
Cheap Speech Creation

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As we look back on Professor Eugene Volokh's predictive article about cheap speech, it is worth examining what other elements of the speech and media landscape, as well as the supporting legal infrastructure, have changed over that same period. This Essay focuses on the substantial reduction in the cost of speech creation, as opposed to distribution. After briefly discussing the accuracy of many of Volokh's most important predictions, it examines innovative technological changes that have enabled a larger number and more diverse range of people to engage in speech creation because of the rapidly shrinking costs of doing so by employing user-friendly interfaces. It provides examples of speech of profound public concern that has resulted from such changes. The Essay then traces the corresponding evolution in First Amendment doctrine and legal scholarship that has expanded the concept of what types of speech creation are covered by the free speech clause. Finally, it addresses some negative externalities

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I was honored to be invited to contribute to this symposium celebrating Professor Volokh's 1995 *Yale Law Journal* article and have enjoyed working with the excellent student editors. Professor Volokh has recently been criticized for his public position that there is pedagogical value in quoting the "N-word" from court decisions and other writings during classroom discussions. This journal's editors have joined in that criticism by including a statement in this issue arguing that the use of this language, even for pedagogical purposes and not employed as an epithet, risks normalizing the term. As a person of color who has been the target of racial epithets and as a First Amendment scholar and litigator, I believe this is an issue that is particularly complex and over which rational discourse is exceedingly challenging. Because this dispute has very little to do with this symposium's topic, I believe a different forum for addressing the editors' critiques would have been more appropriate.

of cheap speech creation, and how the law might confront the challenges presented by such costs without sacrificing speech creation's critical expressive value.

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INTRODUCTION

As I was working on my contribution to this Symposium, I frequently listened to music directly streamed through my computer's sound system from a premium Spotify account.¹ For material, I scoured not only the pages of my (still) hard copy of the New York Times, but also read articles from the online sites of several other national newspapers and news magazines. I subscribe to these online publications at a significantly lower price than it would cost me to receive hard copies. The law review articles, cases, and news stories that I read for my research were all downloaded from the internet (admittedly, these resources were already becoming more accessible by 1995, though the publications available would not have been as extensive). While taking breaks from writing, I read subscription-based, advertising-free publications about non-law topics that interest me. I also learned that NBC was closing one of its sports web sites, and that I would no longer be able to read columns by one of my favorite baseball writers. Soon after, however, that writer announced the beginning of a subscription-only online newsletter on a platform called Substack, where those, like me, who were willing to pay for it could continue to enjoy his work.²

In other words, I recognized that I was living (as are we all) in an information and media world very closely resembling the one that Professor Eugene Volokh sketched out twenty-five years ago in the article that brings us together for this symposium.³ Of course, substantial privilege is necessary to maintain access to all these various media. It is nonetheless true that accessing this range of sources in 1995 would have been more burdensome, more expensive, and substantially less tailored to my idiosyncratic interests. There is also reason to believe that with regard to some forms of speech, the downward cost trend will continue.

Professor Volokh's article predicted that "cheap speech" would become more prevalent because "new information technologies,

¹ SPOTIFY, <https://www.spotify.com/us/premium/> (last visited Jan. 24, 2021) [<https://perma.cc/HJF7-NZPN>].

² Craig Calcaterra, *Cup of Coffee*, SUBSTACK (Jan. 13, 2021), <https://cupofcoffee.substack.com/> [<https://perma.cc/W6SN-RGZH>]. Substack has been described as "a service that enables writers to draft, edit, and send e-mail newsletters to subscribers. Writers can choose whether subscriptions are free or paid; the minimum charge for paid subscriptions is five dollars a month or thirty dollars a year, and Substack takes ten per cent of all revenue." Anna Wiener, *Is Substack the Media Future We Want?*, NEW YORKER (Dec. 28, 2020), <https://www.newyorker.com/magazine/2021/01/04/is-substack-the-media-future-we-want> [<https://perma.cc/QN4A-L4ZD>].

³ Eugene Volokh, *Cheap Speech and What It Will Do*, 104 YALE L.J. 1805 (1995).

especially the ‘information superhighway’ or ‘infobahn,’ [would] dramatically reduce the costs of distributing speech.”⁴ In looking back on his thoughtful work, it is worth examining not only how much of what he foresaw has come into being, but also what other elements of the speech and media landscape have changed over that same period. In this paper, I focus on how, in addition to the substantial reduction in costs of *disseminating* speech that has occurred, it has also become much less expensive to engage in *speech-creating activities*, something that Volokh touched on, but did not emphasize.

My discussion will proceed in the following manner. First, it will briefly address how many of Professor Volokh’s most important predictions about cheap speech have come true, and that as a result, many commonplace features of our speech landscape have been forever transformed. Second, it will observe that while Professor Volokh’s main emphasis was on speech distribution, similar transformations have occurred in the realm of speech creation. This is a result of dramatic changes in technology that have enabled a larger number of people to engage in the production of speech due to rapidly shrinking costs and the wide availability of user-friendly interfaces that require little technical skill, even from novices. That technology, along with other developments, has also sparked cultural changes in the way we carry out political activism, professional journalism, and citizen journalism. Next, the Essay will focus on legal developments that have coincided with those technological changes. Over the past quarter century, First Amendment doctrine and scholarship has both responded to and facilitated cheap speech creation by evolving in ways that recognize the importance of such activity to further the underlying purposes of the free speech clause. I suggest that it is no coincidence that as speech became less expensive to produce, the recognition of broader First Amendment coverage was likely, if not inevitable. Finally, the Essay will address some of the negative externalities of cheap speech creation, examine the ways in which the law might confront the challenges presented by such costs, and suggest some possible issues that may arise in the coming generation.

I. CHEAP SPEECH AND WHAT IT HAS DONE

When Professor Volokh published *Cheap Speech* in 1995, the World Wide Web was just beginning to emerge as the primary space available to the average citizen where information could be accessed, stored, and transmitted. That same year saw Amazon.com, Craigslist, Match.com,

⁴ *Id.* at 1806 (footnotes omitted).

and eBay all go live.⁵ No one had yet heard of Napster, much less iTunes, and one of the first major portable digital music players, the iPod, would not be available for another six years.⁶ The creation of now nearly ubiquitous social networking sites Facebook, Twitter, and Instagram was still years away.⁷ And it would be nearly a decade before broadband connections to the internet would replace slow, dial-up connections.⁸

It was difficult to imagine exactly how quickly and how significantly these developments would change the world of human communication, but Professor Volokh did so in many ways. He began by noting that to the extent that the First Amendment's purpose is to promote a free-flowing marketplace of ideas, that marketplace was distorted because speech was much more accessible to those who are either wealthy or whose expression has mass appeal.⁹ He predicted, however, that new information technologies would lower the cost of distributing speech, leading to a richer, more diverse environment of information, ideas, and entertainment. As he wrote, "Cheap speech will mean that far more speakers – rich and poor, popular and not, banal and avant garde – will be able to make their work available to all."¹⁰ He foresaw four social

⁵ *World Wide Web Timeline*, PEW RES. CTR. (Mar. 11, 2014), <https://www.pewresearch.org/internet/2014/03/11/world-wide-web-timeline/> [<https://perma.cc/VA8Z-5VT7>].

⁶ Portable CD players such as the Sony Discman, which used digital technology, preceded the iPod, though they could not store nearly the same amount of music as the iPod. Devin Coldewey, *30 Years Ago, the CD Started the Digital Music Revolution*, NBC NEWS (Sept. 28, 2012, 12:59 PM PDT), <https://www.nbcnews.com/tech/gadgets/30-years-ago-cd-started-digital-music-revolution-flna6167906> [<https://perma.cc/4WRV-PX4H>]. Napster was launched in 1999. Tom Lamont, *Napster: The Day the Music Was Set Free*, GUARDIAN (Feb. 23, 2013, 7:05 EST), <https://www.theguardian.com/music/2013/feb/24/napster-music-free-file-sharing> [<https://perma.cc/YK76-9L9C>]. Apple introduced iTunes in January 2001, followed by the sale of the first iPod later that year. Press Release, Apple Introduces iTunes — World's Best and Easiest to Use Jukebox Software, APPLE (Jan. 9, 2001), <https://www.apple.com/newsroom/2001/01/09Apple-Introduces-iTunes-Worlds-Best-and-Easiest-To-Use-Jukebox-Software/> [<https://perma.cc/FDN9-GRXX>]; Nate Lanxon & Andrew Hoyle, *The Complete History of Apple's iPod*, CNET (Oct. 25, 2011, 5:04 AM PT), <https://www.cnet.com/pictures/the-complete-history-of-apples-ipod/> [<https://perma.cc/Q8ZV-2L4N>].

⁷ *World Wide Web Timeline*, *supra* note 5.

⁸ *Id.*

⁹ Volokh, *supra* note 3, at 1806. If true, this would address one of the central internal critiques of the marketplace theory, which is that the speech marketplace does not function perfectly, in part because of the tremendous disparity in resources available to different speakers. See generally Joseph Blocher, *Free Speech and Justified True Belief*, 133 HARV. L. REV. 439, 452 (2019) (noting that the purpose of the First Amendment is to promote a free marketplace of ideas, but that marketplace is distorted by massive resource inequalities).

¹⁰ Volokh, *supra* note 3, at 1807.

consequences from such changes: (1) the democratization and diversification of the speech marketplace; (2) the shift of power away from intermediaries, such as publishers and bookstores, to speakers, as well as the greater ability of listeners to tailor what they consume to their own interests; (3) a positive and negative effect on poor listeners, who would gain access to much speech, while still being excluded from other sources; and (4) substantial changes in advertising, which would disappear from some forms of media, but also be targeted more precisely at audiences eager to view or hear it in other media.¹¹

Much of what Volokh foresaw has now happened. His prediction about the transformation of the music business through the ability to transmit digital files directly to consumers, reducing the overall cost of albums, was spot on.¹² It is unclear, however, whether the diversification he predicted has occurred. The move to subscription music and video streaming services, through which producers license their creative material and consumers listen to or view it without limitation, has made it more difficult to measure the relative popularity of mainstream artists versus emerging, independently produced entertainers.¹³

Indeed, the concept of the music “album” has been disrupted by the ability to either stream or purchase digital files of individual songs. This change might actually be unattractive from some artists’ standpoint, as some forms of music recording are conceived of and executed as “concept albums,” more than just a random collection of songs, but an artistic whole that is greater than the sum of its parts.¹⁴ That same

¹¹ *Id.*

¹² Volokh, *supra* note 3, at 1808-09 (predicting the cost of music distribution will drop); see Raymond Shih Ray Ku, *The Creative Destruction of Copyright: Napster and the New Economics of Digital Technology*, 69 U. CHI. L. REV. 263, 300 (2002) (observing that “in cyberspace, copying and distribution costs are virtually nonexistent”).

¹³ See Flora Rostami, *Free Is Hard to Beat: A Closer Look at the Digital Music Download Dilemma*, UCLA J.L. & TECH. 1, 27 (2011) (discussing the need for alternative means of distributing revenue to artists because popularity is harder to measure when music is distributed through streaming services).

¹⁴ A concept album is “a form in which the music, imagery, and, perhaps most significant, lyrics are conceptually linked to a single overall theme or unified story.” PHIL ROSE, ROGER WATERS AND PINK FLOYD: THE CONCEPT ALBUMS 8 (Gary Radford ed., 2015). Interestingly, in light of Volokh’s emphasis on connections between new technology and speech, concept albums were not possible until the development of the long-playing record, which “could accommodate 20 uninterrupted minutes of music per side and offered higher fidelity than pre-1948 recordings.” DAVID LUHRSEN & MICHAEL LARSON, *ENCYCLOPEDIA OF CLASSIC ROCK* 75 (2017); cf. *Hurley v. Irish-Am. Gay, Lesbian & Bisexual Grp. of Bos.*, 515 U.S. 557, 574 (1995) (“Rather like a composer, the Council selects the expressive units of the parade from potential participants, and though the

development, however, has surely enhanced the ability of consumers to select entertainment suited to their individual tastes.

With regard to books, Volokh accurately predicted dramatic reductions in distribution costs as people moved to e-books (or what he called c-books) and that shorter newsletters and opinion pieces would be more widely available independent of publishers.¹⁵ Again, however, the level of diversification resulting from those changes is unclear.

Newspapers and magazines, he suggested, would be challenged because while their distribution costs would fall, the production costs for newsgathering would remain high.¹⁶ Here, Volokh's forecast is a little bit self-contradictory. He noted on the one hand that "the great majority of people do not subscribe to newspapers,"¹⁷ thus minimizing the negative effects of changes to the industry, while also suggesting that "[p]eople will still buy newspapers for news and will expect to get their familiar columnists, too."¹⁸

Furthermore, while he accurately predicted drastic losses for newspapers in classified ad revenue (Craigslist was founded the year his article was published¹⁹), he seemed to think that because advertisements in newspapers and magazines were not as intrusive as television and radio ads, there would be less pressure to reduce their quantity.²⁰ In fact, of course, ad revenue losses for newspapers have been exceptionally large and that has not been made up by revenues generated by their online content. From 2000 to 2012, American newspapers' annual classified ad revenue fell from a high of \$19.6 billion to \$4.6 billion, a loss of \$15 billion in annual income.²¹ Similarly, an industry once dependent on commercial advertising revenue to subsidize its important journalistic work has lost out to competition for

score may not produce a particularized message, each contingent's expression in the Council's eyes comports with what merits celebration on that day.").

¹⁵ Volokh, *supra* note 3, at 1820-24.

¹⁶ *Id.* at 1826.

¹⁷ *Id.* at 1822.

¹⁸ *Id.* at 1823.

¹⁹ James Doubek & Mary Louise Kelly, *At 25 Years, Understanding the Longevity of Craigslist*, NPR (Feb. 24, 2020), <https://www.npr.org/2020/02/24/808965078/at-25-years-understanding-the-longevity-of-craigslist> [<https://perma.cc/XN82-RFQ2>].

²⁰ Volokh, *supra* note 3, at 1841.

²¹ John Reinan, *How Craigslist Killed the Newspapers' Golden Goose*, MINNPOST (Feb. 3, 2014), <https://www.minnpost.com/business/2014/02/how-craigslist-killed-newspapers-golden-goose/> [<https://perma.cc/6R9R-F5N6>].

ads on social media platforms.²² Commercial advertising revenue, which peaked around 2000, recently fell to levels last seen in the 1950s.²³ The impact of these losses has been manifest. As a recent Wall Street Journal article reported, between 2004 and 2018, nearly 1800 newspapers have gone out of business. Most of these were local newspapers, which once played an important role in informing Americans.²⁴ From 1990 to 2016, jobs at American newspapers declined from 465,000 to 183,000.²⁵ The efforts of some newspapers to move to digital content to reverse this trend have been largely unsuccessful.

Perhaps Volokh's one oversight, if you can even call it that, concerns the rise of social media companies as speech intermediaries. While we might be closer to the ideal of direct speech between speaker and listener, bypassing what were then the primary intermediaries of record companies, publishers, and newspapers, those traditional intermediaries have now been replaced to some degree by Facebook, Twitter, and other social media sites. Even as opportunities for direct speaker to audience communication expanded, there still needed to be an easy way to manage the distribution of speech to a wider number of consumers and for consumers to sort through a mass of information.²⁶ Social media now plays that role, but it has done so at some cost.

