

Article

Understanding Chilling Effects

Jonathon W. Penney[†]

Introduction	1452
I. Conventional Theories	1463
A. Chilling Effects as Fear of Legal Harm	1465
B. Chilling Effects as Fear of Privacy Harm	1478
C. The Limits of Deterrence-Based Theories	1487
II. A Social Conformity Theory of Chilling Effects	1488
A. Social Chilling Effects	1489
B. Situational Uncertainty, Social Norms, and Conformity	1497
C. Chilling Effects as Social Conformity	1502
1. Legal / Regulatory / Statutory Chill	1503
2. Surveillance / Data Collection Chill	1506
3. Personalized Law / Threats / Enforcement Chill	1509
4. Social Media Chill and Disinformation / Online Abuse	1510
III. Benefits / Implications of this Theory	1513
A. Clarifying What Chilling Effects Theory Is For	1513
1. What Chilling Effects Produce	1514
2. Law's Multidimensional Role in Addressing Chilling Effects	1518

[†] This Article won the 2020 Privacy Law Scholars Conference (PLSC) Reidenberg-Kerr Award. For invaluable feedback on earlier drafts, the author would like to thank Neil Richards, Julie Cohen, Danielle Citron, Gavin Philippon, Daniel Solove, Ari Waldman, Alice Marwick, Kirsty Hughes, Katherine Strandburg, Ira Rubenstein, Christopher Wolf, Sandra Wachter, Bilyana Petkova, Marc Blitz, Alex Matthews, Peter Ormerod, Alexis Shore. The Article benefitted greatly from feedback at workshops and presentations at UC Berkeley Law (PLSC 2020), Washington University School of Law, the Oxford Internet Institute, University of Oxford, and Harvard's Berkman Klein Center for Internet & Society, as well as from conversations with Ron Deibert, Joan Donovan, Bruce Schneier, Jonathan Zittrain, Chris Hoofnagle, Margot Kaminski, Woodrow Hartzog, Nathan Matias, Kendra Albert, Ram Shankar Siva Kumar, Ryan Budish, Andy Sellars, Joss Wright, Vicki Nash, Urs Gasser, Lex Gill, and Christopher Parsons. The author also thanks the 2020 PLSC Program Committee, including Karen Levy, Orin Kerr, Franziska Boehm, Ryan Calo, Devan Desai, William McGeveran, Paul Ohm, and Priscilla Regan. Copyright © 2022 by Jonathon W. Penney.

3. Chilling Effects and Surveillance Capitalism	1521
B. The Chilling Effects Curve: Explanatory / Predictive Power	1523
C. Navigating Competing / Differing Chilling Effect Claims ..	1525
D. Legal and Constitutional Implications	1527
Conclusion	1530

INTRODUCTION

Surveillance and censorship are on the rise everywhere.¹ The amount of data about our lives, preferences, beliefs, and activities available to government and industry today is unprecedented.² At the same time, ubiquitous computing and social media use, combined with new technologies—like artificial intelligence (AI), machine learning, and facial recognition technology (FRT)—offer powerful new means to analyze and leverage this information to track, censor, manipulate, and control individuals and populations,³ automate legal

1. See Patrick Petit, *'Everywhere Surveillance': Global Surveillance Regimes as Techno-Securitization*, 29 *SCI. AS CULTURE* 30, 31 (2020) ("Surveillance has developed from a practice carried out manually into something now undertaken on a global scale and largely operated by machines."); Mark Scott, *Welcome to New Era of Global Digital Censorship*, *POLITICO* (Jan. 14, 2018), <https://www.politico.eu/article/google-facebook-twitter-censorship-europe-commission-hate-speech-propaganda-terrorist> [<https://perma.cc/52YZ-S7SB>] (noting the increase in surveillance across the globe, particularly in relation to technology and social media companies).

2. See Volker Boehme-Neßler, *Privacy: A Matter of Democracy. Why Democracy Needs Privacy and Data Protection*, 6 *INT'L DATA PRIV. L.* 222, 222 (2016) (noting the significant increase in data left behind when using online platforms); CHRISTOPHER KUNER, *TRANSBORDER DATA FLOWS REGULATION AND DATA PRIVACY LAW 4-7* (2013) (discussing the increase in transborder data available to different entities).

3. See Damir Mujezinovic, *Google's AI and Deep Learning Researcher Warns About AI-Fueled 'Mass Population Control'*, *INQUISITR* (Mar. 22, 2018), <https://web.archive.org/web/20201223161735/https://www.inquisitr.com/opinion/4836851/googles-ai-and-deep-learning-researcher-warns-about-ai-fueled-mass-population-control> (noting the disturbing capabilities of new AI technology and its capacity to control populations); *AI Social Media Could Totally Manipulate You*, *MIND MATTERS* (Nov. 26, 2018), <https://mindmatters.ai/2018/11/ai-social-media-could-totally-manipulate-you> [<https://perma.cc/DJR6-CT7Z>] (discussing fears that AI can be used by corporations or governments to control a population); Darrell M. West & John R. Allen, *How Artificial Intelligence Is Transforming the World*, *BROOKINGS INST.* (Apr. 24, 2018), <https://www.brookings.edu/research/how-artificial-intelligence-is-transforming-the-world> [<https://perma.cc/37SU-YDJ8>] (noting AI's influence on a variety of sectors including "finance, national security, health care, criminal justice, transportation, and smart cities"); Shelly Banjo, *Facebook, Twitter and the Digital Disinformation Mess: Quicktake*, *BLOOMBERG: QUINT* (Feb. 26, 2020), <https://www.bloombergquint.com/quicktakes/facebook-twitter-and-the-digital-disinformation-mess-quicktake> [<https://perma.cc/77CC-4SLX>] (discussing the increased disinformation provided by social media platforms and how that can work to control populations).

enforcement,⁴ or to promote commercial interests.⁵ Not surprisingly, concerns about the large-scale impact of these state and corporate activities on privacy, speech, and other fundamental rights and freedoms—particularly their “chilling effects” on these freedoms,⁶ that is, capacity to “chill” or discourage people from speaking or acting

4. See Woodrow Hartzog, Gregory Conti, John Nelson & Lisa Shay, *Inefficiently Automated Law Enforcement*, MICH. ST. L. REV. 1763, 1764 (2015) (“[T]he automation of law enforcement is already here.”); Frank Pasquale & Glyn Cashwell, *Four Futures of Legal Automation*, 63 UCLA L. REV. DISCOURSE 26, 39 (2015); Lisa A. Shay, Woodrow Hartzog, John Nelson, Dominic Larkin & Gregory Conti, *Confronting Automated Law Enforcement*, in ROBOT LAW 235–73 (Ryan Calo, Michael Froomkin & Ian Kerr eds., 2016) (providing an analytical framework for growing automated law enforcement technology).

5. See SHOSHANA ZUBOFF, *THE AGE OF SURVEILLANCE CAPITALISM: THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER* 8 (2019).

6. See generally Frederick Schauer, *Fear, Risk, and the First Amendment: Unraveling the “Chilling Effect”*, 58 B.U. L. REV. 685 (1978) (noting the connection between the chilling effects and free speech law); Daniel J. Solove, *A Taxonomy of Privacy*, 154 U. PENN. L. REV. 477 (2006) [hereinafter Solove, *Taxonomy of Privacy*] (discussing increasing privacy violations and privacy law); Daniel J. Solove, *The First Amendment as Criminal Procedure*, 82 N.Y.U. L. REV. 112 (2007) [hereinafter Solove, *First Amendment*] (exploring the chilling effect of criminal procedures); Daniel J. Solove, *I’ve Got Nothing to Hide and Other Privacy Misunderstandings*, 44 SAN DIEGO L. REV. 745 (2007) [hereinafter Solove, *Privacy Misunderstandings*] (investigating privacy invasion in government data collection and effects on free speech); Neil M. Richards, *Intellectual Privacy*, 87 TEX. L. REV. 387 (2008) [hereinafter Richards, *Intellectual Privacy*] (discussing the importance of intellectual privacy in relation to free thought and experience); Leslie Kendrick, *Speech, Intent, and the Chilling Effect*, 54 WM. & MARY L. REV. 1633 (2013) (arguing that chilling effect theory is not a good reason to reject strict liability in free speech law); Monica Youn, *The Chilling Effect and the Problem of Private Action*, 66 VAND. L. REV. 1473 (2013) (recognizing the chilling effect of private suits); Neil M. Richards, *The Dangers of Surveillance*, 126 HARV. L. REV. 1934, 1964 (2013) [hereinafter Richards, *Dangers of Surveillance*] (“This is not to say that individual determinations of the chilling of intellectual activities will always be easy . . . [b]ut as chilling effects doctrine has demonstrated, courts have managed to balance threats to free speech against competing government interest.”); NEIL RICHARDS, *INTELLECTUAL PRIVACY: RETHINKING CIVIL LIBERTIES IN THE DIGITAL AGE* (Oxford Univ. Press ed., 2015) [hereinafter RICHARDS, *RETHINKING CIVIL LIBERTIES*]; Jonathon W. Penney, *Chilling Effects: Online Surveillance and Wikipedia Use*, 31 BERKELEY TECH. L.J. 117, 125–29 (2016) [hereinafter Penney, *Chilling Effects*] (discussing the theory of chilling effects after the Snowden leaks); Jonathon W. Penney, *Internet Surveillance, Regulation, and Chilling Effects Online: A Comparative Case Study*, INTERNET POL’Y R. 1 (2017) [hereinafter Penney, *Internet Surveillance*] (discussing regulatory chilling effects on online presence); Danielle Keats Citron & Jonathon W. Penney, *When Law Frees Us to Speak*, 87 FORDHAM L. REV. 2317, 2319–20 (2019) (discussing the chilling effect of online abuse); Jonathon W. Penney, *Chilling Effects and Transatlantic Privacy*, 25 EUR. L.J. 122 (2019) [hereinafter Penney, *Transatlantic Privacy*] (arguing that common chilling effect concerns can bridge the U.S. and European privacy gap); Elizabeth Stoycheff, *Under Surveillance: Examining Facebook’s Spiral of Silence Effects in the Wake of NSA Internet Monitoring*, 93 JOURNALISM & MASS COMM’N 296 (2016) (exploring how perception and justification of surveillances practice may create a chilling effect).

