507</td>
<td>GET CARE Act of 2020</td>
<td>Would have amended the Public Health Service Act to include Sec. 230B, which would have authorized grant funding to carry out a national, evidence-based campaign to increase awareness of the importance of seeking preventive care during the COVID-19 pandemic, including combating misinformation.</td>
</tr>
<tr>
<td>S. 4732</td>
<td>COVID-19 Disinformation Research and Reporting Act of 2020</td>
<td>Would have authorized $1 million for the National Science Foundation to contract with the National Academies of Science, Engineering, and Medicine to study the role of misinformation on the public response to COVID-19 and the role of social media in promoting the spread of false information.</td>
</tr>
<tr>
<td>S. 4737</td>
<td>Community Immunity During COVID-19 Act of 2020</td>
<td>Would have amended Sec. 317 of the Public Health Service Act to authorize grant funding to combat misinformation on the safety of vaccines, including those licensed to prevent, mitigate, or treat COVID-19.</td>
</tr>
<tr>
<td>S. 4800</td>
<td>Health and Economic Recovery Omnibus Emergency Solutions (HEROES) Act</td>
<td>Would have called for a study on the current understanding of the spread of COVID-19-related disinformation on the internet and social media platforms. It would also have authorized $1 million for the National Science Foundation to contract with the National Academies of Science, Engineering, and Medicine to conduct the study.</td>
</tr>
<tr>
<td>S. 4958</td>
<td>COVID-19 Vaccine Awareness Support Act of 2020</td>
<td>Would have authorized funding for public awareness campaigns to improve information about availability of COVID-19 vaccines, including countering misinformation and disinformation.</td>
</tr>
</tbody>
</table>

**Source:** CRS, using Congress.gov.

**Notes:** The listed bills were introduced after January 1, 2020; the list was compiled on January 5, 2021. Only bills that specify actions to be taken specifically about the spread of COVID-19 misinformation are listed. If a bill had the same title as another bill in the same legislative body, and the section on COVID-19 misinformation was the same, the legislation numbers were grouped together.

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