While these social media services are "free" to consumers, the business model on which they rest, and which generates enormous income for these companies, is to sell targeted advertising to businesses. Because social media companies have access to vast amounts of data based on the accumulation and aggregation of consumers' online behavior, they can offer advertisers a way to acutely identify their intended audience rather than indiscriminately broadcasting ads over the airwaves to the general public.²⁷ Critics have dubbed this model

²² Vlad Savov, *The Decline of Print Visualized: US Newspaper Ad Sales Falling Off a Cliff*, VERGE (Mar. 20, 2012), <https://www.theverge.com/2012/3/20/2886806/the-decline-of-print-visualized-us-ad-sales> [https://perma.cc/6GGF-SNCS].

²³ *Id.*

²⁴ Keach Hagey, Lukas I. Alpert & Yaryna Serzek, *In News Industry, a Stark Divide Between Haves and Have-Nots*, WALL ST. J. (May 4, 2019), <https://www.wsj.com/graphics/local-newspapers-stark-divide/> [https://perma.cc/4FF8-BKRS].

²⁵ *Id.*

²⁶ Jack M. Balkin, *Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society*, 79 N.Y.U. L. REV. 1, 7 (2004) ("The digital revolution made a different kind of scarcity salient. It is not the scarcity of bandwidth but the scarcity of audiences, and, in particular, scarcity of audience attention.").

²⁷ Under this model, consumers pay for access to Facebook and other social media sites not with membership fees, but by granting consent to those sites through terms of service agreements to allow access to much of their private data, which those companies

“surveillance capitalism,” because such targeted advertising is the single most valuable product social media companies have to sell.²⁸ But we have now witnessed many downsides as well, as data mining has led to privacy intrusions and user data has not only facilitated precise commercial advertising, but also the targeted spread of disinformation.²⁹

In addition to the problem of scarcity of attention that the onslaught of information has created, Volokh’s forecast that marginalized speakers would be able to bypass institutional intermediaries and reach their audiences has yet to fully emerge. Although such groups can perhaps identify and reach their targeted audiences more easily, to some degree that just allows them to preach to the converted. To engage in speech that has a chance of influencing broader public discourse, such groups might still need a signal boost from more traditional mainstream media entities, and that is still less likely for groups whose views are not already well inside the mainstream. Indeed, even today, many more Americans get their news from television than from social media.³⁰ In

then commodify. See Amy Kapczynski, *The Law of Informational Capitalism*, 129 YALE L.J. 1460, 1468-69 (2020) (describing Google’s business model); Lina M. Khan & David E. Pozen, *A Skeptical View of Information Fiduciaries*, 133 HARV. L. REV. 497, 505-06 (2019) (observing that reform efforts to protect user privacy are incompatible with Facebook’s business model).

²⁸ See generally SHOSHANA ZUBOFF, *THE AGE OF SURVEILLANCE CAPITALISM: THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER* (2019) (using the term “surveillance capitalism” to describe the gathering of mass user data by technology companies for sale to third parties).

²⁹ See, e.g., Songtao Shang, Chu Qiu, Quan Qi, Kaihui Mu & Bo Wang, *A Precision Advertising System Based on Data Mining*, 34 ADVANCES INTELLIGENT SYSTEMS RES. 762 (2013), https://www.researchgate.net/publication/266646602_A_Precision_Advertising_System_Based_on_Data_Mining [<https://perma.cc/QQ4Y-3JVC>] (explaining a precision advertising system based on data mining); Zilong Zhao, Jichang Zhao, Yukie Sano, Orr Levy, Hideki Takayasu, Misako Takayasu, Daqing Li, Junjie Wu & Shlomo Havlin, *Fake News Propagates Differently from Real News Even at Early Stages of Spreading*, EPJ DATA SCI. (Apr. 3, 2020), <https://epjdatascience.springeropen.com/articles/10.1140/epjds/s13688-020-00224-z> [<https://perma.cc/E24C-AB4N>] (explaining how social media can be an unexpected conduit circulating false news through a large population); *How is Fake News Spread? Bots, People like You, Trolls, and Microtargeting*, CTR. FOR INFOR. TECH. & SOC’Y, <https://www.cits.ucsb.edu/fake-news/spread> (last visited Jan. 31, 2021) [<https://perma.cc/KQ5L-PDT9>] (discussing how fake news is spread on the internet).

³⁰ Amy Mitchell, Mark Jurkowitz, J. Baxter Oliphant & Elisa Shearer, *Americans Who Mainly Get Their News on Social Media are Less Engaged, Less Knowledgeable*, PEW RES. CTR. (July 30, 2020), <https://www.journalism.org/2020/07/30/americans-who-mainly-get-their-news-on-social-media-are-less-engaged-less-knowledgeable/> [<https://perma.cc/W8GM-YQW5>] (reporting that 45% of adults get their news primarily from network, local, or cable television news sources, and only 18% get their news primarily from social media).

order to reach a wider audience, then, less powerful speakers might need to spend more resources on other ways to garner attention to their causes. For example, a small racial justice group without national name recognition might need to invest in in-house or contract staff to get their message out and spend more money on travel or other costs associated with pushing their stories to mainstream journalists and news outlets. These costs would also be necessary even if speech creation costs have fallen, as discussed below.

Volokh's article also made a couple of predictions about the new media and the First Amendment. His more general point was that to the extent then-current First Amendment doctrine relied on a pre-internet set of assumptions, it would likely need to be adjusted to adapt to the realities of electronic communication.³¹ Here, he foresaw both potentially positive sides and more troubling aspects of the expansion of cheap speech. Optimistically, he argued that the ability to engage in speech inexpensively would more closely resemble the ideal world in which the marketplace of ideas could function effectively.³² A downside, he speculated, was that cheap speech would also provide a greater voice to extremist groups, which previously would not be able to reach a wider audience because of the lack of funds and disregard by the mainstream media establishment.³³ A second negative consequence would be that the constitutional protection for false speech might have to be revisited as professional, nonpartisan news organizations wielded less power and influence.³⁴ Finally, Volokh suggested that the world of cheap speech could result in what contemporary commentators describe as "filter bubbles" — communities driven to consume and believe only news that comes from within their ideological base, and reinforced by factors such as confirmation bias, selective exposure, and motivated reasoning.³⁵ "As listeners get more control over the topics and viewpoints they see," he said, "they may choose to focus on a much narrower mix of information."³⁶

³¹ Volokh, *supra* note 3, at 1844-47.

³² *Id.* at 1847.

³³ *Id.* at 1848.

³⁴ *Id.* at 1848-49. First Amendment law did evolve with regard to false statements of fact, but in a direction that actually expanded the constitutional protection for lies rather than limiting such protection. See *United States v. Alvarez*, 567 U.S. 709, 718 (2012) (plurality opinion).

³⁵ See Alan K. Chen, *Free Speech, Rational Deliberation, and Some Truths About Lies*, 62 WM. & MARY L. REV. 357, 403, 408, 413 (2020).

³⁶ Volokh, *supra* note 3, at 1849.

Looking back at Professor Volokh's article twenty-five years later, it is not difficult to see that much of what he predicted has largely come true. Because his emphasis was on the unprecedented transformation of communication through electronic media, his discussion homed in on the costs of speech distribution. To be sure, he touches on the costs of the production of speech at a number of different points in his work,³⁷ but that was not the primary focus of his analysis. This Essay turns to that issue, next.

II. THE CHANGING TECHNOLOGICAL LANDSCAPE OF SPEECH CREATION

Equally important to the advent of cheap speech distribution has been the fundamental transformation of the average person's power to engage in easy and inexpensive speech creation. Over the past few generations, American society has witnessed speech evolve as a social practice in ways that have been heavily influenced and shaped in critical ways by emerging technologies, from radio to broadcast television to cable to the internet.³⁸ As Professor Volokh observed, until the availability of the internet, speech was heavily controlled by powerful and well-resourced intermediaries, such as major radio, television, and cable broadcasting networks.³⁹ But the availability of the internet changed the communications landscape by allowing individuals and smaller institutions to distribute speech without having to work through these intermediaries. But what has also made speech more accessible is the expansion and wide availability of devices that make it easy and inexpensive to engage in a range of expressive activity involving speech creation.

As discussed below, the definition of speech creation is important not only to understand its communicative value, but also because this

³⁷ For example, he discusses the falling costs of an artist to "make a commercially viable master recording relatively cheaply." *Id.* at 1809 n.9, 1815. And he mentions that production costs for "good opinion pieces" are quite low but that production costs for newspapers and for "high-quality, high-production-values entertainment" will remain high. *Id.* at 1823, 1826, 1832-33. None of the other contributions to the symposium that Volokh's article was part of discussed speech creation in any significant way, either.

³⁸ On the concept of understanding speech as a social practice, focusing more on its context than its substance, see generally Robert Post, *Recuperating First Amendment Doctrine*, 47 *STAN. L. REV.* 1249, 1250 (1995). *But see* Joseph Blocher, *Public Discourse, Expert Knowledge, and the Press*, 87 *WASH. L. REV.* 409, 418 (2012) ("If instead the boundaries [of the First Amendment] are based directly on whether particular speech acts further the value of democratic legitimation, the concepts of public discourse and protected social practices seem to be little more than conclusory labels.").

³⁹ Volokh, *supra* note 3, at 1834.

assessment is critical to determining to what extent this type of communicative activity counts as speech under the First Amendment.⁴⁰ By speech creation, I mean to describe a set of social practices that begin with the internal intellectual, inquisitive, deliberative, and creative processes of the human mind, the acquisition of information and images, and the early manifestation of that process into a tangible form of expression, even before it is conveyed to any audience. People who keep a journal in which they memorialize their most intimate thoughts are creating speech. The same is true for someone who writes a poem, novel, screenplay, or political speech, composes a piece of music, choreographs a dance, or draws images for an animated film.⁴¹ Sometimes, the creations of the mind are externalized, and are exercised by the manipulation of technology to enhance, alter, and transform the artistic work into something that cannot be simply created by the human hand.

Creation of speech also involves the process of engaging in practices that facilitate future engagement in speech, including the creation, gathering, and processing of data and the recording or other memorialization of events or information. For example, carrying out many of the basic practices of journalism or newsgathering involves speech creation. Newsgathering entails a range of activities that include doing research, interviewing witnesses and sources, gathering documentary evidence, observing events firsthand, and memorializing information.⁴² It might also entail the acquisition and analysis of tangible objects, such as water, air, and soil samples.

⁴⁰ Under First Amendment doctrine, whether a particular form of communication counts as speech is known as the “coverage” question. A form of communication can be covered by the First Amendment, but still be unprotected. Frederick Schauer, *The Boundaries of the First Amendment: A Preliminary Exploration of Constitutional Salience*, 117 HARV. L. REV. 1765, 1769 (2004).

⁴¹ For a comprehensive treatment of artistic creation as speech, see generally MARK V. TUSHNET, ALAN K. CHEN & JOSEPH BLOCHER, *FREE SPEECH BEYOND WORDS: THE SURPRISING REACH OF THE FIRST AMENDMENT* (2017).

⁴² The law offers no single definition of newsgathering. While the Supreme Court has recognized that “news gathering is not without its First Amendment protections,” *Branzburg v. Hayes*, 408 U.S. 665, 707 (1972), it has never elaborated on the scope of that right, much less the definition of what it covers. Some states have enacted shield laws that protect the privilege of news media organizations to protect their confidential sources but define news media as organizations that are engaged in news gathering, without defining the latter term. See, e.g., WASH. REV. CODE § 5.68.010 (2020) (defining news media simply as “any entity that is in the regular business of news gathering and disseminating news or information to the public by any means”). For some alternative definitions, see, for example, Camille Anjes Higham, Note, *Mediagathering vs. Newsgathering: Giving the Freedom of the Press Clause Due Recognition*, 13 FLA. COASTAL

Speech creation might also be understood to include conduct that facilitates speech in more concrete ways, such as spending money to buy a printer and paper, tattoo ink, or paint, or to support a political candidate or ballot initiative. These might also be described as conduct that is a necessary precursor to speech, but if so, that is because, like the other activities described here, they facilitate its creation. As Justin Marceau and I have conceptualized this process:

expressive activity typically takes place along a continuum of actions that include not only direct expression but also much of the conduct that is a necessary precursor to speech. At one end of the continuum or spectrum lie *the most basic elements of conduct that are necessary to engage in communication* – the purchase of paper, ink, paint, etc. At this end, many things will fall completely off the speech spectrum and will not be covered by the First Amendment. For example, buying clothes to participate in a rally or buying gasoline for the vehicle that a protestor drives to that rally are both antecedent to speech yet are too attenuated from the actual expressive activity to implicate the First Amendment. At the other end of the spectrum is the directly communicative element of the expressive process — shouting through a megaphone, exhibiting a painting, displaying a video.⁴³

Understanding the transformation of speech creation over the past twenty-five years requires a brief discussion of important changes to both technology and information acquisition practices.

L. REV. 417, 432 (2012) (referring to newsgathering rights in terms of “the necessity for journalists to be able to uncover information and investigate leads”); Erik Ugland, *Demarcating the Right to Gather News: A Sequential Interpretation of the First Amendment*, 3 DUKE J. CONST. L. & PUB. POL’Y 113, 166 (2008) (identifying one definition as “the search for and acquisition of newsworthy information for the purpose of communicating it to others”); see also 2 LEE LEVINE, SETH D. BERLIN, JAY WARD BROWN, GAYLE C. SPROUL & DAVID A. SCHULZ, *NEWSGATHERING AND THE LAW* § 17.01 (5th ed. 2020) (describing newsgathering as involving “the skill of . . . reporters in gaining access to places they are not welcome, securing documents not meant for public consumption, and unlocking the secrets of those who make the news” and increasingly involving the use of technology such as “the telephone, the tape recorder, the video camera, the hidden ‘hatcam,’ the computer, and the drone”). Accordingly, various definitions like the one I propose may be contested.

⁴³ Justin Marceau & Alan K. Chen, *Free Speech and Democracy in the Video Age*, 116 COLUM. L. REV. 991, 1019 (2016) (emphasis added). For a more complete discussion of the legal doctrine that defines speech creation as “speech,” see *infra* Part II.

A. *Cultural Changes: Political Speech, Professional Newsgathering, and Citizen Journalism*

Since 1995, we have seen important transformations in political speech and professional newsgathering (as well as the emergence of citizen journalism) in ways that have highlighted how we create speech. In the realm of political speech, particularly in the time of the COVID-19 pandemic,⁴⁴ everyone from a presidential candidate to a grassroots political activist can employ modern technology to produce a planned or spontaneous moment using digital recording technology. No professional film crew with its expensive equipment is needed. Consider the way that Elizabeth Warren's presidential campaign leveraged "selfies" with the candidate to mobilize support.⁴⁵ It wasn't just the production of the selfie that was speech, but its ability to allow her to connect with voters. As Warren herself noted, "That's 100,000 hugs and handshakes and stories . . . Stories of people struggling with student loan debt, stories of people that can't pay their medical bills, stories from people that can't find child care."⁴⁶ State representative Wendy Davis became nationally famous by live streaming her thirteen hour filibuster against a Texas abortion bill, mobilizing Texas voters to pressure their representatives to reject the proposed law.⁴⁷ Of course, the easy creation of political videos and audio recordings also means that others can catch political candidates in candid moments that can damage their campaigns, as Mitt Romney and Barack Obama both experienced.⁴⁸

⁴⁴ See generally COVID-19, CTRS. FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/coronavirus/2019-ncov/index.html> (last visited Jan. 27, 2021) [<https://perma.cc/C9CK-RN5L>] (providing a centralized repository of all information and official reporting regarding the COVID-19 pandemic).