freely—have taken on greater urgency and importance.⁷ Indeed, beyond law and social science, the term “chilling effects” has taken hold in “everyday discourse.”⁸ The Snowden revelations about the National Security Agency (NSA) PRISM program led to chilling-effect concerns about mass government surveillance.⁹ The Cambridge Analytica scandal, involving large-scale abuse of Facebook user data, likewise led to social media chilling-effect concerns.¹⁰ And today, the COVID-19 pandemic—which may require mass citizen tracking and surveillance infrastructure to effectively address—has only compounded these chilling effect concerns.¹¹

The conventional understanding in law is that a chilling effect is when a person, deterred by fear of some legal punishment or privacy harm, engages in *self-censorship*, that is, censors themselves and does not speak or engage in some activity, despite that activity being lawful or even desirable.¹² This Article challenges that understanding. It is, I

7. See, e.g., Richard Jones, *Visual Surveillance Technologies*, in THE ROUTLEDGE HANDBOOK OF TECHNOLOGY, CRIME, AND JUSTICE 436, 446–47 (M.R. McGuire & Thomas J. Holt eds., 2017) (discussing the potential “chilling effects” of new forms of visual surveillance technologies); Shay et al., *supra* note 4, at 268 (noting chilling effects likely caused by automated legal systems); Hartzog et al., *supra* note 4, at 1765 (“[E]mployment of these [automation] technologies without careful consideration poses a distinct danger to our civil liberties and can have detrimental effects on society.”).

8. Judith Townend, *Online Chilling Effects in England and Wales*, INTERNET POL’Y R., Apr. 3, 2014, at 1.

9. See e.g., Jimmy Wales & Lila Tretikov, Opinion, *Stop Spying on Wikipedia Users*, N.Y. TIMES (Mar. 10, 2015), <https://www.nytimes.com/2015/03/10/opinion/stop-spying-on-wikipedia-users.html> [<https://perma.cc/S72H-XQ5Z>] (raising concerns about chilling effects and surveillance of internet users).

10. Julie Beck, *People Are Changing the Way They Use Social Media*, ATLANTIC (June 7, 2018), <https://www.theatlantic.com/technology/archive/2018/06/did-cambridge-analytica-actually-change-facebook-users-behavior/562154> [<https://perma.cc/S72H-XQ5Z>] (noting the breach of trust likely led to a “subtle chilling effect”).

11. See Robert Chesney, *COVID-19 Contact Tracing We Can Live With: A Roadmap and Recommendations*, LAWFARE BLOG (Apr. 14, 2020), <https://www.lawfareblog.com/covid-19-contact-tracing-we-can-live-roadmap-and-recommendations> [<https://perma.cc/UH5B-FAWT>] (“Absent extraordinary safeguards, even the mere existence of such comprehensive [COVID-19 contact tracing, surveillance, and life tracking] might have a chilling effect on lawful activities.”); George Letsas & Virginia Mantouvalou, *COVID-19 and Free Speech: ‘Gagging’ NHS Staff Is Not Proportionate and Lawful*, LSE BLOG (Apr. 14, 2020), <https://blogs.lse.ac.uk/politicsandpolicy/covid-19-and-free-speech> [<https://perma.cc/2U8L-S2XG>].

12. See Daniel Bar-Tal, *Self-Censorship as a Socio-Political-Psychological Phenomenon: Conception and Research*, 38 ADVANCES IN POL. PSYCH. 37, 41 (2017) (“Self-censorship of information, defined as the act of intentionally and voluntary withholding information from other in the absence of formal obstacles . . .”). This focus on self-censorship is not surprising given chilling effects association with the First Amendment. See Kendrick, *supra* note 6, at 1649 n.74 (“As Schauer notes, the term ‘chilling

will argue, narrow and empirically weak, and it cannot explain chilling effects in a range of different contexts. Moreover, it neglects insights from a range of social science fields about how chilling effects involve not just an absence—a lack of speaking or doing—but also *shape* behavior. Indeed, the conventional theoretical focus on “self-censorship” is not surprising given chilling effects’ association with the First Amendment—and the legal doctrine of the same name—but it is only *one* dimension of the phenomena. In fact, chilling effects predominantly involve not just a deterrent effect, but a shaping effect—people speaking, acting, or doing, in a way that conforms to, or is in compliance with, a perceived social norm, not simply self-censoring to avoid a legal harm.¹³ Chilling effects are thus also *productive*.¹⁴ They not only involve the silencing of speech, but also the expression of socially conforming speech and behavior.¹⁵

As Julie Cohen has observed, legal scholars have largely neglected these productive dimensions to chilling effects.¹⁶ This is likely for many reasons. One reason, Cohen argues, is unlike theorists in other fields, legal theorists are largely committed to liberal theory and are thus “uncomfortable” discussing “social shaping” of subjectivity and

effect’ may denote unwelcome deterrent effects with respect to any rights or values, but it originated in and remains closely associated with the First Amendment context.”).

13. See *infra* Part II.C.

14. See Julie E. Cohen, *Studying Law Studying Surveillance*, 13 SURVEILLANCE & SOC’Y 91, 92 (2015) [hereinafter Cohen, *Studying Law*] (“Legal theorists are uncomfortable discussing the social shaping of the subject, and this reluctance inclines them to overlook[] all the ways in which they are productive.”); Julie E. Cohen, *Surveillance versus Privacy: Effects and Implications*, in THE CAMBRIDGE HANDBOOK OF SURVEILLANCE LAW 455–69 (David Gray & Stephen E. Henderson eds., 2017) [hereinafter Cohen, *Surveillance Versus Privacy*] (investigating the misalignment between law and surveillance and its productive potential); Julie E. Cohen, *What Privacy Is For*, 126 HARV. L. REV. 1904, 1917 (2013) [hereinafter Cohen, *What Privacy Is For*] (quoting Mark Andrejevic, *Exploitation in the Data Mine*, in INTERNET AND SURVEILLANCE: THE CHALLENGES OF WEB 2.0 AND SOCIAL MEDIA I, 71–73 (Christian Fuchs, Kees Boersma, Anders Albrechtslund & Marisol Sandoval eds., 2012) (noting that it “does not do justice to the productive character of consumer surveillance”)); see also Julie E. Cohen, *Examined Lives: Informational Privacy and the Subject as Object*, 52 STAN. L. REV. 1373 (2000) [hereinafter Cohen, *Examined Lives*] (“[C]ategorical arguments from property, choice, ‘truth,’ and speech lack weight, and mask fundamentally political choices about the allocation of power over information, cost, and opportunity.”).

15. See *infra*, Part II.C.

16. Cohen, *Studying Law*, *supra* note 14, at 92. There are, of course, exceptions, with Neil Richards, Daniel Solove, Margot Kaminski, and Cohen herself, among others. See *supra* note 6 and accompanying text.

tend to overlook the “constitutive power” of cultural norms and practices.¹⁷ Another reason, as Ari Waldman has aptly observed, is that social theory remains “under-developed” in legal scholarship.¹⁸ Waldman was speaking of privacy scholarship,¹⁹ but his observation is also accurate more generally about legal engagement with social theory. Chilling effects theory, it might be said, is simply another example.

But the conventional understanding of chilling effects is not hospitable to social theory either. The first comprehensive account of chilling effects theory and related legal doctrine is Frederick Schauer’s 1978 article *Fear, Risk, and the First Amendment: Unraveling the “Chilling Effect.”*²⁰ His account has been described as the “definitive treatment”²¹ and is today still considered the “leading theory on chilling effects.”²² It is also largely the foundation for the conventional understanding in law—a person is chilled if they are deterred from speaking or engaging in some lawful activity out of fear of a legal threat or harm.²³ But Schauer’s theory relies on rational choice and deterrence theory, reflecting the influence of “law and economics” in the 1970s, a field that largely ignored social science and social theory

17. Cohen, *Studying Law*, *supra* note 14, at 92.

18. Ari Ezra Waldman, *Privacy as Trust: Sharing Personal Information in a Networked World*, 69 U. MIAMI L. REV. 559, 561 (2015); *see also* ARI EZRA WALDMAN, *PRIVACY AS TRUST: INFORMATION PRIVACY FOR AN INFORMATION AGE 35* (2018) (noting some use of social theories in privacy, but they are only “the beginning” and “do not go far enough”).

19. Waldman, *supra* note 18.

20. Schauer, *supra* note 6.

21. Julie E. Cohen, *A Right to Read Anonymously: A Closer Look at ‘Copyright Management’ in Cyberspace*, 28 CONN. L. REV. 981, 1010 n.116 (1996) (suggesting Schauer’s work was the “definitive treatment of the ‘chilling effect’ as an independent and sufficient basis for according First Amendment protection”).

22. Moritz Büchi, Eduard Fosch-Villaronga, Christoph Lutz, Aurelia Tamò-Larrieux, Shruti Velidi & Salome Viljoen, *The Chilling Effects of Algorithmic Profiling: Mapping the Issues*, COMPUT. L. & SEC. REV., Apr. 2020, at 14.

23. *See* Schauer, *supra* note 6, at 689 (“[A]n activity is chilled if people are deterred from participating in that act . . . in law the acknowledged basis of deterrence is the fear of punishment . . .”).

until decades later.²⁴ Given the influence of Schauer's account,²⁵ this may also help explain the neglect for insights from social science and social theory in conventional understanding of chilling effects.

There are, of course, exceptions to this neglect. Scholars like Daniel Solove,²⁶ Neil Richards,²⁷ Woodrow Hartzog,²⁸ Margot Kaminski,²⁹

24. Robert A. Prentice, *Chicago Man, K-T Man, and the Future of Behavioral Law and Economics*, 56 VAND. L. REV. 1663, 1666 (2003) (“[L]aw and economics has dominated interdisciplinary thought in the legal academy for the past thirty years.”). By 1978, law and economics was predominant in the legal academy. See, e.g., Jennifer Arlen, *Comment: The Future of Behavioral Economic Analysis of Law*, 51 VAND. L. REV. 1765 (1998) (noting the dominance of law and economics); Anne C. Dailey, *The Hidden Economy of the Unconscious*, 74 CHI.-KENT L. REV. 1599, 1600 (2000) (“Economic analysis has without question enjoyed a powerful and widespread influence within the legal academy over the last few decades.”); W. Bradley Wendel, *Mixed Signals: Rational-Choice Theories of Social Norms and the Pragmatics of Explanation*, 77 IND. L.J. 1, 8 (2002) (“[T]he rational-choice vision of the human predicament has achieved unparalleled dominance in the legal academy in thinking about individual and social behavior”); Eli M. Salzberger, *The Economic Analysis of Law: The Dominant Methodology for Legal Research?*, 4 HAIFA L. REV. 207, 217 (2008) (noting that law and economics became a “significant branch” of legal theory in the 1960s, but the “important impetus” for the “movement” came in the 1970s, thanks to the work of influential scholar Richard H. Posner). This legal academy ignored social science and theory. See, e.g., Richard H. McAdams & Eric Rasmusen, *Norms and the Law*, in 2 HANDBOOK OF LAW AND ECONOMICS 1573, 1609 (A. Mitchell Polinsky & Steven Shavell eds., 2007) (noting that law and economics had “ignored” both “social norms and conventions” for its “first two decades” and “discovered” them in the 1990s, because before then, law and economics embraced the idea that law was the “only set of enforced rules”); Amitai Etzioni, *Social Norms: Internalization, Persuasion, and History*, 34 LAW & SOC’Y REV. 157, 157–58 (2000) (“For decades, the insights and findings of law and society were largely ignored, and law and economics—which mostly ignores social norms—was all the rage.”).

25. For example, privacy scholar Daniel Solove, who theorized privacy-related chilling effects in the years after 9/11, largely extended Schauer's work, as opposed to significantly challenging it. See *infra* Part II.A.1.

26. See, e.g., Solove, *First Amendment*, *supra* note 6; Solove, *Taxonomy of Privacy*, *supra* note 6.

27. See, e.g., RICHARDS, *RETHINKING CIVIL LIBERTIES*, *supra* note 6; Richards, *Intellectual Privacy*, *supra* note 6; Richards, *Dangers of Surveillance*, *supra* note 6; see also Neil Richards & Woodrow Hartzog, *Taking Trust Seriously in Privacy Law*, 19 STAN. TECH. L. REV. 431, 456 (2016).

28. See, e.g., Richards & Hartzog, *supra* note 27, at 456 (recognizing the impact of trust on privacy law).

29. See, e.g., Margot E. Kaminski & Shane Witnov, *The Conforming Effect: First Amendment Implications of Surveillance, Beyond Chilling Speech*, 49 U. RICH. L. REV. 465, 482 (2015).

Julie Cohen,³⁰ Ryan Calo,³¹ Helen Nissenbaum,³² and Danielle Citron,³³ among others, have all offered important contributions to better understanding chilling effects in different contexts and do so by drawing on insights from other fields, including surveillance studies and social psychology. This Article builds on these and other insights from social science to advance what I call a *social conformity* theory of chilling effects. This theory focuses not just on *why* people are chilled but also *how* are people chilled—as a predictive matter—and *what* these chilling effects produce and their broader implications. Those broader impacts are not just self-censorship, but *social conformity* through both speech and behavior that is conforming to, or compliant with, broader social, economic, and political norms, structures, power, and hierarchies.

This, I argue, has important legal, theoretical, and normative advantages. First, this theory better captures the broader social context of chilling effects and their relationship to existing social, economic, and political structures, power, and hierarchies, which is essential to understanding how chilling effects impacts democratic societies. Second, as it is better grounded in social science and empirical literature, it also has greater predictive and explanatory power. Combining insights from social and deterrence theory, it can predict the *scope* and *magnitude* of chilling effects in different contexts—the more individualized and personalized the threat, the greater the impact. Third, it renders more salient and clear how privacy and chilling effects theory are inextricably linked. If privacy theory is concerned with preserving social conditions for autonomy and self-development, then understanding chilling effects—which fosters competing social conditions favoring self-censorship, social conformity, and compliance—is essential. Fourth, by theorizing chilling effects not just in relation to individual-level self-censorship but also broader social conditions and power dynamics, it provides a normative foundation to distinguish “good” and “bad” chilling effects, and also navigate competing ones. This also has important legal and public policy implications, including

30. See, e.g., Cohen, *Surveillance Versus Privacy*, *supra* note 14; Cohen, *Studying Law*, *supra* note 14; Cohen, *Examined Lives*, *supra* note 14; See also JULIE E. COHEN, BETWEEN TRUTH AND POWER: THE LEGAL CONSTRUCTIONS OF INFORMATIONAL CAPITALISM (2019); Cohen, *Examined Lives*, *supra* note 14.

31. See e.g., M. Ryan Calo, *The Boundaries of Privacy Harm*, 86 IND. L.J. 1131 (2011) [hereinafter Calo, *Boundaries*]; M. Ryan Calo, *People Can Be So Fake: A New Dimension to Privacy and Technology Scholarship*, 114 PENN. ST. L. REV. 809 (2010).

32. See, e.g., HELEN NISSENBAUM, PRIVACY IN CONTEXT: TECHNOLOGY, POLICY, AND THE INTEGRITY OF SOCIAL LIFE (2010).

33. See DANIELLE KEATS CITRON, HATE CRIMES IN CYBERSPACE 6–8 (2014); Citron & Penney, *supra* note 6.

for chilling effects standing and doctrine. A behavioral phenomenon—caused by state and corporate actions—that encourages the production of speech and behavior that is more compliant and conforming has obvious implications in an era of surveillance capitalism and the emergence of mass citizen tracking systems.³⁴ Lastly, this theory can also help us better understand the polarization and tribalism we see on social media platforms. Sometimes social conformity does not simply mean self-censorship or more reserved behavior. If the norm is more polarizing speech or abusive conduct, then chilling effects can encourage that too.

In some ways, there have always been problems with the law's conventional understanding of chilling effects. Though the idea of "chilling effects" first came to prominence in a series of U.S. Supreme Court decisions in the years after the Second World War,³⁵ lawyers, privacy theorists, and social scientists have remained skeptical whether such chilling effects actually exist and, if they do, whether they are passing, trivial, or ephemeral.³⁶ Courts have likewise long questioned chilling effects, especially those associated with surveillance and other forms of tracking and information gathering.³⁷ In its

34. See generally ZUBOFF, *supra* note 5. See also Cohen, *Surveillance Versus Privacy*, *supra* note 14; Amy Kapczynski, *The Law of Informational Capitalism*, 129 YALE L.J. 1460 (2020) (providing examples and explanations of state and corporate actions that encourage surveillance-enabling activities on the part of consumers); Nicole Kobie, *The Complicated Truth About China's Social Credit System*, WIRED (June 7, 2019), <https://www.wired.co.uk/article/china-social-credit-system-explained> [<https://perma.cc/XFH9-TDAS>] (describing the Chinese social credit system as a more extreme application of surveillance capitalism, data collection, and citizen tracking practices); Xin Dai, *Toward a Reputation State: The Social Credit System Project of China*, (Mar. 10, 2021) (unpublished work) (on file with author) (providing more detail on China's social credit system); Rogier Creemers, *China's Social Credit System: An Evolving Practice of Control*, (May 22, 2018) (unpublished work) (on file with author) (providing more detail on China's social-credit system).

35. Penney, *Chilling Effects and Transatlantic Privacy*, *supra* note 6, at 125; Richards, *Intellectual Privacy*, *supra* note 6, at 1949–50 (emphasizing the Court's concern for avoiding the imposition of chilling effects during the mid-20th century); Kendrick, *supra* note 6, at 1636 n.7 (noting early cases discussing the concept).