⁴⁵ See Rebecca Jennings, *Why Selfie Lines are Crucial to Elizabeth Warren's Campaign*, VOX (Dec. 20, 2019, 10:56 AM EST), <https://www.vox.com/the-goods/2019/9/19/20872718/elizabeth-warren-2020-selfie-line> [<https://perma.cc/56T3-UHFJ>].

⁴⁶ *Id.*

⁴⁷ See Tracey Welson-Rossman, *Politics in the Age of Technology-Enabled Campaigning*, FORBES (Sept. 24, 2018, 11:27 AM EST), <https://www.forbes.com/sites/traceywelsonrossman/2018/09/24/politics-in-the-age-of-technology-enabled-campaigning/> [<https://perma.cc/C2T2-STMQ>].

⁴⁸ See David Corn, *Meet Scott Prouty, the 47 Percent Video Source*, MOTHER JONES (Mar. 14, 2013), <http://www.motherjones.com/politics/2013/03/scott-prouty-47-percent-video> [<https://perma.cc/2RQE-FL6X>] ("For nearly two weeks, [Prouty's video] dominated the presidential race."); Mayhill Fowler, *Obama: No Surprise That Hard-Pressed Pennsylvanians Turn Bitter*, HUFFPOST (Nov. 17, 2008, 10:07 PM ET), https://www.huffpost.com/entry/obama-no-surprise-that-ha_b_96188 [<https://perma.cc/DCF9-GQMG>].

In the context of established journalists, the acquisition and memorialization of information is a critical aspect of speech creation that has also undergone an important evolution. Newsgathering by professional journalists is a quintessential example of this practice. Journalists' ultimate goals are to disseminate facts to help inform people and promote public deliberation about the stories they publish.⁴⁹ The process of newsgathering has continually evolved over time and will continue to do so. While contemporary society tends to idealize or romanticize independent, objective news reporting, the practices of American journalism have not always fulfilled those ideals. Professional journalism in the early days of the Republic and well through the nineteenth century was often highly partisan.⁵⁰ Even after journalism began to develop professional standards in the early twentieth century, practices among publications and individual journalists varied widely.⁵¹

One journalistic practice that has been the subject of debate and controversy is the use of undercover investigations, which may themselves employ some contested practices. One such practice is the gathering of news at least in part through the falsifying or obscuring of the reporter's identity to gain access to people, places, and information that the reporter would otherwise be unable to secure.⁵² There is serious debate within the journalistic community about the ethics of such practices, but they have played an important role in uncovering information of public concern throughout modern history.⁵³ The socio-

⁴⁹ See, e.g., *First Nat'l Bank of Bos. v. Bellotti*, 435 U.S. 765, 781 (1978) ("The press cases emphasize the special and constitutionally recognized role of that institution in informing and educating the public, offering criticism, and providing a forum for discussion and debate.").

⁵⁰ See JONATHAN M. LADD, *WHY AMERICANS HATE THE MEDIA AND HOW IT MATTERS* 6, 10 (2012); Richard Kaplan, *The Origins of Objectivity in American Journalism*, in *THE ROUTLEDGE COMPANION TO NEWS AND JOURNALISM* 25, 30 (Stuart Allan ed., 2010).

⁵¹ See Jennifer Peebles, *History of the Society*, SOC'Y OF PROF. JOURNALISTS, <https://www.spj.org/spjhistory.asp> (last visited Jan. 19, 2021) [<https://perma.cc/7LDP-WRTS>].

⁵² See Alan K. Chen & Justin Marceau, *High Value Lies, Ugly Truths, and the First Amendment*, 68 VAND. L. REV. 1435, 1458-60 (2015). The same practices, of course, are used lawfully by law enforcement officers, civil rights testers, and union "salts." *Id.* at 1461.

⁵³ See generally BROOKE KROEGER, *UNDERCOVER REPORTING: THE TRUTH ABOUT DECEPTION* (2012) (surveying the history of undercover reporting and arguing for its fundamental journalistic value). As I have discussed elsewhere, one can make a stronger case for a First Amendment right to record if the subject of the video is a matter of public concern. See Marceau & Chen, *supra* note 43, at 1039. However, it would also present serious First Amendment problems if the government were to prohibit the recording of videos of a personal nature in the privacy of one's own home, even if that did not involve recording a matter of public concern. See *id.* The Supreme Court has

legal history of undercover investigations demonstrates that at various times in our nation's history, the public has shown greater or lesser tolerance, depending in large part on the current information infrastructure.

Frequently coupled with the practice of using deception to gain access to stories is the use of secret videorecording equipment to document information.⁵⁴ This practice, too, has been controversial, and journalists who have engaged in it have been accused of unethical, and sometimes illegal, behavior.⁵⁵ But one cannot deny that the practice of journalists surreptitiously recording for stories has on multiple occasions revealed information of profound public concern. As just one example, ABC news reporters working for the show Prime Time Live gained access to a medical testing company's premises by posing as people who were studying the possibility of opening a similar business.⁵⁶ The company's representatives were recorded stating that one advantage they had over other companies was the speed with which they reported their results.⁵⁷ Other ABC representatives had previously submitted a set of actual pap smear slides for testing by the company, and discovered that the company failed to detect several confirmed cases of cervical cancer.⁵⁸ The story was aired on television, after which the company unsuccessfully sued for invasion of privacy, fraud, and other common law claims.⁵⁹

Another practice that has changed over the past twenty-five years has to do with nonprofessional journalists engaging in traditional newsgathering practices. While in past generations newsgathering had

indicated that speech addresses a matter of public concern when it can "be fairly considered as relating to any matter of political, social, or other concern to the community," or when it "is a subject of legitimate news interest; that is, a subject of general interest and of value and concern to the public." *Snyder v. Phelps*, 562 U.S. 443, 453 (2011) (citations omitted).

⁵⁴ Because secret video recordings are, by definition, non-consensual, there is implicit deception in their very use. But it is also true that in order to gain access to areas in which such recordings can be made, investigators may need to lie about their identities as journalists or activists prior to recording. *See, e.g., Med. Lab. Mgmt. Consultants v. ABC, Inc.*, 30 F. Supp. 2d 1182, 1185 (D. Ariz. 1998) (describing television news show's undercover investigation that used deception to gain access to business, where secret recordings were used to reveal misconduct), *aff'd*, 306 F.3d 806 (9th Cir. 2002).

⁵⁵ *See KROEGER, supra* note 53, at 147-70 (discussing lawsuits and controversies surrounding journalists' use of hidden cameras).

⁵⁶ *See Med. Lab. Mgmt. Consultants*, 30 F. Supp. 2d at 1185-86.

⁵⁷ *Id.* at 1185.

⁵⁸ *Id.* at 1186.

⁵⁹ *See id.*

been almost exclusively the bailiwick of professional journalists, in the contemporary era we have seen the proliferation of the so-called “citizen journalist.”⁶⁰ The emergence of citizen journalists has generated interesting doctrinal questions, such as who “counts” as the press for the purposes of the First Amendment’s Press Clause.⁶¹ But the actual world of on-the-ground newsgathering does not follow neat legal boundaries. Furthermore, as discussed below, some individuals and organizations have adopted the information acquisition practices of undercover journalists as a form of activism in various social movements.

Political speech, undercover investigations by professional journalists, and newsgathering by citizen journalists have all been rendered even more effective by technological innovations, as discussed next. These innovations have expanded the opportunities for all types of information gatherers to document their findings.

B. Technological Changes

1. Compact Digital Video Recorders

Perhaps the most salient example of a technological development that facilitates newsgathering is the digital video recorder. In the past, video recording involved cumbersome and expensive equipment as well as sizeable recording media such as large video cassettes. Use of such recording equipment would be obvious, and therefore unlikely to capture any images or sounds that the target of an investigation wished to hide from public view. As with other electronic equipment,⁶² digital video recorders today are smaller, less expensive, and more easily

⁶⁰ See SCOTT GANT, WE’RE ALL JOURNALISTS NOW 3 (2007) (“The lines distinguishing professional journalists from other people who disseminate information, ideas, and opinions to a wide audience have been blurred, perhaps beyond recognition, by forces both inside and outside the media themselves.”).

⁶¹ Despite the express text of the First Amendment, the Supreme Court has generally not recognized freedom of the press as a right distinct from the freedom of speech. See Sonja R. West, *Awakening the Press Clause*, 58 UCLA L. REV. 1025, 1027-28 (2011). Though scholars have argued that this approach substantially diminishes the constitutional importance of a free press, there has been an ongoing and contested discussion about how to define the press for these purposes. See *id.* at 1029-30 (discussing the problematic nature of defining the press and providing a voluminous list of scholarly attempts to do so).

⁶² See, e.g., A. Bruno Frazier, Robert O. Warrington & Craig Friedrich, *The Miniaturization Technologies: Past, Present, and Future*, 42 IEEE TRANSACTIONS ON INDUS. ELECTRONICS 423, 423 (1995) (discussing examples of the “miniaturization” in the context of other electronic devices).

capable of being obscured from observation. Some video recorders are specifically designed to be small and undetectable. As just one example, one can currently purchase a portable, digital high-definition, spy camera that is less than one square inch, and has night vision capability for less than \$25.⁶³ For about \$10 or \$15 more, the buyer can add Wi-Fi capability and secure the ability to watch live video feeds on a smart phone.⁶⁴ In contrast, in 1995, major electronics companies were selling home digital camcorders in the range anywhere from \$400 to \$3000, though even by then, these devices were “[a]bout the size of a paperback novel.”⁶⁵ Today’s miniature spycams can be employed in planned undercover investigations to document things ranging from industrial pollution to labor law violations to incriminating statements.

Moreover, today’s camcorders are more useful for undercover work because rather than using cumbersome tapes or discs, they record digitally and allow one to upload video files to the cloud quickly and easily. Editing technology has also improved, so one can not only gather the digital information inexpensively, but also easily produce a video of professional quality, shaped by one’s own editorial sensibilities. As with questions about professional journalism standards, the editing of videos may sometimes raise questions about the value and accuracy of video recordings. It is one thing for an editor to use technology to present information professionally (e.g., editing out extraneous, irrelevant material), but a completely different thing for the editing process to result in intentionally misleading images about the events or actions recorded.⁶⁶

But dedicated camcorders are no longer even necessary to create high-quality digital still images and videos because of the wide availability of

⁶³ See *Mini Spy Camera, Full HD 1080P Hidden Camera*, AMAZON, <https://www.amazon.com/Camera-Hidden-Security-Detection-Outdoor/dp/B086JVQ16Q/> (last visited Jan. 23, 2021) [<https://perma.cc/ZS8K-D674>].

⁶⁴ See *Mini Spy Camera with Night Vision*, AMAZON, <https://www.amazon.com/Camera-Wireless-Computer-Security-Outdoor/dp/B0838TTKBQ> (last visited Jan. 23, 2020) [<https://perma.cc/V77A-SC5D>].

⁶⁵ Dennis Hunt, *Low-End Camcorders, High-End Features*, L.A. TIMES (Dec. 16, 1994, 12:00 AM), <https://www.latimes.com/archives/la-xpm-1994-12-16-ca-9822-story.html> [<https://perma.cc/677H-LU3U>] (placing camcorder costs between \$400 and \$1000); Rich Warren, *Digital Camcorders Among Best Products of 1995*, HARTFORD COURANT (Dec. 28, 1995), <https://www.courant.com/news/connecticut/hc-xpm-1995-12-28-9512270035-story.html> [<https://perma.cc/5889-Q7T2>] (reporting camcorder costs from \$2,200 to \$3,000). In either case, the costs are much lower, today.

⁶⁶ See *infra* notes 199–207 and accompanying text.

cell phone cameras. In 1995, only 22% of Americans had cell phones.⁶⁷ By 2016, 75% of people had smart phones while another 18% had non-smart cellphones.⁶⁸ Cell phone digital video cameras are now ubiquitous and as we all know, can be used to capture unplanned, spontaneous events of public interest.⁶⁹

In the current environment, the use of cell phone videos to document the tragically commonplace incidents of law enforcement officers' shootings, frequently of young Black men, has become seemingly ubiquitous.⁷⁰ Citizen documentation of police misconduct is, of course, by no means limited to current times. The home video of police officers' beating of Rodney King in 1992 was widely distributed and shown on national news broadcasts.⁷¹ But videos of the killings of Eric Garner, Sandra Bland, and Walter Scott in the mid-2010s to Ahmaud Arbery, Breonna Taylor, George Floyd, Rayshard Brooks, and Jacob Blake in the summer of 2020, have sparked nationwide protests and calls for systemic reform of policing and the dismantling of structural racism.⁷² Organizations such as Cop Watch and the ACLU have developed apps that allow such video recordings to be uploaded to the internet instantaneously in case the cell phones are destroyed or confiscated

⁶⁷ Reuben Fischer-Baum, *What 'Tech World' Did You Grow Up in?*, WASH. POST (Nov. 26, 2017), <https://www.washingtonpost.com/graphics/2017/entertainment/tech-generations/> [<https://perma.cc/3ETC-62AZ>].

⁶⁸ *Id.*

⁶⁹ See Seth F. Kreimer, *Pervasive Image Capture and the First Amendment: Memory, Discourse, and the Right to Record*, 159 U. PA. L. REV. 335, 344 (2011).

⁷⁰ See Nicol Turner Lee, *Where Would Racial Progress in Policing Be Without Camera Phones?*, BROOKINGS (June 5, 2020), <https://www.brookings.edu/blog/fixgov/2020/06/05/where-would-racial-progress-in-policing-be-without-camera-phones/> [<https://perma.cc/JRD4-SKQ2>].

⁷¹ See Sa'id Wekili & Hyacinth E. Leus, *Police Brutality: Problems of Excessive Force Litigation*, 25 PAC. L.J. 171, 181-82 (1994) ("Had it not been for the secretly taped video evidence, the case of Rodney King may never have found its way to the media or the courtroom."); Jim Kavanagh, *Rodney King, 20 Years Later*, CNN (Mar. 3, 2011, 1:56 PM GMT), <http://edition.cnn.com/2011/US/03/03/rodney.king.20.years.later/index.html> [<https://perma.cc/T4R8-YPR5>] (describing King case and its aftermath).

⁷² See Joanna Stern, *They Used Smartphone Cameras to Record Police Brutality — and Change History*, WALL ST. J. (June 13, 2020, 12:01 AM EST), <https://www.wsj.com/articles/they-used-smartphone-cameras-to-record-police-brutalityand-change-history-11592020827> [<https://perma.cc/P47J-BBJZ>]. In the high-profile case of Michael Brown in Ferguson, Missouri, there was actually no video recording of the shooting that led to this death. See CNN, *New Video from the Michael Brown Shooting Death*, YOUTUBE (Aug. 13, 2014), <http://www.youtube.com/watch?v=advkpZluq2U> [<https://perma.cc/EV5P-SXX3>].

before the videos can be posted.⁷³ These videos have helped generate broader public support for Black Lives Matter and related social movements and political organizers.⁷⁴ There could hardly be a matter that fits more directly within the definition of matters of public concern.

The same tools that benefit journalists and other citizens have also been adopted by political activists to carry out undercover investigations that are linked to their causes. One area in which this technique has been particularly prevalent is in the animal protection movement, which has engaged in secret video recordings to document illegal and unethical conduct including the extreme abuses visited on farmed animals at animal agricultural facilities such as slaughterhouses.⁷⁵ Organizations such as the People for the Ethical Treatment of Animals, the Animal Legal Defense Fund, Mercy for Animals, and others have worked with investigators who have gained entry to such facilities by obtaining jobs and then used their access to record, and later publicize, animal abuse.⁷⁶ The videos are then released widely on YouTube or other easily accessible platforms to expose the mistreatment of animals to the general public in the hopes that this transparency will lead to legal and socio-cultural reforms. In many cases, the release of such videos has led to formal statutory and regulatory, legal reforms, criminal prosecutions and civil lawsuits, and

⁷³ See Farhad Manjoo & Mike Isaac, *Phone Cameras and Apps Help Speed Calls for Police Reform*, N.Y. TIMES (Apr. 8, 2015), <http://nytimes.com/2015/04/09/technology/phone-cameras-and-apps-help-speed-calls-for-police-reform.html> [<https://perma.cc/6B7X-GZJA>] (discussing Cop Watch and interviewing its creator); Tom McGhee, *Witness Police Wrongdoing? There's an App for That*, DENVER POST (Oct. 29, 2015), http://www.denverpost.com/news/ci_29043137/witness-police-wrongdoing?-theres-an-app-for-that [<https://perma.cc/F7NF-SPJM>] (describing Mobile Justice Colorado app).

⁷⁴ See Adam Serwer, *The New Reconstruction*, ATLANTIC (Oct. 2020), <https://www.theatlantic.com/magazine/archive/2020/10/the-next-reconstruction/615475/> [<https://perma.cc/JR5G-APTD>]. See generally BLACK LIVES MATTER, <https://blacklivesmatter.com/> (last visited Jan. 24, 2021) [<https://perma.cc/5SKK-UM4E>] (providing background information and resources related to the Black Lives Matter organization and movement).

⁷⁵ See Kelsey Piper, “Ag-gag Laws” Hide the Cruelty of Factory Farms from the Public. Courts are Striking Them Down., VOX (Jan. 11, 2019, 2:48 PM EST), <https://www.vox.com/future-perfect/2019/1/11/18176551/ag-gag-laws-factory-farms-explained> [<https://perma.cc/W4PY-4C9Q>].

⁷⁶ Ag-Gag Laws, ANIMAL LEGAL DEFENSE FUND, <https://aldf.org/issue/ag-gag/> (last visited Mar. 3, 2021) [<https://perma.cc/ZL4K-VP8S>]; *Exposés and Undercover Investigations*, PETA, <https://www.peta.org/investigations/> (last visited Mar. 3, 2021) [<https://perma.cc/R69E-M73L>]; *Undercover Investigations*, MERCY FOR ANIMALS, <https://mercyforanimals.org/investigations> (last visited Mar. 3, 2021) [<https://perma.cc/7WZ8-6THY>].

major recalls of meat.⁷⁷ They may also be influencing debates about the regulation of food safety and the morality of eating meat from nonhuman animals.⁷⁸ By providing information that sparks public discourse and democratic responses to animal mistreatment, the creation of speech through these videos advances basic principles underlying the freedom of speech.

It is worth adding a note of caution about these transformative new technologies and free speech. The same technical ability to gather information for journalistic or political purposes can be employed by the government to monitor the activities of lawful political organizations. That type of governmental spying can, in turn, chill constitutionally protected speech by private actors. Whether limitations on such surveillance come from the Constitution or from federal and state law, the emergence of these technologies may ultimately call for the development of some sorts of legal or professional standards to ensure that the resulting gains to free expression are not outweighed by the costs.

2. Drones

A related technological development has been the proliferation of drones, a shorthand term for unmanned aerial vehicles (“UAVs”). Originally created for military use, drones have become widely available to consumers for a number of personal uses, with around two million sold in 2016.⁷⁹

[T]here is a wide array of nonmilitary applications for UAVs: firefighting and disaster recovery, precision agriculture and

⁷⁷ See, e.g., *Nat'l Meat Ass'n v. Harris*, 565 U.S. 452, 458 (2012) (noting that investigation led to “largest beef recall in U.S. history” and to amendment of California law, though ultimately holding that such law as preempted by federal law); Linda Chiem, *Slaughterhouse Owners Hit with \$500M Judgment in FCA Case*, LAW360 (Nov. 16, 2012), <http://www.law360.com/articles/394827/slaughterhouse-owners-hit-with-500m-judgment-in-fca-case> [<https://perma.cc/T8JU-96A4>] (explaining how the release of videos of animal mistreatment at a slaughterhouse led to a civil suit).

⁷⁸ Jen Fifield, *Farmers Push Back Against Animal Welfare Laws*, PEW CHARITABLE TRUSTS (Nov. 29, 2016), <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2016/11/29/farmers-push-back-against-animal-welfare-laws> [<https://perma.cc/8TK6-5SML>] (explaining how undercover videos of animal abuse at slaughterhouses have influenced consumer expectations about the treatment of farmed animals).

⁷⁹ As one report indicates, however, the technologies used for consumer drones are not drawn from military systems, but from hobbyists’ radio-controlled aircraft and smartphones. Tom Standage, *Taking Flight: Civilian Drones*, ECONOMIST (June 8, 2017), <https://www.economist.com/technology-quarterly/2017-06-08/civilian-drones> [<https://perma.cc/DN3L-AM4L>].

ranching, pipeline and other utility inspection, weather forecasting, newsgathering, mapmaking, real estate, amateur and professional photography and videography, filmmaking, sports broadcasting, tourism, prevention of poaching and other unwanted behaviors, search and rescue, and shipping and transport.⁸⁰

But for both individual and commercial uses, a significant utility for drones is to serve as flying cameras.⁸¹

In one reported incident, a hobbyist flying a drone in Texas recorded images of a creek near his home that had turned red, later learning that he had inadvertently captured evidence that a local meat processing plant was engaged in illegal dumping.⁸² A few years ago, activists used drones to monitor protests at the Dakota Access Pipeline in Standing Rock, North Dakota, capturing aerial images of police shooting high pressure water cannons at protestors when temperatures fell well below freezing.⁸³ Reporters who cover environmental issues have used drones to document rising waters and other signs of climate change that are not observable from the ground.⁸⁴

The possibilities of drone-based journalistic investigations have not been lost on the profession. Several news media companies, including CNN, have established drone divisions.⁸⁵ Supported by the Knight Foundation, two professors at the University of Nebraska, Lincoln have developed a drone journalism lab as well as a procedures manual for carrying out such work.⁸⁶ The Poynter Institute for Media Studies

⁸⁰ Marc Jonathan Blitz, James Grimsley, Stephen E. Henderson & Joseph Thai, *Regulating Drones Under the First and Fourth Amendments*, 57 WM. & MARY L. REV. 49, 54 (2015).

⁸¹ Standage, *supra* note 79.

⁸² Colleen Curry, *Drone Eyed by Paparazzi, J-School Teaching Reporters How to Fly Them*, ABC NEWS (Mar. 21, 2013), <https://abcnews.go.com/US/drones-eyed-paparazzi-school-teaching-reporters-operate/story?id=18782432> [<https://perma.cc/9W8D-6LJH>].

⁸³ Janus Kopfstein, *Police Are Making It Impossible to Use Drones to Document Protests*, VOCATIV (Jan. 27, 2017), <https://www.vocativ.com/396662/police-drone-journalists-protests/> [<https://perma.cc/L55H-F978>].

⁸⁴ See *Taking Visual Journalism into the Sky with Drones*, N.Y. TIMES (May 2, 2018), <https://www.nytimes.com/2018/05/02/technology/personaltech/visual-journalism-drones.html> [<https://perma.cc/6979-29SA>].

⁸⁵ Benjamin Mullin, *CNN Just Launched a New Drone Division*, PONYTER (Aug. 19, 2016), <https://www.poynter.org/tech-tools/2016/cnn-just-launched-a-new-drone-division-heres-what-they-plan-to-do-with-it/> [<https://perma.cc/NRT6-YYLQ>].

⁸⁶ Matt Waite, *Drone Journalism Lab Publishes Operations Manual to Guide Newsrooms*, KNIGHT FOUND. (Sept. 1, 2016), <https://knightfoundation.org/articles/drone-journalism-lab-publishes-operations-manual-guide-newsrooms/> [<https://perma.cc/23FJ-LFVJ>].

provides training for journalists who want to incorporate drones into their fact finding.⁸⁷ And the National Press Photographers Association and Poynter have teamed up with other organizations to develop a drone journalism code of ethics.⁸⁸

While drones therefore are another example of technologically driven cheap speech creation, they can also be used to interfere with speech and other political activity. Like miniature video cameras, drones paradoxically present the possibility of both ominous and ubiquitous government surveillance of private citizens and the opportunity for cheap speech creation that can promote democracy by securing information that is of great public importance. Government regulation that addresses both of these concerns has already begun to emerge.⁸⁹

In response to the expanded use of drones for a range of private uses, the federal government and many states have enacted several laws. At the federal level, the applicable regulations depend on the user. Recreational drone pilots must register their drone and mark it with a registration number.⁹⁰ Furthermore, they must keep their drones within their line of sight and may not fly them above 400 feet.⁹¹ As of the end of 2019, according to the Federal Aviation Administration (“FAA”), consumers had registered over a million recreational drones.⁹² There are other limitations pertaining to where recreational users may fly drones.⁹³ The FAA imposes more substantial limits on commercial drone use. For example, commercial drone users must be “certificated remote pilots,” meaning that they must be at least sixteen years old, be able to read, write, speak, and understand English, be in a physical and mental condition to safely fly a drone, and pass a test administered by the FAA.⁹⁴

⁸⁷ *Drone Journalism*, PONYTER, <https://www.poynter.org/tag/drone-journalism/> (last visited Jan. 16, 2021) [<https://perma.cc/D95X-MJBG>].

⁸⁸ Al Tompkins, *Help Journalism Grow Responsibly*, NAT’L PRESS PHOTOGRAPHERS ASS’N (2017), <https://nppa.org/magazine/drone-code-ethics> [<https://perma.cc/N5JJ-TQ7L>].

⁸⁹ For this article, I set aside concerns about government use of drones for surveillance. For a comprehensive evaluation of constitutional limitations on government drone use and government regulation of private drone use, see Blitz et al., *supra* note 80, at 49.

⁹⁰ See 14 C.F.R. § 48.100(c) (2020).

⁹¹ See *id.* § 107.51(b)(2) (2020).

⁹² *UAS by the Numbers*, FED. AVIATION ADMIN. (Dec. 10, 2019), https://web.archive.org/web/20200103181022/https://www.faa.gov/uas/resources/by_the_numbers/ [<https://perma.cc/T893-FPA5>].

⁹³ See generally 14 C.F.R. §§ 107.37-107.51 (codifying operating rules for small unmanned aircraft systems).

⁹⁴ *Id.* § 107.61.

State laws vary widely. Many states have no drone regulations. Some states regulate only government use of drones.⁹⁵ Many states regulate drone flights to protect public safety. Several states limit the locations where drones may be flown, including some restrictions that could have free speech implications. Idaho law establishes a civil tort remedy for anyone who is the subject of drone surveillance or nonconsensual photography or recording from a drone for the purpose of publishing or otherwise publicly disseminating the images recorded.⁹⁶ A few states prohibit flying drones above “critical infrastructure facilities.”⁹⁷ These resemble other laws that restrict protests that might interfere with such facilities, as several states enacted in the wake of the protests at the Dakota Access pipeline construction site at Standing Rock, North Dakota.⁹⁸ Law enforcement agencies can chill speech through the use of drones that monitor protest activity and identify potential targets of prosecution, so drones are not unilaterally positive speech enhancing tools.⁹⁹ When helicopters (though not drones) were used to cover news about protests in Ferguson, Missouri after the killing of Michael Brown, the Federal Aviation Administration agreed to a request by local police to impose a temporary no-fly zone over the city.¹⁰⁰ Sources reported, however, that the real purpose of the ban was to keep news stations away from covering the protests.¹⁰¹

⁹⁵ See, e.g., H.B. 255, 28th Leg., Reg. Sess. (Alaska 2014) (regulating law enforcement use of drones); ME. REV. STAT. tit. 25, § 4501 (2020) (regulating law enforcement use of drones); UTAH CODE ANN. § 72-14-203 (2020) (regulating law enforcement use of drones).

⁹⁶ IDAHO CODE § 21-213 (2020). Like some of the Ag-Gag laws discussed in this Essay, the Idaho law also specifically prohibits conducting drone surveillance of “[a] farm, dairy, ranch or other agricultural industry, or commercial or industrial property, without the written consent of the property owner.” *Id.*

⁹⁷ H.B. 1027, Reg. Sess. (Fla. 2017); see H.B. 1770, 90th Leg., Reg. Sess. (Ark. 2015); H.B. 195, 148th Leg., Reg. Sess. (Del. 2016); H.B. 2599, 55th Leg., Reg. Sess. (Okla. 2016); S.B. 2106, 109th Leg., Reg. Sess. (Tenn. 2016); H.B. 1481, 84th Leg., Reg. Sess. (Tex. 2015). New Jersey allows operators of critical infrastructure to apply to the FAA to forbid or limit drone use near their facilities. S.B. 3370, 217th Leg., Reg. Sess. (N.J. 2018).

⁹⁸ See S.B. 151, Reg. Sess. (S.D. 2020); H.B. 4615, 84th Leg., Reg. Sess. (W.V. 2020).

⁹⁹ See John D. McKinnon & Michelle Hackman, *Drone Surveillance of Protests Comes Under Fire*, WALL ST. J. (June 10, 2020), <https://www.wsj.com/articles/drone-surveillance-of-protests-comes-under-fire-11591789477> [<https://perma.cc/7VFC-Q7HE>].

¹⁰⁰ Associated Press, *Police Targeted Media With No-Fly Zone Over Ferguson, Tapes Show*, N.Y. TIMES (Nov. 2, 2014), <https://www.nytimes.com/2014/11/03/us/police-targeted-media-with-no-fly-zone-over-ferguson-tapes-show.html> [<https://perma.cc/L455-5A25>].

¹⁰¹ *Id.*

California has one of the most restrictive drone laws, prohibiting all use of drones to record another person without their consent.¹⁰² That law resembles, in important ways, some of the Ag-Gag laws discussed below. Other laws are more narrowly tailored to more specific government interests, and prohibit drone use that invades privacy and/or involves “video voyeurism.”¹⁰³

C. Data Creation and Acquisition

Thus far, the discussion has focused on advancements in audiovisual recording technology as the primary examples of contemporary speech creation. But acquisition of data or other types of information can also be a form of speech creation. Collecting information can take place through traditional methods, such as personal observation, through scientific methods, such as gathering of soil or water samples to identify contamination, or by technological methods, such as programs that can scrape data from websites. Data can be critical evidence that documents the violation of environmental regulations, civil rights statutes, and other laws.

In *Western Watersheds Project v. Michael*,¹⁰⁴ the Tenth Circuit addressed the constitutionality of a state law that prohibited certain types of data collection on public and private lands. In that case, the plaintiffs challenged the constitutionality of a Wyoming law that subjected anyone who crosses private property to access adjacent land to collect “resource data” to criminal penalties and tort liability.¹⁰⁵ Under the law, “collect” meant “to take a sample of material, acquire, gather, photograph, or otherwise preserve information in any form and the recording of a legal description or geographical coordinates of the

¹⁰² CAL. CIV. CODE § 1708.8 (2020).