36. Penney, *Chilling Effects*, *supra* note 6, at 120–21 (describing skepticism among the judiciary and legal scholars as to the impact of chilling effects); see also David Alan Sklansky, *Too Much Information: How Not to Think About Privacy and the Fourth Amendment*, 102 CAL. L. REV. 1069, 1094–100 (2014) (finding little empirical evidence that surveillance leads to chilling effects, despite a popular belief among scholars that it does); Jef De Mot & Michael Faure, *Public Authority Liability and the Chilling Effect*, 22 TORT L. REV. 120, 121 (2014) ("[T]he existence of chilling effects is not universally accepted . . . current empirical literature does not seem to pinpoint which side has the strongest case.").

37. Penney, *Chilling Effects*, *supra* note 6, at 120–21 (describing the U.S. Supreme Court's skepticism toward chilling effects evident in the *Laird* and *Clapper* decisions);

2013 decision in *Clapper v. Amnesty International USA*, for example, the United States Supreme Court rejected the argument that chilling effects caused by government surveillance gave rise to sufficient standing, since the chilling effects were merely “self-inflicted injuries,” “subjective fear,” and “too speculative.”³⁸ Fortunately, with a growing

Kaminski & Witnov, *supra* note 29, at 482 (describing the variability of Supreme Court jurisprudence when it comes to chilling effects across different bodies of law, and a similar split between lower courts).

38. 568 U.S. 398, 401, 418–19 (2013).

body of related studies,³⁹ the question has moved on from the *existence* of chilling effects to understanding them, and how to respond.⁴⁰

39. A growing body of research employing varying methods has documented chilling effects due to a range of public and private sector activities. For studies finding chilling effects associated with government surveillance and similar state practices in online contexts, see, for example, Dawinder S. Sidhu, *The Chilling Effect of Government Surveillance Programs on the Use of the Internet by Muslim-Americans*, 7 U. MD. L.J. RACE, RELIGION, GENDER & CLASS 375 (2007), finding Muslim-Americans' Internet use has been chilled by post-9/11 surveillance; FDR Group, *Chilling Effects: NSA Surveillance Drives U.S. Writers to Self-Censor*, PEN. AM. CTR. 3–6 (Nov. 12, 2013) http://www.pen.org/sites/default/files/Chilling%20Effects_PEN%20American.pdf [<https://perma.cc/8UNB-RNU7>], noting that 28% of the writers surveyed had “curtailed or avoided” certain online activities due to “fear of surveillance”; FDR Group, *Global Chilling: The Impact of Mass Surveillance on International Writers*, PEN. AM. CTR. 5, 9–12 (Jan. 5, 2015), http://www.pen.org/sites/default/files/globalchilling_2015.pdf [<https://perma.cc/8FZD-YR4P>], noting that the international self-censorship among writers is reaching alarming levels, even in “liberal democratic counties”; Keith N. Hampton, Lee Rainie, Weixu Lu, Maria Dwyer, Inyoung Shin & Kristen Purcell, *Social Media and the ‘Spiral of Silence’*, PEW RSCH. CTR. 3 (Aug. 26, 2014), https://www.pewresearch.org/internet/wp-content/uploads/sites/9/2014/08/PI_Social-networks-and-debate_082614.pdf [<https://perma.cc/BP8T-ZR24>], finding, for example, 86% of respondents were willing to discuss NSA surveillance revelations in person, compared to 42% of Twitter and Facebook users that were willing to post about them; Martin Shelton, Lee Rainie & Mary Madden, *Americans' Privacy Strategies Post-Snowden*, PEW RSCH. CTR. 4 (Mar. 16, 2015), https://www.pewresearch.org/internet/wp-content/uploads/sites/9/2015/03/PI_AmericansPrivacyStrategies_0316151.pdf [<https://perma.cc/VB28-KFFA>], noting that 25% of those aware of government surveillance have “changed the patterns” of their use of “technological platforms”; Jonathon W. Penney, *Internet Surveillance, Regulation, and Chilling Effects Online: A Comparative Case Study*, INTERNET POL'Y REV. 1 (May 26, 2017), <https://policyreview.info/pdf/policyreview-2017-2-692.pdf> [<https://perma.cc/8X55-F4DP>] [hereinafter Penney, *Internet Surveillance*], finding chilling effects on a range of typical online due to both government as well as private sector online surveillance; Penney, *Chilling Effects*, *supra* note 6, finding chilling effects on Wikipedia use due to NSA surveillance revelations; Alex Marthews & Catherine Tucker, *The Impact of Online Surveillance on Behavior*, in THE CAMBRIDGE HANDBOOK OF SURVEILLANCE LAW 437 (David Gray & Stephen E. Henderson eds., 2017), finding chilling effects on Google search users due to NSA surveillance revelations; Stoycheff, *supra* note 6, finding chilling effects due to government surveillance on political speech and social media engagement; Elizabeth Stoycheff, Juan Liu, Kai Xu & Kunto Wibowo, *Privacy and the Panopticon: Online Mass Surveillance's Deterrence and Chilling Effects*, 21 NEW MEDIA & SOC'Y 602 (2019), finding that online government surveillance chilled behavioral intentions to commit illegal acts; Lina Dencik, Arne Hintz & Jonathan Cable, *Towards Data Justice? The Ambiguity of Anti-surveillance Resistance in Political Activism*, BIG DATA & SOC'Y, Nov. 24, 2016, at 1, finding political activists were chilled from certain activities following the Snowden revelations; Lina Dencik & Jonathan Cable, *The Advent of Surveillance Realism: Public Opinion and Activist Responses to the Snowden Leaks*, 11 INT'L J. COMM'N 763 (2017) reporting similar findings; Karin Wahl-Jorgensen, Lucy K. Bennett & Jonathan Cable, *Surveillance Normalization and Critique: News Coverage and Journalists' Discourses Around the Snowden Revelations*, 5 DIGIT. JOURNALISM 386 (2016), documenting journalists experiencing chilling effects due to

Yet, perhaps due to the multi-disciplinary nature of the phenomena and difficulties of exploring it empirically,⁴¹ there still remains a clear dearth in systematic theoretical and empirical work on point.⁴²

surveillance; and Mark Rosso, ABM Nasir & Mohsen Farhadloo, *Chilling Effects and the Stock Market Response to the Snowden Revelations*, 22 NEW MEDIA & SOC'Y 1976 (2020), finding an increase in use of the DuckDuckGo search engine after the Snowden revelations about NSA surveillance as indicative of chilling effects on more popular but less privacy protective search engines like Google. Older studies have likewise documented state surveillance chilling effects. See, e.g., Gregory L. White & Philip G. Zimbardo, *The Effects of Threat of Surveillance and Actual Surveillance on Expressed Opinions Toward Marijuana*, 111 J. SOC. PSYCH. 49, 59 (1980).

For studies finding corporate online surveillance chill, see, for example Penney, *Chilling Effects Online*, *supra* note 6, finding that both private and public sector internet surveillance chills a range of internet user behavior; and NIK WILLIAMS, DAVID MCMENEMY & LAUREN SMITH, SCOTTISH CHILLING: IMPACT OF GOVERNMENT AND CORPORATE SURVEILLANCE ON WRITERS (2018). For studies exploring chilling effects associated with automated enforcement of legal and regulatory interests, see, for example Yoan Hermstrüwer & Stephan Dickert, *Sharing Is Daring: An Experiment on Consent, Chilling Effects and a Salient Privacy Nudge*, 51 INT'L REV. L. & ECON. 38 (2017); Jonathon W. Penney, *Privacy and Legal Automation: The DMCA as a Case Study*, 22 STAN. TECH. L. REV. 412 (2019) [hereinafter Penney, *Privacy and Legal Automation*], exploring chilling effects associated with the DMCA's automated removal notice system; and J. Nathan Matias, Jonathon Penney, Merry Ember Mou & Max Klein, *Do Law Enforcement Bots Reduce Freedom of Expression Online? Study Results*, CAT LAB (Sept. 2020), <https://citizensandtech.org/2020/09/chilling-effect-automated-law-enforcement> [<https://perma.cc/2E4D-MNER>], describing similar findings. For studies on algorithmic profiling, see, for example Büchi et al., *supra* note 22. For studies on social media chill, see, for example, Sauvik Das & Adam Kramer, *Self-censorship on Facebook*, PROC. 7TH INT'L AAAI CONF. ON WEBLOGS & SOC. MEDIA 120 (2013), finding extensive evidence of Facebook users self-censoring; Manya Sleeper, Reecca Balebako, Sauvik Das, Amber Lynn McConahy, Jason Wiese & Lorrie Faith Cranor, *The Post that Wasn't: Exploring Self-censorship on Facebook*, CSCW '13: PROC. OF THE 2013 CONF. ON COMPUT. SUPPORTED COOP. WORK 793 (2013), reporting similar findings; and Ben Marder, Adam Joinson, Avi Shankar & David Houghton, *The Extended 'Chilling' Effect of Facebook: The Cold Reality of Ubiquitous Social Networking*, 60 COMPUTS. HUM. BEHAV. 582 (2016), finding a social chilling effect on Facebook users.

40. Marthews & Tucker, *supra* note 39, at 448.

41. Solove, *First Amendment*, *supra* note 6, at 155; see also Marthews & Tucker, *supra* note 39, at 448–49 (explaining the difficulties of collecting meaningful empirical data on chilling effects for posts relating to certain topics made on social media sites, due to user-controlled privacy settings); Büchi et al., *supra* note 22, at 4 (suggesting that the difficulty of collecting empirical evidence of chilling effects caused by surveillance is demonstrated by the lack of legal research on the topic).