¹⁰³ H.B. 1349, 90th Leg., Reg. Sess. (Ark. 2015) (privacy & voyeurism); FLA. STAT. § 934.50 (2020) (privacy) (Florida also authorizes local governments to adopt drone restrictions to prohibit voyeurism, see H.B. 1027, Reg. Sess. (Fla. 2017)); H.B. 635, Reg. Sess. (La. 2016) (voyeurism); S.B. 992, 98th Leg., Reg. Sess. (Mich. 2016); S.B. 80, Reg. Sess. (S.D. 2017). Interestingly, Utah exempts drone users from liability for what would otherwise be a privacy violation if they are employing the drone for a commercial or educational purpose. See S.B. 111, 59th Leg., Reg. Sess. (Utah 2017) (voyeurism).

¹⁰⁴ 869 F.3d 1189, 1191-92 (10th Cir. 2017).

¹⁰⁵ *Id.* at 1191. The lower court had dismissed the challenge, along with challenges to two other parts of the statute that prohibited entry on to private land for the purpose of collecting resource data and actually collecting resource data on private land. *W. Watersheds Project v. Michael*, 196 F. Supp. 3d 1231, 1242-45 (D. Wyo. 2016) (upholding WYO. STAT. ANN. § 6-3-414 (a)-(b)) (2020), *rev'd in part*, 869 F.3d 1189 (10th Cir. 2017). The plaintiffs did not appeal the dismissal of those claims.

location of the collection.”¹⁰⁶ “Resource data” was defined as “data relating to land or land use, including, but not limited to data regarding agriculture, minerals, geology, history, cultural artifacts, archeology, air, water, soil, conservation, habitat, vegetation or animal species.”¹⁰⁷ The law was challenged by, among others, environmental organizations that collected these types of data to uncover information that would assist them in advocating for public policy reforms regarding water quality and endangered species.¹⁰⁸ In defending the statute, Wyoming contended that the prohibited activity was not speech, but prohibited conduct on public lands. As discussed below, the Tenth Circuit ultimately concluded that the collection of resource data constituted the “creation of speech.”¹⁰⁹

There is also a close connection between speech and the creation of data. For example, some of the sample materials that were prohibited from collection by the Wyoming law were not in and of themselves communicative, but had to be subjected to further testing to create information. As with other types of suppressing speech creation, cutting off the inputs effectively prohibited the speech outputs. Collection led to testing, which created data, which was then used to inform the public.

While the expressive activities at issue in the *Western Watersheds* case were not solely technologically based, there are other more advanced tools for acquiring data that can also be importantly and effectively used to create speech. One example comes from the contemporary investigation of civil rights violations. When it comes to face-to-face transactions, such illegal discrimination can sometimes be detected by civil rights testers. A long accepted investigative approach here is used by housing groups that send paired testers, one white and one Black, to inquire about an ad for an apartment rental. The testers are given fake names and virtually identical employment and financial backgrounds so that they are comparable in all ways that might be relevant to a landlord. If the landlord denies that the apartment is available to the

¹⁰⁶ WYO. STAT. ANN § 6-3-414 (e)(1) (2020).

¹⁰⁷ *Id.* § 6-3-414 (e)(iv).

¹⁰⁸ See *W. Watersheds Project*, 869 F.3d at 1195. The other plaintiff was the National Press Photographers Association, an organization whose members engage in photojournalism. NAT’L PRESS PHOTOGRAPHER’S ASS’N, <https://nppa.org/> (last visited Mar. 7, 2021) [<https://perma.cc/PVV9-KBJF>].

¹⁰⁹ *W. Watersheds Project*, 869 F.3d at 1195-96.

Black tester, but invites the white tester to apply, the testers have identified a form of discrimination called “racial steering.”¹¹⁰

But proving online discrimination is even more elusive. Many major parts of commerce, including real estate, employment, and consumer purchases, have moved to web-based transactions, but there has been increasing concern that it will be harder to detect discrimination against marginalized groups by such e-commerce enterprises. The volume and the impersonal nature of transactions make it easier to obscure discriminatory conduct or effect because these sites may discriminate through the algorithms they employ rather than by direct consumer contact. These algorithms use consumers’ data in ways that might direct them toward or away from certain transactions or enable unlawful class-based price discrimination.¹¹¹ Thus, in the same ways that cheap speech has made targeted advertising beneficial to consumers by directing them to books or music similar to the ones they have previously purchased, it also enables sellers to identify consumers by characteristics that can be used to discriminate.¹¹² The discrimination might be purposeful or it may be nonintentional, but have a substantially disparate impact on members of protected classes.¹¹³

Researchers have recently developed two methods of online auditing that allow users to acquire data from websites that may be an inexpensive and effective way of accessing information that is worthy of public concern. The two methods are “sock puppet” audits and scraping audits, both of which may be used to identify whether a website has engaged in discriminatory conduct. As described in a recent article:

In a “scraping” audit, a researcher uses a bot to impersonate users of various backgrounds; the bot then issues repeated queries to see how an algorithm functions in response and subsequently collects the responses it receives. A “sock puppet” audit essentially replicates a traditional testing scenario online:

¹¹⁰ For descriptions of civil rights testing programs, see *Havens Realty Corp. v. Coleman*, 455 U.S. 363, 368 (1982); *United States v. Garden Home Mgmt. Corp.*, 156 F. Supp. 2d 413, 416 (D.N.J. 2001).

¹¹¹ Komal S. Patel, *Testing the Limits of the First Amendment: How Online Civil Rights Testing Is Protected Speech Activity*, 118 COLUM. L. REV. 1473, 1477-82 (2018). See generally Solon Barocas & Andrew D. Selbst, *Big Data’s Disparate Impact*, 104 CALIF. L. REV. 671, 692-93 (2016) (explaining the potential for data mining to “indirectly determine individuals’ membership in protected classes and unduly discount, penalize, or exclude such people accordingly”).

¹¹² Patel, *supra* note 111, at 1477.

¹¹³ *Id.* at 1477-82.

Researchers imitate users of various backgrounds with fake accounts or preprogrammed data profiles to test whether any differential treatment occurs.¹¹⁴

Scraping audits thereby detect exactly how a web site's algorithms respond to certain information provided by the program, such as race or gender, thus enabling the researcher to determine whether users with different backgrounds are given different information. When sock puppets are implemented, they may be able to detect the very type of discrimination that used to be identified by civil rights testers. As discussed below, there may be legal barriers to the use of these technological auditing programs, which in turn may implicate the First Amendment to the extent that such restrictions interfere with data-based speech creation.

D. Artistic Speech Creation

In his article, Volokh did not limit his discussion to core political speech, but also projected the possibilities for faster and less expensive distribution of artistic expression, including movies, music, and books. At the same time as some of these distribution mechanisms and intermediaries have been fundamentally altered, it has become easier for artists to produce their expression. It goes without saying that the internal creative process of developing a movie plot, writing a song, or choreographing a dance is relatively costless, at least in terms of out-of-pocket costs,¹¹⁵ but the speaker then has to convert that expression to a transmittable media.

Volokh predicted that popular music would become less expensive because a significant part of the costs went to both production and distribution, with musicians required to publish their work through record companies and intermediaries such as record and CD stores taking a cut as well.¹¹⁶ If musicians could sell directly to consumers, the result would be increased profits for musicians and reduced costs and increased selection choices for consumers.¹¹⁷ Consumers could choose from a menu of songs rather than having to purchase an entire album and therefore pay only for music they wanted. He foresaw what would eventually be popular music streaming services such as Apple Music

¹¹⁴ *Id.* at 1474.

¹¹⁵ I do not account here for opportunity costs that may be incurred while the artist engages in creation or the costs of possible research that might sometimes be a precursor to such creation.

¹¹⁶ See Volokh, *supra* note 3, at 1808.

¹¹⁷ *Id.* at 1808-15.

and Spotify and projected that this new distribution system would “radically change what music is available,” address the problem of limited physical space in stores, and limit the power of record labels to determine what and who gets heard.¹¹⁸ While those predictions have certainly come true, it is unclear whether musicians are making more money in the age of streaming services. Even now, “[s]treaming platforms do not make payments directly to musicians, but rather to labels, distributors, publishers, and copyright collection societies, all of whom take their own cut before passing the money along.”¹¹⁹ Today, “[a]rtists receive, on average, a small fraction of a cent for each time one of their songs is streamed on a major platform.”¹²⁰

This is one area in which Volokh did address the cost of speech creation. He noted that “Even today an artist can make a commercially viable master recording relatively cheaply,” also observing that “At the low end, recording can cost very little indeed.”¹²¹ Indeed, it is widely reported that it took only \$600 to produce Nirvana’s first album, *Bleach*, in 1989.¹²² But it is not that easy to measure music production costs because it’s unclear how to categorize things such as equipment costs (does the band already own its instruments?), rehearsal space (free or rented?), studio time, and the costs of a recording engineer and post-recording sound mixing. Theoretically, a musician or band could handle almost all of those costs internally if they have the right space and technical skills.

It is almost surely the case that developments in software since 1995 have further reduced the costs of music production, at least with regard to recording, editing, and mixing. Hardware developments can help, too. For example, since 1995, companies have developed relatively inexpensive audio interfaces that allow musicians to input music directly to their computers, after which various programs allow one to

¹¹⁸ *Id.* at 1809-10, 1814-15.

¹¹⁹ Andy Cush, *How Musicians Are Fighting for Streaming Pay During the Pandemic*, PITCHFORK (June 29, 2020), <https://pitchfork.com/features/article/how-musicians-are-fighting-for-streaming-pay-during-the-pandemic/> [<https://perma.cc/YZ3D-YW5C>].

¹²⁰ *Id.*

¹²¹ Volokh, *supra* note 3, at 1815. Moreover, the physical production costs of making CDs were already quite low in 1995, though there are other things that contribute to the final price of music, including marketing, promotion, artists’ fees, and royalties. See Neil Strauss, *Pennies That Add Up to \$16.98: Why CD’s Cost So Much*, N.Y. TIMES (July 5, 1995), <https://www.nytimes.com/1995/07/05/arts/pennies-that-add-up-to-16.98-why-cd-s-cost-so-much.html> [<https://perma.cc/MM73-8Z2N>].

¹²² See Alan McGee, *How Nirvana’s Bleach Brightened Up Grunge*, GUARDIAN (Sept. 21, 2009), <https://www.theguardian.com/music/musicblog/2009/sep/21/nirvana-bleach-album-reissue> [<https://perma.cc/NZ3C-XZAA>].

engage in sound editing, mixing, adding effects, and other modifications.¹²³

Movie production costs are difficult to measure because of the wide range of types of films and who produces them. In addition, the Motion Picture Association of America (“MPAA”) stopped publishing reports about production costs in 2007, supposedly because it felt the figures were misleading given the complex nature of financing and marketing films.¹²⁴ In any event, the MPAA’s figures were only drawn from major studios and their specialty production affiliates.¹²⁵

From the MPAA’s earlier reports, the average cost of producing a movie from a Hollywood studio in 1995 appears to have been about \$34.3 million, with another \$16.1 million allotted to marketing costs.¹²⁶ Though contemporary figures are harder to come by, in 2007, the last year in which the MPAA published figures, the average cost of producing and marketing a studio movie was \$106.6 million.¹²⁷ Other sources report that this figure rose to \$65 million for production and \$35 million for marketing and promotion.¹²⁸

Of course, much of the film industry involves independent film making, where the budgets are much more modest. Even here, however, budgets can vary widely. Independent film making has benefited substantially from technological developments in the past twenty-five years that have reduced the cost of movie production. For example, the shift from analog to digital image capture has reduced costs such as film, while the post-production costs of film making have also dropped because of the availability of digital editing technology.¹²⁹

¹²³ See *Pro Audio Interfaces for Home Recording*, POPULAR SCIENCE (Nov. 24, 2020), <https://www.popsci.com/best-home-recording-audio-interfaces/> [https://perma.cc/QS3X-GEXA].

¹²⁴ Richard Verrier, *MPAA Won’t Disclose Average Costs to Make and Market Films*, L.A. TIMES (Apr. 1, 2009), <https://www.latimes.com/archives/la-xpm-2009-apr-01-fi-cotown-mpaa1-story.html> [https://perma.cc/VUL8-68JK].

¹²⁵ *Id.*

¹²⁶ Claudia Eller, *Average Cost of Making, Marketing Movie Soars: Hollywood: Figure Hit \$50.4 Million, ‘a Beast of a Number,’ Says MPAA President Jack Valenti*, L.A. TIMES (Mar. 8, 1995), <https://www.latimes.com/archives/la-xpm-1995-03-08-fi-40252-story.html> [https://perma.cc/Q85L-3ZNF].

¹²⁷ Verrier, *supra* note 124.

¹²⁸ Annie Mueller, *Why Movies Cost So Much to Make*, INVESTOPEDIA (Apr. 28, 2020), <https://www.investopedia.com/financial-edge/0611/why-movies-cost-so-much-to-make.aspx> [https://perma.cc/P25S-4LHQ].

¹²⁹ See Austin Canary, *Professional Video Editing Tools Used in Hollywood Post-Production*, REV (Nov. 5, 2019), <https://www.rev.com/blog/professional-video-editing-tools> [https://perma.cc/6Nzt-SGCE] (reporting that many professional digital editing programs cost a little more than \$200 per year).

Much attention has been paid to the independent film, *Tangerine*, a critically acclaimed movie about transgender sex workers that premiered at the Sundance Film Festival. Released in 2015, this movie was shot almost entirely on director Sean Baker's iPhone 5s.¹³⁰ The reported cost of the making the film was \$100,000.¹³¹ This included the cost of the iPhone (actually three phones were used) as well as an \$8 app called Filmic Pro, a Steadicam device to maintain stability, and some special lenses that could be attached to the phones.¹³² The equipment was relatively inexpensive, but the production was aided by the participation of a team of people with significant filmmaking experience.¹³³ If people with that level of expertise can work inexpensively, this also reduces costs. Of course, to the average budding filmmaker (or novice), \$100,000 is still a lot of money.

Other movies that have received wide distribution have similarly benefited from contemporary technology. The acclaimed director Steven Soderbergh has now shot two films, *Unsane* and *High Flying Bird*, on iPhones.¹³⁴ And cost savings may not be the only advantage. As Soderbergh reported, when filmmaker Christopher Nolan suggested that he move back to conventional film, he responded "that would be like 'writing scripts in pencil.'" ¹³⁵ Soderbergh added that "If we'd done *High Flying Bird* conventionally it would have taken longer and I can't tell you that it would be better," and that "I could make a couple of arguments that it would be worse."¹³⁶ And *Searching for Sugar Man*, the picture that won the "Best Documentary Feature" at the 2013 Academy

¹³⁰ Ramin Setoodeh, *Sundance Premieres Sophisticated 'Tangerine,' Shot on iPhone 5s*, VARIETY (Jan. 23, 2015, 6:52 PM), <http://variety.com/2015/film/news/sundance-premieres-sophisticated-tangerine-shot-on-iphone-5s-1201413692/> [<https://perma.cc/AV3M-QP2N>]; Nigel M. Smith, *Tangerine Is a Big Deal, Not Just Because It Was Shot on an iPhone*, GUARDIAN (July 10, 2015, 4:49 PM), <https://www.theguardian.com/film/2015/jul/10/tangerine-film-iphone-buddy-comedy-transgender-prostitutes> [<https://perma.cc/688W-5DRN>].