42. See, e.g., Büchi et al., *supra* note 22, at 4–7 (finding, after extensive review of the literature, studies on chilling effects are “scarce and scattered” especially work studying the impact of corporate practices on people’s behavior, which is particularly “under-researched” and “under-developed”); Kendrick, *supra* note 6, at 1640, 1656–57 (after surveying both scholarship and case law on point, described how the empirical basis for such chilling effect concerns and claims were “weak[]” and “flimsy” and concluding additional research was required for the “unsubstantiated empirical judgments” of chilling effects claims); Kaminski & Witnov, *supra* note 29, at 517 (calling for

This has left significant gaps in understanding, and key questions unanswered: If chilling effects are real, how are they best understood? *Why* are people chilled and what factors influence these effects? What sorts of state or private sector actions will “chill” more than others? This Article sets out to fill this void, offering the first comprehensive account of chilling effects theory and its empirical foundations, while synthesizing insights from a range of relevant fields, primarily social theory, to answer these and other related theoretical and empirical questions.

In Part I, I analyze and critique conventional theories of chilling effects—chilling effects as fear of legal harm and fear of privacy harm, arguing they are too narrow, largely not supported by relevant empirical research, and cannot explain chilling effects in a range of contexts beyond legal or privacy contexts. In Part II, I first canvass social science literature to outline social reasons for chilling effects. This provides an empirical and theoretical foundation for the ensuing discussion that outlines my social conformity theory of chilling effects. I employ the theory to explain and analyze chilling effects in a range of different contexts, including legal/statutory, surveillance related, more personalized law, threats, and enforcement, as well as social media and disinformation chill. In Part III, I set out the benefits and implications of this new chilling effects understanding.

I. CONVENTIONAL THEORIES

Though the idea of self-censorship in the face of coercive threats is centuries old, even ancient,⁴³ more contemporary notions of

further research on the “types of surveillance and surveillance cues that cause chilling effects”).

43. Intellectual historian Quentin Skinner, for example, has written of the importance of notions of self-censorship to early republican thought—how writers in the 17th Century believed that liberty was restricted not just by the actual exercise of arbitrary power, or even the threat of it, but the mere awareness of living under it, limited one’s freedom. See Quentin Skinner, *A Third Concept of Liberty*, LONDON REV. OF BOOKS (Apr. 4, 2002), <https://www.lrb.co.uk/the-paper/v24/n07/quentin-skinner/a-third-concept-of-liberty> [<https://perma.cc/N8H8-RWW6>] (“These [17th century] writers are not making the obvious point that the possibility of arbitrary interference renders our liberty less robust or secure. They are arguing that our mere awareness of living under an arbitrary power—a power capable of interfering with our activities without having to consider our interests—serves in itself to limit our liberty.”); see also Robert E. Goodin & Frank Jackson, *Freedom from Fear*, 35 PHIL. & PUB. AFFS. 249, 254–56 (2007) (suggesting that self-censorship originates in one’s perceived fears); TREVOR ROSS, WRITING IN PUBLIC: LITERATURE AND THE LIBERTY OF THE PRESS IN EIGHTEENTH-CENTURY BRITAIN 277 n.32 (Johns Hopkins Univ. Press, 2018); ERIC BARENDT, LAURENCE LUSTGARTEN, KENNETH NORRIE & HUGH STEPHENSON, LIBEL AND THE MEDIA: THE CHILLING EFFECT 189–90 (1997) (discussing the term “American legal origin”).

“chilling effects” emerged after the Second World War.⁴⁴ Paul Freund first used the term in an influential 1951 law review article,⁴⁵ but it would be in the U.S. Supreme Court’s First Amendment jurisprudence that the idea of chilling effects would take on far greater prominence.⁴⁶ In a series of cases decided in the late 1950s and 1960s, the Court would set out what commentators would later call the “chilling effects doctrine,” which encouraged courts to treat laws or state actions that may chill or deter free speech “with suspicion.”⁴⁷ The idea would become entrenched in the Court’s First Amendment doctrine in the ensuing years, as the Court would invoke it to strike down various overreaching anti-communist statutes enacted during the Cold War.⁴⁸

A classic example of the Court’s chilling effects concerns is seen in Justice William Brennan’s 1964 opinion in *New York Times Co. v. Sullivan*, which concluded that an overly broad Alabama libel law would have an unconstitutional “chilling effect” on First Amendment protected speech, finding:

A rule compelling the critic of official conduct to guarantee the truth of all his factual assertions—and to do so on pain of libel judgments virtually unlimited in amount—leads to a comparable ‘self-censorship.’ . . . Under such a rule, would-be critics of official conduct may be deterred from voicing their criticism, even though it is believed to be true and even though it is in fact true, because of doubt whether it can be proved in court or fear of the expense of having to do so. They tend to make only statements which ‘steer far wider of the unlawful zone.’⁴⁹

Some key ideas expressed in this passage would later become conventional aspects of chilling effects theory—a concern for self-censorship; a deterrence theory of chilling effects; and fear of a legal harm, causing the chill, that arises due to the costs and uncertainty of the legal system. However, it would not be until Schauer publishes his oft cited account over a decade later⁵⁰ that the chilling effects doctrine, and the

44. See *supra* note 31 and accompanying text.

45. Paul A. Freund, *The Supreme Court and Civil Liberties*, 4 VAND. L. REV. 533, 539 (1951).

46. ROSS, *supra* note 43, at 277 n.32; BARENDT ET AL., *supra* note 43, at 189–90.

47. Penney, *Chilling Effects*, *supra* note 6, at 125–26; Richards, *Dangers of Surveillance*, *supra* note 6, at 1949–50; Kendrick, *supra* note 6, at 1636 n.7 (noting early cases).

48. Morton J. Hortwitz, *In Memoriam: William J. Brennan, Jr.*, 111 HARV. L. REV. 23, 26–27 (1997) (noting the progress achieved in Supreme Court free speech jurisprudence throughout the 20th century); Penney, *Transatlantic Privacy*, *supra* note 6, at 126–27 (describing chilling effects in the McCarthy and Cold War eras); Kendrick, *supra* note 6, at 1653 (describing how chilling effects influenced First Amendment overbreadth doctrine); RICHARDS, *RETHINKING CIVIL LIBERTIES*, *supra* note 6, at 106. For early cases recognizing the chilling effects doctrine, see, for example, *Dombrowski v. Pfister*, 380 U.S. 479 (1965); and *Wieman v. Updegraff*, 344 U.S. 183 (1952).

49. 376 U.S. 254, 279 (1964).

50. Schauer, *supra* note 6.

behavioral theory underlying it, would receive comprehensive treatment. Privacy theorist Daniel Solove would build on Schauer's work, still largely working within his theoretical and normative framework, but exploring more comprehensively chilling effects associated with privacy threats.⁵¹ In the following Sections, I examine these two leading accounts, by Schauer and Solove.

A. CHILLING EFFECTS AS FEAR OF LEGAL HARM

Schauer is a legal theorist and constitutional law scholar whose work on free speech has been "important" and impactful.⁵² When he published his article *Fear, Risk, and the First Amendment: Unraveling the "Chilling Effect"* in 1978, which would become the "leading"⁵³ account of chilling effects, he had not yet achieved such accolades but was arguably laying the groundwork. Only four years later he would publish what would be his most influential work *Free Speech: A Philosophical Enquiry*,⁵⁴ a provocative interrogation of the philosophical foundations of free speech theory that highlights his concern for free speech.⁵⁵ This concern is also reflected in his account on chilling effects theory. Indeed, Schauer extensively analyzed relevant First Amendment cases and theorized chilling effects as a deterrent effect arising due to the uncertainties inherent in the law coupled with people's fear of legal harms. That is, a person is chilled or deterred from speaking or engaging in lawful activities—namely First Amendment protected speech—out of fear of prosecution or legal sanction, combined with uncertainties in the law and legal process, and the costs of defending legal claims.⁵⁶

51. See Solove, *Taxonomy of Privacy*, *supra* note 6; Solove, *First Amendment*, *supra* note 6; Solove, *Privacy Misunderstandings*, *supra* note 6.

52. Mike Fox, *Frederick Schauer Receives Honorary Doctorate from WU Vienna*, UNIV. VA. SCH. L. (Oct. 28, 2019), <https://www.law.virginia.edu/news/201910/frederick-schauer-receives-honorary-doctorate-wu-vienna> [<https://perma.cc/5ETR-2FXJ>]; *Schauer Appointed Director of Safra Foundation Center*, HARVARD GAZETTE (April 5, 2007), <https://news.harvard.edu/gazette/story/2007/04/schauer-appointed-director-of-safra-foundation-center> [<https://perma.cc/9G5U-AJGS>].

53. Büchi et al., *supra* note 22, at 4.

54. Fox, *supra* note 52.

55. Franklyn S. Haiman, Book Review, *Free Speech: A Philosophical Enquiry* by Frederick Schauer, 17 PHIL. & RHETORIC 176 (1984).

56. Schauer, *supra* note 6, at 687, 689 (noting legal uncertainty is a core element of chilling effects: "The very essence of a chilling effect is an act of deterrence. While one would normally say that people are deterred, it seems proper to speak of an activity as being chilled Although an individual's decision not to engage in certain behavior may be influenced by a wide range of stimuli, in law the acknowledged basis of

An example would be a vague or overly broad statute that would chill or deter someone from speaking or acting as they were uncertain whether their speech could fall within the scope of the statute and whether they could successfully defend their case within an uncertain legal system. In fact, Schauer's article title perfectly reflects his account and conventional understanding—like that reflected in Justice Brennan's statement excerpted above: a focus on "fear" of legal harms; rational assessment of "risk" by people before speaking or acting; and an emphasis on self-censorship ("First Amendment"). And while Schauer focused primarily on speech chill, his theory also can explain chilling effects on other lawful activities as well.⁵⁷ In theory, for example, someone who fears legal punishment may also be chilled by police surveillance on the assumption that being monitored increases risk of being accused, rightly or wrongly, of legal wrongs and punished.

In fact, Schauer's account—focused on fears of legal harm—essentially provides the foundation for the overall conventional understanding of chilling effects today. There are three primary dimensions. First is the centrality of deterrence theory, and its behavioral assumptions, to chilling effects.⁵⁸ Chilling effects, conventional understanding holds, are based on a deterrence theory—a person is deterred from speaking or doing out of fear of some harm, most often a legal or privacy harm.⁵⁹ Here, a person engages in a form of rational cost-benefit analysis—an assessment of risk—before speaking or acting, and decides to avoid doing so as a way of avoiding the feared legal threat or harm.⁶⁰ As earlier noted, Schauer considers chilling effect theory as simply a "branch of decision theory,"⁶¹ a central focus of law and economics at the time.⁶² Rational choice or decision theory posits that individuals are rational in their decision-making, so they would thus act,

deterrence is the fear of punishment—be it by fine, imprisonment, imposition of civil liability, or deprivation of governmental benefit.”).

57. Schauer, *supra* note 6, at 686–87 n.10; Kendrick, *supra* note 6, at 1649 n.74.

58. Schauer, *supra* note 6, at 730 (noting that the chilling effect rests on “predictions” and “assumptions” about human behavior, specifically, that people may be “deterred” or become “overly cautious” in response to “statutes, rules, or regulations”).

59. Schauer, *supra* note 6, at 689–90.

60. Schauer, *supra* note 6, at 695 (“Thus, individuals who ‘know’ that their conduct is not proscribed by the regulating rule must, if rational, consider the possibility that a court will find otherwise. This possibility may be translated into a fear—a fear that lawful conduct may nonetheless be punished because of the fallibility inherent in the legal process.”).

61. Schauer, *supra* note 6, at 731.

62. Katie Steel & H. Orri Stefánsson, *Decision Theory*, in STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Edward N. Zalta ed., 2020); Thomas S. Ulen, *Rational Choice Theory in Law and Economics*, in ENCYCLOPEDIA OF LAW AND ECONOMICS 790, 791 (Boudewijn Bouckaert

with reasoned justification, to maximize utility and minimize cost.⁶³ Second, the conventional understanding of chilling effect emphasizes self-censorship—that is, an *absence* or lack of speaking, acting, or doing—a silencing, in the speech context, or an inhibiting effect, if speaking of action more generally.⁶⁴ For instance, in the face of a vague law or police surveillance, a person exercises a kind of self-restraint and censors their own conduct—deciding not to speak up or engage in some activity to avoid sanction under the law. The perceived fear leads the person to self-censor their speech or activities to avoid the harm. Third, chilling effects also concern *lawful* activity—be it speech or conduct—which is how it can be distinguished from deterrence of illegal conduct in the law more generally.⁶⁵

This conventional understanding of chilling effects, which Schauer's influential account has largely shaped, is apparent in legal scholarship examining chilling effects more generally,⁶⁶ and in law

& Gerrit De Geest eds., 2000) (noting “rational choice theory” is “at the heart of modern economic theory and in the disciplines contiguous to economics,” including “decision theory”).

63. Ulen, *supra* note 62, at 791–92; Salzberger, *supra* note 24, at 215 (“The advantage of economic models dealing with traditional economic markets is that their underlying assumptions are less controversial or are more faithful to reality, as it is transformed to the model. One of the key assumptions that characterize [sic] most economic models is rational behavior. *Homo economicus* behaves rationally when his decisions are geared to maximize his welfare (or utility or wellbeing). He has a set order of preferences, and he makes his choices on the basis of information.”).

64. Schauer, *supra* note 6, at 689–90.

65. Schauer, *supra* note 6, at 690, 698. (“What we are looking for then is not this *benign* deterrence, but rather some sort of *invidious* chilling of constitutionally protected activity. . . . The above discussion assumed that individuals contemplating action ‘know’ that their proposed conduct is lawful, but fear that the legal system will come to a different, and erroneous, conclusion.”). It can certainly be said that there are some *good* and *bad* chilling effects. In Part III.C, I provide a normative framework for helping determine those.

66. Kendrick, *supra* note 6, at 1649 (citing Schauer for the premise that, “[t]he term ‘chilling effect’ refers to a claim that an otherwise legitimate regulation has the incidental effect of deterring—or chilling—benign activity, in this case protected expression.”); *see also* Youn, *supra* note 6, at 1481 (“A chilling effect occurs where one is deterred from undertaking a certain action *X* as a result of some possible consequence *Y*.”); Wendy Seltzer, *Free Speech Unmoored in Copyright’s Safe Harbor: Chilling Effects of the DMCA on the First Amendment*, 24 HARV. J.L. & TECH. 171, 194 (2010) (“Typically, the chilling effect doctrine is concerned with excessive promotion of self-censorship. An individual may refrain from speech that the law does not intend to target because of fear that the law will adversely affect him.”).

and economics in particular.⁶⁷ It is also employed by the courts,⁶⁸ as well as by international legal scholars.⁶⁹ As will be seen, Solove builds on, and clarifies, the privacy components of Schauer's account, but largely remains faithful to his overall theoretical framework.

The *normative* foundation for this theory, less often explored in depth in scholarship, largely rests on liberal theory and its various

67. Law and economics scholars have long examined regulatory chilling effects, employing a rational choice model. See Isaac Ehrlich & Richard A. Posner, *An Economic Analysis of Legal Rulemaking*, 3 J. LEGAL STUD. 257, 263 (1974) (“[C]onsider the Supreme Court’s concern with the ‘chilling’ effect on participation in socially desirable activity of vague criminal statutes punishing conduct closely related to the expression of ideas. If such a statute, because of its uncertain scope, *might* be applied to the expression of ideas itself, that expression becomes burdened by an expected punishment cost.”); Louis Kaplow, *Optimal Proof Burdens, Deterrence, and the Chilling of Desirable Behavior*, 101 AM. ECON. REV. 277, 278–80 (2011) (empirically analyzing chilling effects as a deterrent effect); John E. Calfee & Richard Craswell, *Some Effects of Uncertainty on Compliance with Legal Standards*, 70 VA. L. REV. 965, 965–67 (1984) (challenging the law-and-economics literature’s assumption that actors “know exactly what level of care is legally required,” and arguing that rational actors will reduce the risk of unpredictable liability by “overcomplying”); Dru Stevenson, *Toward a New Theory of Notice and Deterrence*, 26 CARDOZO L. REV. 1535, 154 (2005) (“Too much uncertainty about legal sanctions, however, can be counter-productive. When people feel the law or sanctions are not just unknown, but unknowable, they will either be overly cautious and reclusive (avoiding too many useful activities) due to the ‘chilling effect,’ or overly careless about the consequences of their actions, creating significant externalities for society.”); Russell B. Korobkin, *Behavioral Analysis and Legal Form: Rules vs. Standards Revisited*, 79 OR. L. REV. 23, 46 (2000) (“Economic analysis predicts that the *ex ante* uncertainty of legal boundaries in a standards regime will cause some citizens to unknowingly violate the law and also chill some desirable behavior on the part of citizens who unknowingly overcomply with the law.”); Amitai Aviram, *Allocating Regulatory Resources*, 37 J. CORP. L. 739, 750 (2012).

68. See *New York Times Co. v. Sullivan*, 376 U.S. 254, 268 (1964); see also *Domrowski v. Pfister*, 380 U.S. 479, 487–89 (1965) (finding that criminal charges under a state’s Subversive Activities and Communist Control Law, and requirements that members of perceived subversive organizations register with the state, have a “chilling effect” on the organization’s free speech and activities that causes injury sufficient to confer standing); *Wieman v. Updegraff*, 344 U.S. 183, 191 (1952) (holding that requiring public employees to take an oath of loyalty disavowing communist organizations violates the Due Process Clause by “inhibit[ing] individual freedom” and “stifl[ing] the flow of democratic expression”).