¹³¹ Angela Watercutter, *Tangerine Is Amazing – But Not Because of How They Shot It*, WIRED (July 7, 2015), <https://www.wired.com/2015/07/tangerine-iphone/> [<https://perma.cc/6T4M-M53U>].

¹³² Casey Newton, *How One of the Best Films at Sundance Was Shot Using an iPhone 5S*, VERGE (Jan. 28, 2015), <https://www.theverge.com/2015/1/28/7925023/sundance-film-festival-2015-tangerine-iphone-5s> [<https://perma.cc/Y6QM-KLJP>].

¹³³ See *id.*

¹³⁴ Richard Trenholm, *iPhone Fan Steven Soderbergh: Shooting on Film Is Like 'Writing in Pencil,'* CNET (Jan. 28, 2019), [<https://www.cnet.com/news/iphone-loving-stein-soderbergh-shooting-on-film-is-like-writing-in-pencil/>] [<https://perma.cc/UU2L-6HRP>].

¹³⁵ *Id.*

¹³⁶ *Id.*

Awards, was completed on an iPhone using an app called 8mm Vintage Camera when the director ran out of money after filming most of it on regular 8mm film.¹³⁷

In these various ways, and perhaps some others,¹³⁸ the creation of speech has become significantly less expensive over the past twenty-five years. In the next Part, the discussion turns to the parallel developments in legal doctrine and scholarship that increasingly recognize speech creation as an important element of the expressive activity that is governed by the First Amendment's protections.

III. DOCTRINAL AND SCHOLARLY EVOLUTION

At the same time that the aforementioned rapid technological developments were occurring, the federal courts and legal scholars became more focused on the doctrinal and theoretical underpinnings that would evaluate the constitutional limits on regulating the expressive functions of these technologies. Building on earlier cases that implicitly recognized that government restrictions on the creation of speech at the front end of the speech continuum could effectively censor speech at the back end,¹³⁹ these claims about the breadth of First Amendment coverage have become more commonplace, and have in large measure facilitated the effective use of these technologies.

¹³⁷ Matthew Kitchen, *The Oscar Winner Who Used an iPhone*, ESQUIRE (Feb. 25, 2013), <https://www.esquire.com/entertainment/movies/a19869/searching-for-sugar-man-iphone-filmmaking-15130998/> [<https://perma.cc/H3WE-HDT6>].

¹³⁸ One potential additional category of cheap speech creation might be the use of public access cable television as a vehicle for inexpensive, television programming tailored to the interests of local communities. Under federal law, state and local governments are authorized to set aside some cable channels for public, educational, or governmental use. 47 U.S.C. § 531 (2018). The policy goals of this provision were to promote diversity of programming that would address local interests. *See generally* James N. Horwood, *Public, Educational, and Governmental Access on Cable Television: A Model to Assure Reasonable Access to the Information Superhighway for All People in Fulfillment of the First Amendment Guarantee of Free Speech*, 25 SETON HALL L. REV. 1413 (1995) (discussing the goal of providing a diversity of information systems to the public). Unfortunately, because of its highly decentralized nature and the fact that local government franchise agreements are not publicly available, it is difficult for researchers to access information about the costs of producing public access programming and the content of the range of available programming.

¹³⁹ *See* *Minneapolis Star & Tribune Co. v. Minn. Comm'r of Revenue*, 460 U.S. 575, 591 (1983) (striking down state use tax on the cost of paper and ink products used in the production of newspapers). There, the Court noted that the threat of burdensome taxes on newspapers "can operate as effectively as a censor to check critical comment by the press, undercutting the basic assumption of our political system that the press will often serve as an important restraint on government." *Id.* at 585.

Before discussing these legal developments, it is worth noting that, as with other historical shifts in First Amendment doctrine that were tied to technological developments such as radio and television broadcasting,¹⁴⁰ there are complex “chicken or egg” questions about causality. Did the technological changes compel the Supreme Court and other federal courts to come up with new First Amendment rules or were the courts simply adapting preexisting principles to slightly new circumstances? A full discussion of this interesting question is beyond the scope of this Essay, but is surely worth further discussion in future research projects.

In *Sorrell v. IMS Health Inc.*,¹⁴¹ the Supreme Court invalidated a Vermont law prohibiting the sale of information about physicians’ past prescription practices to pharmaceutical manufacturers, who would use the information to allow their representatives to target and refine their sales presentations to doctors based on their history of prescribing drugs.¹⁴² The State asserted that the statute was justified by its police powers interests in protecting medical privacy and reducing the chance that the prohibited marketing would influence doctors to prescribe medications that were not in their patient’s best interests.

The State argued that its law should not even be subject to First Amendment scrutiny for two reasons. First, it claimed that its statute regulated “access to information,” rather than expression.¹⁴³ Because the prescriber information was required to be produced by other state laws, the State suggested that it was simply denying access to what was tantamount to government information.¹⁴⁴ But the Court rejected this claim, observing that the law directly “imposed a restriction on access to information in private hands.”¹⁴⁵ Second, the State asserted that the law prohibited conduct, not speech.¹⁴⁶ Here, the Court responded by reaffirming that the law was subject to constitutional scrutiny because

¹⁴⁰ David S. Han, *Constitutional Rights and Technological Change*, 54 UC DAVIS L. REV. 71, 77 (2020) (“[I]n the First Amendment context, the Court has dealt with the development of sound amplification, the rise of radio and television, and the emergence of motion pictures and video games.”) (footnotes omitted).

¹⁴¹ *Sorrell v. IMS Health Inc.*, 564 U.S. 552 (2011).

¹⁴² *See id.* at 570.

¹⁴³ *Id.* at 567.

¹⁴⁴ *Id.* at 567-68. Under First Amendment doctrine, there is no undifferentiated right for the public or press to gain access to government information. *See Houchins v. KQED, Inc.*, 438 U.S. 1, 15 (1978).

¹⁴⁵ *Sorrell*, 564 U.S. at 568.

¹⁴⁶ *Id.* at 570.

“the *creation* and dissemination of information are speech within the meaning of the First Amendment.”¹⁴⁷

Sorrell reaffirmed the Court’s commitment to the idea that free speech protections extend not only to ideas, but also to information.¹⁴⁸ Thus, regulation of the gathering, organization, and analysis of such information, and not just its dissemination, is subject to the First Amendment. As the Court further noted, “Facts, after all, are the beginning point for much of the speech that is most essential to advance human knowledge and to conduct human affairs.”¹⁴⁹ Vermont argued for an exception to “the rule that information is speech,” but the majority grounded its decision ultimately on the discrimination produced by the law’s content- and speaker-based restrictions.¹⁵⁰

In *Brown v. Entertainment Merchants Association*,¹⁵¹ the Court examined the constitutionality of a state law prohibiting the sale or rental of violent video games to minors. In responding to the claim that prohibiting the sale of such games did not interfere with their creation, the majority noted that drawing this distinction would be fraught with First Amendment concerns. It pointed out that recognizing this difference would “make permissible the prohibition of printing or selling books — though not the writing of them,” adding that “[w]hether government regulation applies to creating, distributing, or consuming speech makes no difference” for First Amendment purposes.¹⁵² In doing so, the Court was strongly indicating that speech creation is fundamentally protected by the free speech clause.

The Court has acknowledged that constitutional protection of speech requires that the First Amendment also limit other types of conduct that serves as a necessary precursor to speech in other contexts as well. The Supreme Court has long held that campaign spending is a form of speech protected by the First Amendment,¹⁵³ and in *Citizens United v. Federal Election Commission*, it elaborated on this analysis in a manner that shows concern about restrictions of speech toward the front end of

¹⁴⁷ *Id.* (emphasis added).

¹⁴⁸ See also Jane Bambauer, *Is Data Speech?*, 66 STAN. L. REV. 57, 63-64 (2014) (arguing that data should receive speech protection whenever it is regulated as information).

¹⁴⁹ *Sorrell*, 564 U.S. at 570.

¹⁵⁰ *Id.* at 571.

¹⁵¹ 564 U.S. 786 (2011).

¹⁵² *Id.* at 792 n.1.

¹⁵³ See *Buckley v. Valeo*, 424 U.S. 1, 19 (1976) (“A restriction on the amount of money a person or group can spend on political communication during a campaign necessarily reduces the quantity of expression by restricting the number of issues discussed, the depth of their exploration, and the size of the audience reached.”).

the expression continuum.¹⁵⁴ There, it noted that “[l]aws enacted to control or suppress speech may operate at different points in the speech process.”¹⁵⁵ In an earlier case, *Minneapolis Star & Tribune Co. v. Minnesota Commissioner of Revenue*, the Court invalidated a state use tax on ink and paper that applied discriminatorily toward only some groups within the press.¹⁵⁶ In doing so, it implicitly acknowledged that even though the newspaper could still operate under the tax, the law imposed a burden on conduct that preceded the newspapers’ speech and was therefore subject to First Amendment scrutiny.

The lower federal courts, too, have recognized that the First Amendment’s speech guarantees apply to government action that burdens speech-creating activity. As technology has expanded the ability to engage in both planned and spontaneous video recording, the courts have begun to acknowledge recording as speech. In *ACLU v. Alvarez*, the Seventh Circuit enjoined the state from enforcing an eavesdropping law that would have prevented the audiovisual recording of police officers while they were performing their duties in public.¹⁵⁷ Numerous other circuits have recognized a First Amendment right to record the police in such circumstances, finding that such recording unequivocally counts as speech creation.¹⁵⁸ Legal recognition of the right to record has been an important foundation for the documentation of police shootings that have helped expand attention to the Black Lives Matter movement.¹⁵⁹

Moreover, some courts have begun to broaden the right to record to apply even on private property in some circumstances. In response to the undercover investigations by animal rights groups discussed above, several states have enacted so-called Ag-Gag laws¹⁶⁰ that criminalize

¹⁵⁴ See *Citizens United v. Fed. Election Comm’n*, 558 U.S. 310, 466 (2010).

¹⁵⁵ *Id.* at 336.

¹⁵⁶ *Minneapolis Star & Tribune Co. v. Minn. Comm’r of Revenue*, 460 U.S. 575, 591 (1983).

¹⁵⁷ *Am. Civil Liberties Union of Ill. v. Alvarez*, 679 F.3d 583, 588, 608 (7th Cir. 2012).

¹⁵⁸ See, e.g., *Fields v. City of Philadelphia*, 862 F.3d 353 (3d Cir. 2017) (holding that the First Amendment right to access information protects police recordings); *Turner v. Lieutenant Driver*, 848 F.3d 678 (5th Cir. 2017) (noting that the creation of speech can be protected); *Glik v. Cunniffe*, 655 F.3d 78 (1st Cir. 2011) (following other circuits in holding that video recordings of police are protected); *Smith v. City of Cumming*, 212 F.3d 1332 (11th Cir. 2000) (recognizing that recording police implicates the right to access information); *Fordyce v. City of Seattle*, 55 F.3d 436 (9th Cir. 1995) (reversing summary judgment in a First Amendment video recording cop case).

¹⁵⁹ See *supra* notes 69–73 and accompanying text.

¹⁶⁰ The term “Ag-Gag law” was first coined by food writer Mark Bittman. See Mark Bittman, Opinion, *Who Protects the Animals?*, N.Y. TIMES (Apr. 26, 2011, 9:29

such investigative conduct, including the recording of videos at such facilities without the owners' consent. The groups have successfully challenged many of these laws in federal courts. In *Animal Legal Defense Fund v. Wasden*, the Ninth Circuit struck down Idaho's Ag-Gag law, concluding that "[t]he act of recording is itself an inherently expressive activity; decisions about content, composition, lighting, volume, and angles, among others, are expressive in the same way as the written word or a musical score."¹⁶¹ Another federal court, adjudicating the fate of Utah's Ag-Gag law, observed that:

In sum, it appears the consensus among courts is that the act of recording is protectable First Amendment speech. And this court agrees. Were the law otherwise, as the State contends, the State could criminalize, for example, creating music videos, or videos critical of the government, or any video at all, for that matter, with impunity. In other words, the State could do indirectly what the Supreme Court has made clear it cannot do directly.¹⁶²

We may also witness further legal recognition of the right to record in the context of regulations on drones. In one of the first lawsuits challenging a state's drone regulations, the National Press Photographers Association and other plaintiffs sued to invalidate provisions of Texas law that imposed criminal and civil penalties on any person who "uses an unmanned aircraft to capture an image of an individual or privately owned real property in [Texas] with the intent to conduct surveillance on the individual or property contained in the image."¹⁶³ Though the statute provided for some exemptions, its prohibitions applied to news media entities.¹⁶⁴ In rejecting state

PM), <https://opinionator.blogs.nytimes.com/2011/04/26/who-protects-the-animals/> [<https://perma.cc/8KFB-2VJC>].

¹⁶¹ *Animal Legal Def. Fund v. Wasden*, 878 F.3d 1184, 1203, 1205 (9th Cir. 2018).

¹⁶² *Animal Legal Def. Fund v. Herbert*, 263 F. Supp. 3d 1193, 1208 (D. Utah 2017). Federal courts have also invalidated Ag-Gag laws in Kansas and Iowa, although both cases are now on appeal. See *Animal Legal Def. Fund v. Kelly*, 434 F. Supp. 3d 974, 983, 1002 (D. Kan. 2020), *amended by* No. CV 18-2657, 2020 WL 1659855 (D. Kan. Apr. 3, 2020), *appeal docketed*, No. 20-3082 (10th Cir. May 1, 2020); *Animal Legal Def. Fund v. Reynolds*, 353 F. Supp. 3d 812, 817, 817 n.5, 827 (S.D. Iowa 2019), *appeal docketed*, No. 19-1364 (8th Cir. Feb. 22, 2019).

¹⁶³ *Nat'l Press Photographers Ass'n v. McCraw*, No. 1:19-CV-946, 2020 WL 7029159, at *1 (W.D. Tex. Nov. 30, 2020) (alteration in original) (citing TEX. GOV'T CODE ANN. § 423.003 (2019)). The suit also challenged a no-fly provision of Texas law that effectively prevented journalists from using drones for the purpose of newsgathering. See *id.* at *2.

¹⁶⁴ *Id.* at *1.

officials' motion to dismiss, the federal district court found that the plaintiffs had adequately pled that the law violated the First Amendment because "the surveillance provisions are burdening expressive conduct — taking photos and video for newsgathering purposes."¹⁶⁵

Doctrinal developments in the area of data acquisition are promising as well. In the *Western Watersheds Project* case, where plaintiffs challenged the Wyoming data trespass law discussed earlier, the state contended that collection of resource data is conduct, not speech. Rejecting this claim, the Tenth Circuit held that "An individual who photographs animals or takes notes about habitat conditions is creating speech in the same manner as an individual who records a police encounter."¹⁶⁶ Furthermore, although collection of water or soil samples is further afield from typical speech creation, the court noted that because the law's prohibitions coupled such collection with the recording of either a legal description or the geographical coordinates of where the collection took place, the regulated conduct was nevertheless at the front end of the speech continuum.¹⁶⁷ Consistent with the Supreme Court's cases acknowledging the dangers of state regulation of speech creating activity, the Tenth Circuit acknowledged that "[i]f the creation of speech did not warrant protection under the First Amendment, the government could bypass the Constitution by 'simply proceed[ing] upstream and dam[ming] the source' of speech."¹⁶⁸

Returning to the two computer tools, scraping audits and sock puppet audits, used to detect unlawful discrimination on web sites, there has been some developing law as well. One impediment to using such tools is the federal Computer Fraud and Abuse Act¹⁶⁹ ("CFAA"), which prohibits fraudulent access to computers or access that exceeds the scope of authorized permission by imposing both criminal penalties and civil liability. Some courts have applied CFAA to persons who have violated a site's terms of service on the ground that such access may be

¹⁶⁵ *Id.* at *9. The court also found that the plaintiffs' claims that the Texas law was unconstitutionally vague and overbroad and that the no-fly provisions violated the First Amendment were adequately pled. *Id.* at *11-*12.

¹⁶⁶ *W. Watersheds Project v. Michael*, 869 F.3d 1189, 1196 (10th Cir. 2017) (citing *Am. Civil Liberties Union of Ill. v. Alvarez*, 679 F.3d 583, 595-96 (7th Cir. 2012)).

¹⁶⁷ *Id.* at 1197.

¹⁶⁸ *Id.* at 1196 (alteration in original) (quoting *Buehrle v. City of Key West*, 813 F.3d 973, 977 (11th Cir. 2015)).

¹⁶⁹ 18 U.S.C. § 1030 (2018).

without, or have exceeded, the user's authorization.¹⁷⁰ Not surprisingly, many websites' terms of service prohibit using data scraping tools or creating fake user profiles, and therefore using the auditing tools might well violate CFAA.¹⁷¹

In *Sandvig v. Sessions*,¹⁷² several researchers and a media organization who wished to use computer auditing tools to identify discrimination on commercial websites sued the U.S. Attorney General seeking a decision that CFAA violated their First Amendment rights and an injunction against their prosecution under the act. Specifically, the plaintiffs challenged the CFAA provision that imposes punishment on anyone who "intentionally accesses a computer without authorization or exceeds authorized access, and thereby obtains . . . information from any protected computer."¹⁷³ The government moved to dismiss the case on the grounds that the plaintiffs lacked standing and had failed to state a valid First Amendment claim.¹⁷⁴ The federal district court rejected the motion, concluding that computer tools used to access data on a website are analogous to devices used to make recordings.¹⁷⁵ The court expanded on this analysis as follows.

That plaintiffs wish to scrape data from websites rather than manually record information does not change the analysis. Scraping is merely a technological advance that makes information collection easier; it is not meaningfully different from using a tape recorder instead of taking written notes, or

¹⁷⁰ See, e.g., *United States v. Lawson*, No. CRIM. 10-114, 2010 WL 9552416, at *5, 8 (D.N.J. Oct. 12, 2010) (denying motion to dismiss an indictment on CFAA charges where the alleged conduct involved violations of the website's terms of service). *But see*, e.g., *United States v. Drew*, 259 F.R.D. 449, 464 (C.D. Cal. 2009) (holding that CFAA prosecution for violation of terms of service agreement violated void for vagueness doctrine). For a discussion of the potentially problematic scope of CFAA, see Orin S. Kerr, *Cybercrime's Scope: Interpreting "Access" and "Authorization" in Computer Misuse Statutes*, 78 N.Y.U. L. REV. 1596, 1598, 1628-34, 1648-60 (2003).

¹⁷¹ Airbnb's terms of service, for example, prohibit the use of "bots, crawlers, scrapers, or other automated means to access or collect data or other content from or otherwise interact with the Airbnb Platform." *Terms of Service*, AIRBNB, <https://www.airbnb.com/help/article/2908/terms-of-service> (last updated Oct. 30, 2020) [<https://perma.cc/Q662-VMJ2>]. ZipRecruiter's terms of service forbid any job seeker to "post or submit any inaccurate, incomplete, or false biographical information or another person's information." *Global Terms of Use Agreement*, ZIPRECRUITER, <https://www.ziprecruiter.com/terms#s1> (last updated Jan. 8, 2021) [<https://perma.cc/6HAC-TNJL>].

¹⁷² *Sandvig v. Sessions*, 315 F. Supp. 3d 1 (D.D.C. 2018).

¹⁷³ *Id.* at 8 (quoting 18 U.S.C. § 1030(a)(2)(C)).

¹⁷⁴ *Id.* at 11.

¹⁷⁵ *Id.* at 15-16, 34.

using the panorama function on a smartphone instead of taking a series of photos from different positions. And, as already discussed, the information plaintiffs seek is located in a public forum. Hence, plaintiffs' attempts to record the contents of public websites for research purposes are arguably affected with a First Amendment interest.¹⁷⁶

In a later decision, the court ruled that CFAA is not implicated by a violation of the terms of service alone and dismissed the case as moot, though it is now on appeal.¹⁷⁷ But this case and others like it are likely to shape an important aspect of First Amendment doctrine as it pertains to automated data collection.

Finally, some courts have recognized speech creation under the First Amendment in the more artistic or aesthetic contexts. For example, in *Anderson v. City of Hermosa Beach*, the Ninth Circuit held that not only did tattoos represent speech, but also that "the *process* of tattooing is purely expressive activity."¹⁷⁸ There, the court noted that:

[N]either the Supreme Court nor our court has ever drawn a distinction between the process of creating a form of *pure* speech (such as writing or painting) and the product of these processes (the essay or the artwork) in terms of the First Amendment protection afforded. Although writing and painting can be reduced to their constituent acts, and thus described as conduct, we have not attempted to disconnect the end product from the act of creation.¹⁷⁹

These doctrinal developments would surely be seen to protect the types of speech creation outlined in the previous section, at least most of the time. The courts' analyses have also been shored up by a number of scholarly examinations of speech creation that have been published over the same time frame in which technological innovations have occurred. For example, Professor Jane Bambauer has taken an approach that focuses on the broader intellectual freedom that serves as a foundation of First Amendment theory. She conceptualizes the type of expressive activity discussed in this Essay, not only as the creation of

¹⁷⁶ *Id.* at 16.

¹⁷⁷ *Sandvig v. Barr*, 451 F. Supp. 3d 73, 76 (D.D.C. 2020), *appeal docketed*, No. 20-5153 (D.C. Cir. May 28, 2020).

¹⁷⁸ *Anderson v. City of Hermosa Beach*, 621 F.3d 1051, 1061 (9th Cir. 2010).

¹⁷⁹ *Id.* at 1061-62. For a novel, somewhat related claim, that the First Amendment ought to protect "not only the right to share ideas and factual claims, but also a (limited) right to test them," see Jane R. Bambauer, *The Empirical First Amendment*, 78 OHIO ST. L.J. 947, 947 (2017).

speech, but as the creation of *knowledge*, which “reinforces American commitments to autonomy and intellectual curiosity. It at once transcends and supports ‘speaker’ and ‘listener’ rights by protecting observation and thought — the very things that make speaking and listening so valuable.”¹⁸⁰

One of the first scholars to recognize the importance of recording as speech is Professor Seth Kreimer. In his work, he has challenged the notion that only the final step of communicating information or ideas to an audience should count as speech.¹⁸¹ Rather, challenging us to think about the practice of speech earlier in the process and recognizing that communication is made up of multiple steps, including the processing of information, he suggests that the formulation of ideas and thoughts, and the transformation of that knowledge and thinking into a form that others can hear and understand counts as speech.¹⁸² Thus, the process of video recording, whether for political purposes or artistic creation, must, like the protection of access to computer printers and other implements of communication, be protected by the First Amendment.¹⁸³

Premising his analysis on the First Amendment’s Press Clause rather than the Speech Clause, Professor Ashutosh Bhagwat has persuasively argued that “producing speech,” as distinguished from its conveyance to listeners, must be constitutionally protected.¹⁸⁴ As he explains, “Regulation of the press is thus regulation of the production of communication rather than of communication itself, and so the Press Clause by its terms protects the production of written speech.”¹⁸⁵ The importance of separating creation from communication derives from the fact that, unlike oral communication or an act of symbolic expression, such as burning a flag, there is a temporal space in between creation and expression.¹⁸⁶

¹⁸⁰ Bambauer, *supra* note 148, at 61, 63 (“Expanded knowledge is an end goal of American speech rights, and accurate information . . . provides the fuel.”).

¹⁸¹ See Kreimer, *supra* note 69, at 376-77.

¹⁸² See *id.* at 379-82.

¹⁸³ See Robert Post, *Encryption Source Code and the First Amendment*, 15 BERKELEY TECH. L.J. 713, 717 (2000) (“The genre of the cinema . . . encompasses far more than speech acts. It includes materials . . . like projectors If the state were to prohibit the use of projectors without a license, First Amendment coverage would undoubtedly be triggered.”).

¹⁸⁴ See Ashutosh Bhagwat, *Producing Speech*, 56 WM. & MARY L. REV. 1029, 1054-56 (2015).

¹⁸⁵ *Id.* at 1057.

¹⁸⁶ *Id.* at 1033.

Thus, a book is printed, but may not be distributed or read until much later. A movie is filmed, but probably will not be screened for several months, if not years. A photograph is taken, but may not be printed or posted to the Internet or shown to others for some time.¹⁸⁷

Thus, the confluence of changes in new technology and legal doctrine presents a compelling case for this expansive view of speech creation as speech. This recognition is also consistent with free speech theory, as a capacious view of the speech continuum allows closer scrutiny of government efforts to restrict speech creation. As Justin Marceau and I have written:

Coupled with the advent of the Internet, the expansion of video recording technology has made it possible to broadcast images widely, inexpensively, and instantaneously. This creates transformative ways for individuals to participate in democracy and inform public discourse about not only political and social issues but also broader understandings about the truths of the universe, including complex moral questions.¹⁸⁸

The same, of course, could be said about digital data collection and recording technologies.

Although the Supreme Court has yet to full acknowledge the notion of speech creation as within the First Amendment's scope, contemporary circumstances suggest that it will have to address the issue at some point in the near future. It's worth noting that rejecting the claim that speech creation or production is "speech" are would fundamentally undermine the protection of essential components that

¹⁸⁷ *Id.*; see also Kreimer, *supra* note 69, at 377 (observing that if speech producing conduct is not covered by the First Amendment, the government would be free to seize unpublished drafts of manuscripts); Marceau & Chen, *supra* note 43, at 1023 ("The proposition that recording for later broadcast or consumption is not covered by the First Amendment, whereas recording and simultaneously broadcasting that recording to even a single viewer is covered cannot seriously be defended. The distinction between recording and broadcast is also blurred with the development of new apps that permit citizens to easily make videos available for wide viewing."). Professor Campbell offers a slightly different approach to assessing the constitutionality of regulations of speech-facilitating conduct. Wesley J. Campbell, *Speech-Facilitating Conduct*, 68 STAN. L. REV. 1, 5 (2016). He argues for recognition of a new category of "speech-facilitating conduct," which involves nonexpressive conduct that may or may not have free speech implications. *Id.* at 5. His account suggests that whether such conduct is covered by the First Amendment turns, and should turn, on whether the government regulation in question targets speech. *Id.* at 5-6.

¹⁸⁸ Marceau & Chen, *supra* note 43, at 1000 (footnote omitted).

rest on the speech continuum. Displaying a photograph would be speech, but not taking one. Writing in a diary would not be speech unless there was an intended audience. Performing a symphony would be speech, but not composing one. Dancing would be speech, but not choreography.

Furthermore, the implications for newsgathering, whether by professional journalists or citizens, would be severe. The Supreme Court has held that journalists are not exempt from otherwise generally applicable laws, but it has somewhat opaquely suggested that this does not mean “that news gathering does not qualify for First Amendment protection.”¹⁸⁹ It has acknowledged that “without some protection for seeking out the news, freedom of the press could be eviscerated.”¹⁹⁰ Yet, the Court has never expounded upon the scope or extent of such protection. As discussed above, newsgathering itself is an important component of speech creation. Some newsgathering activities are unambiguously speech, such as interviewing a source. But much journalism involves collecting, digesting, and organizing information and data and recording events, images, and sounds. That process continues with refinement, confirmation, writing, and editing, all before the speech is ever published. At a time when public trust in the press is waning,¹⁹¹ it is critical to protect newsgathering as a form of speech creation as a way of bolstering the ability of the news media to discover and publish factually accurate information to promote public interest and deliberation.

IV. SOME CHALLENGES AND LOOKING AHEAD

As with most technological developments, the availability of inexpensive speech-creating tools has some negative externalities as well. It is worth exploring what those might be, and addressing how the First Amendment can be deployed to protect speech that advances the goals of free expression while allowing some room for restriction of the most harmful instantiations of speech creation. In this Part, I address a few of the most obvious costs of cheap speech creation – the abuse of the right to record by misleading editing and display, making a video appear to show something that it does not and the related problem of

¹⁸⁹ *Branzburg v. Hayes*, 408 U.S. 665, 681 (1972).

¹⁹⁰ *Id.*

¹⁹¹ See Lee Rainie, Scott Keeter & Andrew Perrin, *Trust and Distrust in America*, PEW RES. CTR. (July 22, 2019), <https://www.pewresearch.org/politics/2019/07/22/trust-and-distrust-in-america/> [<https://perma.cc/U5D2-Q3EP>].

deep fake videos,¹⁹² the apparent proliferation of “fake news,”¹⁹³ and the extensive privacy harms caused by “revenge porn.”¹⁹⁴

A. *Misleading Editing and Manipulation of Images*¹⁹⁵

The ability to inexpensively create socially valuable speech also, not surprisingly, makes it easy to create expression that produces significant social harms. With the same tools that a citizen journalist can use to create an independent newsletter, another person can design a masthead for a fictional newspaper and simply make up and publish false news stories that may mislead its readers.¹⁹⁶

The First Amendment value of speech creation is largely dependent on such actions resulting in a form of expression that is accurate and truthful.¹⁹⁷ At least with regard to political speech, there may be problems associated with audiovisual recordings, photographs, or other images that have been manipulated in ways that undermine their reliability. In many contexts, video recordings can be even more reliable than other tools for creating speech, such as note taking or dictation. Rather than having whatever is observed be filtered through the

¹⁹² Deep fake videos have been described “as shorthand for the full range of hyper-realistic digital falsification of images, video, and audio.” Bobby Chesney & Danielle Citron, *Deep Fakes: A Looming Challenge for Privacy, Democracy, and National Security*, 107 CALIF. L. REV. 1753, 1757 (2019).

¹⁹³ There is at least some evidence that the problem of fake news, while commanding the public’s attention more than ever before, has not had a great influence on American politics or elections. See, e.g., Andrew Guess, Brendan Nyhan & Jason Reifler, *Exposure to Untrustworthy Websites in the 2016 Election*, 4 NATURE HUM. BEHAVIOR 472 (2020).

¹⁹⁴ Danielle Keats Citron & Mary Anne Franks, *Criminalizing Revenge Porn*, 49 WAKE FOREST L. REV. 345, 346 (2014) (advocating for criminalization of revenge porn and discussing potential First Amendment implications).

¹⁹⁵ In this Part, I only touch on some of the major concerns, as well as some preliminary responses to those concerns, and do not mean my analysis to represent a comprehensive response to these challenges.

¹⁹⁶ In another article, I suggest that in some contexts fake news might have value to its consumers if they are seeking out such material to satisfy their emotional needs and the desire for social cohesion that is solidified by connecting with like-minded persons. Chen, *supra* note 35, at 403-16.