69. See Pierluigi Perri & David Thaw, *Ancient Worries and Modern Fears: Different Roots and Common Effects of U.S. and E.U. Privacy Regulation*, 49 CONN. L. REV. 1621, 1633 (2017) (noting that both American and European approaches to “privacy regulatory frameworks share a common fear of privacy invasions as ‘chilling,’ or deterring, certain actions by individuals”); Bart van der Sloot, *The Individual in the Big Data Era: Moving Towards an Agent-Based Privacy Paradigm*, in *EXPLORING THE BOUNDARIES OF BIG DATA* 177, 189–91 (Bart van der Sloot, Dennis Broeders & Erik Schrijvers eds., 2016) (explaining the European Court of Human Rights’ position that the “chilling effect” from government surveillance of big data can make a person a “victim,” even absent a “concrete harm”); Townend, *supra* note 8, at 2–3 (examining the chilling effect on the activities of English and Welsh bloggers).

classic themes. These normative commitments are also apparent in Schauer's 1978 article, though he expounds them in greater depth elsewhere.⁷⁰ He cites some of the classics in the liberal tradition, including John Milton's *Areopagitica* (1644) and John Stuart Mill's *On Liberty*, as well as more contemporary liberal theorists like Ronald Dworkin and Alexander Meiklejohn.⁷¹ Among those key themes is skepticism about state interventions, especially in matters of free expression, embodied in Mill's famous "harm principle."⁷² Another is the liberal commitment to individual liberty and freedom, which has both an individual and societal value. On the former, Mill links liberty to social "utility" that he defines as "the permanent interests" of people as "progressive" beings.⁷³ And on the latter, Mill claims that liberty of speech is essential to society because, among other things, it provides an essential truth identification function.⁷⁴ Schauer echoes these sentiments, citing the "transcendent value" of speech and its importance to "individual liberty."⁷⁵

This is only a brief sketch, but it is easy to see how chilling effect theory rests on these liberal precepts, as it is concerned with "chills" on people's ability to speak or live freely, without fear of legal harm. It also provides powerful normative justification to closely scrutinize state efforts to regulate speech and similar constitutionally protected activities, especially those inconsistent with Mill's harm principle. Finally, it justifies legal rules like the judicially shaped "chilling effects doctrine," which encourages courts to treat such state efforts with suspicion, in line with classic liberal or libertarian skepticism for such state interventions.

There are, however, significant problems with theories based on "fear of legal harm," including theoretical, empirical, and normative limitations. Many of these problems center around deterrence theory, upon which Schauer's chilling effects theory sits. In the decades since

70. See, e.g., Frederick Schauer, *On the Relationship Between Chapters One and Two of John Stuart Mill's On Liberty*, 39 CAP. U. L. REV. 571 (2011).

71. Schauer, *supra* note 6, at 691–92 n.35.

72. JOHN STUART MILL, ON LIBERTY 80 (David Bromwich & George Kateb eds., Yale Univ. Press 2003) (1859); Schauer, *supra* note 70, at 574 (defining the harm principle as "the principle that society may proceed only against genuine harms and not against other forms of individual or social discomfort"); Paul Horwitz, *The First Amendment's Epistemological Problem*, 87 WASH. L. REV. 445, 450 (2012) (explaining that, under the harm principle, "speech and other actions should only be suppressed to prevent harm to others").

73. MILL, *supra* note 72, at 81; Schauer, *supra* note 70, at 575.

74. MILL, *supra* note 72, at 118; Schauer, *supra* note 70, at 575–76.

75. Schauer, *supra* note 6, at 704.

Schauer published his account,⁷⁶ researchers from a range of social science fields have systematically tested the theory's assumptions and effectiveness, and they are not empirically supported. First, a "mountain" of experimental studies in psychology and other disciplines show that people do not make decisions as deterrence theory—and Schauer's chilling effects account—assumes.⁷⁷ People do not necessarily engage in a cost-benefit analysis, and situational pressures may mean that their analysis is not necessarily rational.⁷⁸ And people are often not sufficiently aware of the law or state activities such that any possible legal harm or sanction could impact their decision about speaking or acting.⁷⁹ It *may* be that many people are reasoning to avoid other kinds of harms, like privacy harms. I address that point later in the Article—in the "privacy harms" conception of chilling effects in the next Section—though Schauer's claim *still* assumes a cost-benefit analysis that empirical studies suggest is not likely happening.

Second—and perhaps because of these flawed assumptions—there is little empirical evidence that deterrence actually works.⁸⁰

76. Andrew V. Papachristos, Tracey L. Meares & Jeffrey Fagan, *Why Do Criminals Obey the Law? The Influence of Legitimacy and Social Networks on Active Gun Offenders*, 102 J. CRIM. L. & CRIMINOLOGY 397, 400 (2012) ("Research on compliance with the law has flourished over the last two decades.").

77. Prentice, *supra* note 24, at 1666–67, 1666 nn.6–7.

78. See Paul H. Robinson & John M. Darley, *Does Criminal Law Deter? A Behavioral Science Investigation*, 24 OXFORD J. LEGAL STUD. 173, 178–82 (2004) (providing an extensive summary of relevant research on the limits of criminal actors' rational decision-making capacity); Janice Nadler, *Expressive Law, Social Norms, and Social Groups*, 42 LAW & SOC. INQUIRY 60, 62–63 (2017) ("It is not clear that most individuals make the relevant cost-benefit calculation that deterrence theory presumes, and even when they do make such a calculation, situational pressures sometimes leave individuals unable to calculate rationally."); Prentice, *supra* note 24, at 1666–67, 1666 nn.6–7; W. Jonathan Cardi, Randall D. Penfield & Albert H. Yoon, *Does Tort Law Deter Individuals? A Behavioral Science Study*, 9 J. EMPIRICAL LEGAL STUD. 567, 568–70 (2012) (listing empirical challenges to deterrence theory's assumption that people make rational decisions based on legal consequences). See generally Lucas Miotto, *The Good, the Bad, and the Puzzled: Coercion and Compliance*, in CONCEPTUAL JURISPRUDENCE: METHODOLOGICAL ISSUES, CONCEPTUAL TOOLS, AND NEW APPROACHES (Jorge Fabra-Zamora & Gonzalo Villa Rosas eds., 2021) (arguing that deterrence theory rests on unsubstantiated empirical assumptions).

79. See Nadler, *supra* note 78, at 62; Robinson & Darley, *supra* note 78, at 175–78 ("[P]eople rarely know the criminal law rules, even when those rules are formulated under the express assumption that they will influence conduct."); Prentice, *supra* note 24, at 1666–67, 1666 nn.6–7; Cardi et al., *supra* note 78, at 568–70 ("[E]vidence shows that people are typically ignorant of the law.").

80. Robinson & Darley, *supra* note 78, at 173 ("Does criminal law deter? Given available behavioral science data, the short answer is: generally, no." Also, the authors note that even in the few studies where there is a deterrent effect, it is often "minor"

That is to say, the evidence suggests that fear of legal sanction or harm—like a statute imposing a legal punishment—is just not a central or important reason why people may modify their behavior to comply with the law.⁸¹ Rather, deterrence is often not a significant factor impacting behavior—the evidence suggests its effects are “modest to negligible”⁸²—and when it is, it requires a very specific set of conditions not often present.⁸³ This empirical weakness and specificity

and “unpredictable.”); Nadler, *supra* note 78, at 62 (“Existing empirical evidence suggests that current crime control doctrines in the United States do not accurately reflect the community’s sense of justice . . . and also do not effectively deter in many contexts.”); Tom R. Tyler, *Legitimacy and Criminal Justice: The Benefits of Self-Regulation*, 7 OHIO ST. J. CRIM. L. 307, 309 (2009) (“Given these problems, it is not surprising that studies which empirically test the deterrence model typically find either that deterrence effects cannot be reliably detected or that, when they are detected, their magnitude is small.”); Raymond Paternoster, *How Much Do We Really Know About Criminal Deterrence?*, 100 J. CRIM. L. & CRIMINOLOGY 765, 766 (2010) (“[W]e do not have very solid and credible empirical evidence that deterrence through the imposition of criminal sanctions works very well.”); Paul H. Robinson & John M. Darley, *The Role of Deterrence in the Formulation of Criminal Law Rules: At Its Worst When Doing Its Best*, 91 GEO. L.J. 949, 953 (2003) (“[P]otential offenders commonly do not know the law, do not perceive an expected cost for a [legal] violation that outweighs the expected gain, and do not make rational self-interest choices.”); Travis C. Pratt, Francis T. Cullen, Kristie R. Blevins, Leah E. Daigle & Tamara D. Madensen, *The Empirical Status of Deterrence Theory: A Meta-Analysis*, in TAKING STOCK: THE STATUS OF CRIMINOLOGICAL THEORY 367, 383 (Francis T. Cullen, John Paul Wright & Kristie R. Blevins eds., 2008) (finding the effects of deterrence theory to be “modest to negligible”); Ana M. Martin, Bernardo Hernández, Martha Frias-Armenta & Stephany Hess, *Why Ordinary People Comply with Environmental Laws: A Structural Model on Normative and Attitudinal Determinants of Illegal Anti-Ecological Behavior*, 19 LEGAL & CRIMINOLOGICAL PSYCH. 80, 82–83 (2014) (documenting evidence that the perceived moral righteousness (or lack thereof) of laws explains behavior better than deterrence theory); Tom R. Tyler, *Understanding the Force of Law*, 51 TULSA L. REV. 507, 507 (2016) [hereinafter Tyler, *Force of Law*]; TOM R. TYLER, WHY PEOPLE OBEY THE LAW 64–67 (2006) (“The most important normative influence on compliance with the law” is perceived morality, whereas “the influence of deterrence on compliance may be overstated.”). Though not tested as comprehensively, these findings also apply to deterrence in a civil or tort-based context. See Cardi et al., *supra* note 78, at 570 (“[N]o study has found that tort law serves as a comprehensive deterrent.”).

81. Tyler, *Force of Law*, *supra* note 80, at 507 (“There is a large body of social science evidence showing that social norms, moral values, and judgments about legitimacy all influence law-related behavior and, relying upon it, social scientists generally suggest that while sanctions matter sanction-independent forces are central to and often dominate the factors shaping people’s law-related behaviors.”).