¹⁹⁷ See *id.* at 362 (noting that “a central claim that underlies much First Amendment theory” is that “speech’s value is primarily connected to its ability to facilitate rational deliberation in its audience, thus advancing the goals of promoting democracy and truth finding”). There are, however, other theories about the values of free speech that are not dependent on factual truth, such as the notion that the First Amendment’s function should be to promote individual self-realization. See Martin H. Redish, *The Value of Free Speech*, 130 U. PA. L. REV. 591, 593 (1982).

speaker's own biases and faulty memory, the recording is in some ways self-authenticating and therefore more reliable.¹⁹⁸

In recent years, we have witnessed a couple of incidents of secret video recordings by conservative activists affiliated with Project Veritas¹⁹⁹ and some anti-abortion groups where the accuracy of the published recording has been seriously challenged.²⁰⁰ There is, of course, no ideological valence for accuracy, so the same thing could occur with progressive activists. In the case of Project Veritas, its founder, James O'Keefe, has been called out for inaccuracies.²⁰¹ In one incident, O'Keefe secretly recorded an employee with the progressive organization ACORN, in which O'Keefe pretended to engage the employee in a plan to smuggle underage girls into the United States for prostitution. While the ACORN representative reported this conversation to law enforcement officials, O'Keefe published an edited version of the video that appeared to show the ACORN employee offering support for parts of the plan.²⁰² The controversy contributed to ACORN's dissolution.²⁰³

In another incident, representatives of the anti-abortion group, Center for Medical Progress ("CMP"), secretly recorded conversations with individuals who worked with Planned Parenthood and the National Abortion Federation.²⁰⁴ The object of the investigation was to secure evidence that these organizations devoted to reproductive

¹⁹⁸ Marceau & Chen, *supra* note 43, at 1029 ("A recording provides a self-authenticating and easily reproduced memorialization of one's encounters or experiences.").

¹⁹⁹ PROJECT VERITAS, <https://www.projectveritas.com/> (last visited Jan. 15, 2021) [<https://perma.cc/5DHR-TVXY>].

²⁰⁰ See Jackie Calmes, *Video Accuses Planned Parenthood of Crime*, N.Y. TIMES (July 15, 2015), <http://www.nytimes.com/2015/07/15/us/video-accuses-planned-parenthood-of-crime.html> [<https://perma.cc/8HUZ-RBG3>].

²⁰¹ See, e.g., Conor Friedersdorf, *Still Making an Innocent Man Look Bad*, ATLANTIC (Dec. 29, 2010), <http://www.theatlantic.com/daily-dish/archive/2010/12/still-making-an-innocent-man-look-bad/177964/> [<https://perma.cc/5KGV-3C3M>] (emphasizing "misleading" nature of O'Keefe's videos, making "innocent man look as if he was complicit in a plot to traffic underage girls across the border"); Alexander Nazaryan, *James O'Keefe: Meet the Man Who Makes the Fake News*, NEWSWEEK (Jan. 1, 2018), <https://www.newsweek.com/2018/02/02/james-okeefe-project-veritas-american-pravda-fake-news-781964.html> [<https://perma.cc/HBB9-8AWW>] (criticizing O'Keefe for purposefully and grossly misrepresenting facts in several videos that purport to uncover and reveal wrongdoing).

²⁰² Vera v. O'Keefe, No. 10-CV-1422, 2012 WL 3263930, at *961 (S.D. Cal. Aug. 9, 2012).

²⁰³ *Id.* at *961.

²⁰⁴ Calmes, *supra* note 200.

freedom were violating federal law by selling tissue collected from abortions performed at their facilities.²⁰⁵ The resulting videos were made available to the public, but the reproductive rights organizations argued that they were edited in such a way that misled viewers regarding the substance of the conversation.²⁰⁶ This dispute is the object of ongoing litigation, but at this point Planned Parenthood has secured a verdict against CMP on several legal claims, including breach of contract, fraudulent misrepresentation, state recording laws, and civil RICO violations. CMP has appealed to the Ninth Circuit.²⁰⁷

While there is little doubt that the issues that were the subject of the recordings in these disputes were matters of public concern and would otherwise be of First Amendment value, the manipulation and editing of the videos in ways that communicate something that is objectively not true raises important questions about the limits on the right to record. Although the Supreme Court has recognized that false statements of fact are not categorically exempt from First Amendment coverage, it has also stated that lies that cause legally cognizable or tangible harms are not protected as speech.²⁰⁸ If false representations of fact through manipulation of videos causes such harms, constitutional protection from their regulation may no longer apply.²⁰⁹

Similarly, it is not just the editing of videos that can make them misleading, and therefore potentially harm causing. A video might also be misleading if it reflects anecdotal, unrepresentative, or selective information about the activities recorded, thus not fairly depicting the events it purports to have documented. A video's accuracy might also be affected by camera angles or production choices.²¹⁰

²⁰⁵ Sandhya Somashekhar, *Planned Parenthood Files Lawsuit over Antiabortion 'Sting' Videomaker*, WASH. POST (Jan. 14, 2016), http://www.washingtonpost.com/national/planned-parenthood-files-lawsuit-against-antiabortion-sting-video-maker/2016/01/14/446d9206-baf5-11e5-829c-26ffb874a18d_story.html [<https://perma.cc/2RW3-H4A3>].

²⁰⁶ *See id.*

²⁰⁷ *Planned Parenthood Fed'n of Am., Inc. v. Ctr. for Med. Progress*, No. 16-CV-00236, 2020 WL 4818614, at *1 (N.D. Cal. Aug. 19, 2020), *appeal filed*, Nos. 20-16068 & 20-16070.

²⁰⁸ *See United States v. Alvarez*, 567 U.S. 709, 719 (2012) (plurality opinion) (“[T]he knowingly false statement and the false statement made with reckless disregard of the truth, do not enjoy constitutional protection.” (quoting *Garrison v. Louisiana*, 379 U.S. 64, 75 (1964))); *see also id.* at 734 (Breyer, J., concurring in the judgment).

²⁰⁹ Some state courts have considered editing of videos to create misleading communications to be defamatory. *See, e.g., Nguyen v. Taylor*, 723 S.E.2d 551, 558 (N.C. Ct. App. 2012).

²¹⁰ *Marceau & Chen, supra note 43*, at 1053 n.284.

Having said that, it is also important to recognize that editing itself can be a form of speech in that it is an important component of the ultimate communicative project. In films, editing is an art form worthy of recognition by the relevant artistic community. For political videos, editing can highlight key aspects of the information documented and can present them in informative, but also persuasive, ways, as in documentary footage. It seems that the development of some sorts of editorial standards is necessary to draw distinctions between editing that has speech value and editing that is tantamount to fraud.

A related, but slightly different, and perhaps even more pernicious, problem arises from the proliferation of so-called “deep fake” videos. Deep fake videos employ advanced digital technology to create and manipulate video images in ways that display images of a person saying or doing something that was in reality never said or done.²¹¹ These images may be a more powerful communication vehicle that is even harder to rebut than false statements of fact, yet they are also capable of causing tangible and perhaps even tragic harms. For example, as Professors Chesney and Citron have argued:

In addition to the ability of deep fakes to inject visual and audio falsehoods into policy debates, a deeply convincing variation of a long-standing problem in politics, deep fakes can enable a particularly disturbing form of sabotage: distribution of a damaging, but false, video or audio about a political candidate. The potential to sway the outcome of an election is real, particularly if the attacker is able to time the distribution such that there will be enough window for the fake to circulate but not enough window for the victim to debunk it effectively (assuming it can be debunked at all).²¹²

One response to these problems might be narrowly targeted regulations to check fraudulent editing of real videos and the creation of deep fake images. Even if the First Amendment does and should protect the creation of truthful video images on matters of public concern, that should not forbid legal sanctions for misrepresentation of images. As Professor Marceau and I have written:

There is no right to mislead or provide false impressions through video recording. No one could reasonably assert a right to record and cause damage through the presentation of untruthful (or substantially untrue) broadcasts. This

²¹¹ See Chesney & Citron, *supra* note 192, at 1757.

²¹² *Id.* at 1778.

consideration may cause courts to look differently at situations in which the video is alleged to be edited or otherwise presented in a way that conveys untruthful information²¹³

Furthermore, in addition to making these misleading video images possible, technology can also expand the possibilities for responding to deep fake or other altered and edited videos. One example comes from a report about a city council candidate in Austin, Texas.

[W]hen a conservative pundit recently edited an interview with her for a YouTube channel and used it in a paid media campaign, she began receiving hate mail. Weigel fought back by re-editing the piece with her own core messages intact and turning it into a counter piece that resonated with her base. That familiarity with tech, aided by an understanding of voter interests and her learned marketing skills, allowed her to turn a potentially bad moment into a positive one.²¹⁴

Of course, the opportunity to rebut these videos may require sufficient notice and time, so corrective measures may not always be a solution.

B. *Fake News*

Professor Volokh anticipated some of the problems discussed here, which are related both to the inexpensiveness of speech creation and distribution. In discussing the social consequences of moving away from speech intermediaries such as the professional media as a social good, he acknowledged that because speakers can now communicate directly to consumers, the absence of professional editorial and fact-checking may lead to “less trustworthy” speech. Individual speakers, he wrote, “might not be willing to hire fact checkers, or might not be influenced enough by professional journalistic norms, or might not care enough about their long-term reputation for accuracy,” though he also said it was not clear how significant the “magnitude of the greater inaccuracy would be.”²¹⁵

The apparent proliferation of “fake news” in our contemporary speech and political climate would seem to validate this part of Volokh’s prediction, not only for speakers unwilling to conform to professional journalistic norms but also those who intentionally wish to mislead the public. The problem in addressing fake news is that there are strong

²¹³ Marceau & Chen, *supra* note 43, at 1052.

²¹⁴ Welson-Rossman, *supra* note 47.

²¹⁵ Volokh, *supra* note 3, at 1838.

arguments why its regulation might violate the First Amendment, particularly in light of the Supreme Court's decision in *United States v. Alvarez*.²¹⁶

In *Alvarez*, the Court invalidated the Stolen Valor Act, a federal statute making it a crime to lie about having received certain military honors from the United States.²¹⁷ There, a plurality of the Court, coupled with a concurring opinion, rejected the notion that lies are categorically exempt from the First Amendment's protections.²¹⁸ Rather, the opinions suggested, the government can only prohibit false factual statements where they cause a tangible harm or produce an undeserved material gain on the part of the liar, as in the case of fraud.²¹⁹ Many lower courts have distinguished *Alvarez*'s application based on the context of the particular lie. Where the false statement is made in the context of an undercover investigation, for example, but causes no harm to the listener, courts have held the lies to be protected by the First Amendment.²²⁰ But it has always been the case that lies that cause tangible harms to others may be subject to government regulation.²²¹

Beyond those limited regulations of harm-causing lies, effective and constitutional responses to fake news, therefore, are more likely to come from non-restrictive measures that facilitate the ability of consumers to detect information provided from questionable sources, technological tools that help to detect fake news, and from the widespread and rapid dissemination of fact-checking platforms.²²² Furthermore, there may be narrowly drawn regulations of fake news that can withstand First Amendment scrutiny where the speech causes tangible harms to readily identifiable victims.²²³

²¹⁶ 567 U.S. 709 (2012).

²¹⁷ *Id.* at 730. Justice Breyer's concurring opinion agrees with this holding. *Id.* at 736. (Breyer, J., concurring in the judgment).

²¹⁸ *Id.* at 722.

²¹⁹ *Id.* at 734-36.

²²⁰ See, e.g., *Animal Legal Def. Fund v. Wasden*, 878 F.3d 1184, 1194-99 (9th Cir. 2018) (emphasizing how entry to property is the only material gain in this context which does not reach the level of harmful speech). See generally Chen & Marceau, *supra* note 52 (noting that high value lies can advance the goals underlying freedom of speech).

²²¹ See, e.g., *Illinois ex rel. Madigan v. Telemarketing Assoc.'s, Inc.*, 538 U.S. 600, 612 (2003) (emphasizing that the First Amendment "does not shield fraud").

²²² See Chen, *supra* note 35, at 425-27.

²²³ *Id.* at 418-19.

C. Revenge Porn

Finally, the cheapness of speech creation also has made it possible for unscrupulous people, almost always men, to record intimate sexual encounters with their partners and distribute them on the internet without the partner's consent.²²⁴ Even if the original encounter and video recording is done with the partner's consent, the distribution is most frequently not, thus causing deep and indelible invasions of privacy. Here, legislative enactments of criminal or civil penalties for distribution of nonconsensual pornography or "revenge porn" have been, for the most part, upheld by the courts that have examined them against First Amendment challenges, though on different theories.²²⁵ A complete discussion of the constitutionality of revenge porn prohibitions would require a great deal more time and space. For now, I offer a couple of observations.

First, there are important distinctions between the decision of private individuals to create a consensual video of their intimate sexual encounters and the act of one of those involved to publish the video without the others' consent. The consensual creation of a sex video itself can be an important and valuable form of speech creation, made for the private use of those involved. Just as memorializing one's most intimate thoughts in a diary or in private correspondence with another person are speech, so too can the act of creating a private sex video. Thus, the distinction that some courts have drawn about the constitutionality of revenge porn being that the recordings involve purely private activity rather than matters of public concern,²²⁶ could also be used to justify prohibitions of the creation of consensual sex videos.

But there are two other critical distinctions between revenge porn video and the types of valuable, speech-creating videos discussed in this paper. First, revenge porn laws regulate not speech creation, but speech distribution, and therefore do not need to influence our understandings about the degree of the right to record *per se*.²²⁷ Second, to the extent that government restrictions on the distribution of speech are constitutionally suspect, so long as those measures are narrowly tailored

²²⁴ See Citron & Franks, *supra* note 194, at 348-49.

²²⁵ See, e.g., *People v. Austin*, 155 N.E.3d 439, 456, 475 (Ill. 2019) (upholding state revenge porn law on the ground that it was a content neutral time, place, and manner restriction and also regulated a purely private matter); *State v. VanBuren*, 210 Vt. 293, 323 (2019) (concluding that revenge porn is speech, but that the law was narrowly tailored to serve a compelling governmental interest and therefore not facially unconstitutional).

²²⁶ See *VanBuren*, 210 Vt. at 321.

²²⁷ See Marceau & Chen, *supra* note 43, at 993 n.10.

to target revenge porn and not chill socially valuable speech, it would seem hard to dispute that protection of privacy in this context is a compelling state interest.²²⁸ Therefore, though revenge porn probably counts as speech under the First Amendment, its regulation is likely to survive even the most rigorous form of constitutional scrutiny. And such regulation can likely be carried out without prohibiting or chilling speech that has social value.

CONCLUSION

As much as the dramatic increase in cheap speech distribution, the ability to engage in cheap speech creation provides an opportunity to expand the universe of socially valuable, productive expression in a wide range of political, social, and cultural contexts. A combination of technological and cultural changes in our information infrastructure has enabled everyone from famous film directors to professional journalists to the average citizen to engage in activity that entertains, informs, and facilitates transparency and accountability in meaningful ways. First Amendment doctrine and legal theory have adapted by welcoming a more capacious understanding of what counts as speech and protects such activity from government regulation. Even if there are some identifiable negative consequences that might occur from such cheap speech creation, there are reasonable ways to distinguish those activities that should permit appropriate government responses without suppressing or chilling valuable speech. Moreover, there is strong reason to believe that the value of cheap speech creation will far outweigh such potential harms. But we may need to wait another twenty-five years to find out.

²²⁸ See *VanBuren*, 210 Vt. at 317-23.