82. Pratt et al., *supra* note 80, at 383; Paternoster, *supra* note 80, at 818.

83. Martin et al., *supra* note 80, at 82–83. For a discussion of specific conditions required for deterrence to be effective, see Terrie E. Moffitt, *The Learning Theory Model of Punishment: Implications for Delinquency Deterrence*, 10 CRIM. JUST. & BEHAV. 131, 138–50 (1983). See also MARTIN SUNDEL & SANDRA S. SUNDEL, BEHAVIOR CHANGE IN THE HUMAN SERVICES: BEHAVIORAL AND COGNITIVE PRINCIPLES AND APPLICATIONS 155–56 (6th ed., 2018).

for deterrence theory also means that Schauer's chilling effects theory, based on deterrence, has little predictive power. It is, as Darley and Robinson say of deterrence theory, "unpredictable."⁸⁴ So, Schauer's chilling effects theory, which rests on a deterrence theory, is both empirically weak and unpredictable. It cannot, for instance, predict chilling effects, nor their scope and magnitude.

Third, this theory is too narrow and has little explanatory power for chilling effects in a range of different contexts where there is no clear legal harm for people to fear and thus chill their behavior. One compelling example of this is chilling effects associated with surveillance. There are now several empirical studies demonstrating how online surveillance can have a chilling effect on people's behavior online, including the information they read, search for, or access.⁸⁵ But this theory of chilling effects based on "fear of legal harm" cannot account for these impacts, as there is no obvious "legal harm" that would cause the chill.

For example, in an earlier empirical legal study,⁸⁶ I examined whether the Snowden disclosures about NSA surveillance, publicized in *The Guardian* and *The Washington Post* in June 2013,⁸⁷ and intensely covered by media internationally,⁸⁸ had a chilling effect on

84. Robinson & Darley, *supra* note 78, at 173.

85. See generally Penney, *Chilling Effects*, *supra* note 6 (finding surveillance chilling effect, due to Snowden revelations, on Wikipedia article access); Penney, *Internet Surveillance*, *supra* note 39 (finding evidence of government and corporate surveillance chilling effects on a range of online activities, including content sharing, speech, and searching); Marthews & Tucker, *supra* note 39 (finding surveillance chilling effect, due to Snowden revelations, on Google search results); Stoycheff, *supra* note 39 (finding a "spiral of silence" effect due to online social media surveillance).

86. See generally Penney, *Chilling Effects*, *supra* note 6 (examining the chilling effect on Wikipedia searches in the wake of Snowden revelations).

87. See Barton Gellman & Laura Poitras, *U.S., British Intelligence Mining Data from Nine U.S. Internet Companies in Broad Secret Program*, WASH. POST (June 7, 2013), https://www.washingtonpost.com/investigations/us-intelligence-mining-data-from-nine-us-internet-companies-in-broad-secret-program/2013/06/06/3a0c0da8-cebf-11e2-8845-d970ccb04497_story.html [<https://perma.cc/WT5P-HZK2>]; Glenn Greenwald, *NSA Collecting Phone Records of Millions of Verizon Customers Daily*, GUARDIAN (U.K.) (June 6, 2013), <https://www.theguardian.com/world/2013/jun/06/nsa-phone-records-verizon-court-order> [<https://perma.cc/M9S6-7MLX>].

88. See David Lyon, *Surveillance, Snowden, and Big Data: Capacities, Consequences, Critique*, BIG DATA & SOC'Y, July 9, 2014, at 2 (2014); Amy Wu, Will W.K. Ma & Wendy W.I. Chan, "Whistleblower or Leaker?" *Examining the Portrayal and Characterization of Edward Snowden in USA, UK, and HK Posts*, in *NEW MEDIA, KNOWLEDGE PRACTICES & MULTILITERACIES* 53, 58-64 (Will W.K. Ma, Allan H.K. Yuen, Jae Park, Wilfred W.F. Lau & Liping Deng eds., 2014); Vian Bakir, *News, Agenda Building, and Intelligence Agencies: A Systematic Review of the Field from the Discipline of Journalism, Media, and Communica-*

what Wikipedia articles people were willing to read. I compared Wikipedia article traffic to privacy-sensitive articles before and after the June 2013 revelations. Given Wikipedia's popularity,⁸⁹ I surmised that people may be chilled from accessing more privacy-sensitive content due to awareness of possible NSA surveillance online after the Snowden revelations in 2013.⁹⁰ Between January 2012 and August 2014, I examined Wikipedia article "page view" data for forty-eight privacy-sensitive Wikipedia articles.⁹¹ The forty-eight Wikipedia article concerned topics associated with "terrorism"—including Wikipedia articles such as "dirty bomb," "suicide attack," and "Al Qaeda," among others—and according to a survey I conducted, these keywords were also privacy-sensitive, that is, raised privacy concerns for internet users.⁹² These forty-eight "terrorism" related Wikipedia articles constituted nearly eighty-one million total page views over the course of the thirty-two-month period I studied.⁹³

The study's results provided compelling evidence of surveillance chilling effects—arguably at mass scale. First, the combined average monthly views for all forty-eight "terrorism" related Wikipedia articles showed a reduction of 526,614 in the average monthly views for the articles after June 2013, a 19.5% drop in article view counts.⁹⁴ This difference was statistically significant with a large effect size and consistent with a surveillance chilling effect.⁹⁵ I then analyzed the data before, during, and after June 2013 using segmented regression analysis with an interrupted time series research design.⁹⁶ Once outliers were accounted for, an even clearer picture of a surveillance chilling effect emerges (see Figure 1):

tions, 20 INT'L J. PRESS/POL. 131, 132–34 (2015); Keir Giles & Kim Hartmann, *Socio-Political Effects of Active Cyber Defence Measures*, 6 INT'L CONF. ON CYBER CONFLICT (2014), https://ccdcoe.org/uploads/2018/10/d0r0s0_giles.pdf [<https://perma.cc/49EV-QXFU>]; Jie Qin, *Hero on Twitter, Traitor on News: How Social Media and Legacy News Frame Snowden*, 20 INT'L J. PRESS/POL. 166, 167–71 (2015).

89. Penney, *Chilling Effects*, *supra* note 6, at 140–41.

90. See Penney, *Chilling Effects*, *supra* note 6, at 129–30.

91. *Id.* at 141. I constructed the forty-eight-article set using a U.S. Department of Homeland Security (DHS) list of "terrorism" keywords that it uses to track and monitor social media, with the set including Wikipedia articles such as "dirty bomb," "suicide attack," and "Al Qaeda," among others. I also conducted an Amazon Mechanical Turk (MTurk) survey, where users provided a "privacy rating" for each "terrorism" keyword, which showed that content associated with the keywords was privacy-sensitive, that is, raised privacy concerns for internet users. *Id.* at 140–43.

92. *Id.*

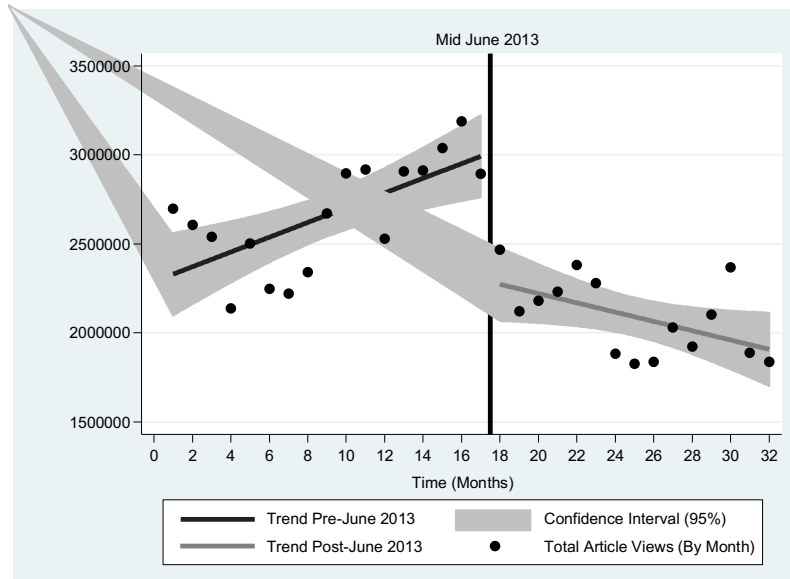
93. *Id.* at 141.

94. *Id.* at 146.

95. *Id.* at 145–46.

96. *Id.* at 137.

Figure 1. *Pre and Post June 2013 Article View Trends. The sudden drop in views and trend shift—from increasing monthly views over to decreasing after June 2013—is consistent with a significant and lasting chilling effect.*



The findings showed a large, sudden, and statistically significant drop of 693,617 total article views in June 2013, a 25% drop off.⁹⁷ This was consistent with a surveillance chilling effect in June 2013 due to public awareness about government surveillance thanks to reporting on the Snowden leaks in the U.S. and internationally that month.⁹⁸ However, there was also a statistically significant change in the overall trend in monthly article views—which went from increasing 41,421 views month to month before June 2013, to a decrease of 67,513 in views per month after.⁹⁹ This suggests the chilling effect was not just temporary, but also longer term.

These findings were further confirmed by additional analysis of the most privacy-sensitive articles within the set of forty-seven “terrorism” Wikipedia articles as well comparator Wikipedia articles—groups of articles concerning “security,” “infrastructure,” and the most

97. *Id.* at 151.

98. *Id.* at 125.

99. *Id.* at 151.

popular Wikipedia articles from 2012 to 2014.¹⁰⁰ The results are in **Figure 2**:

Figure 2. *The highly statistically significant drop in view count in June 2013 and shift to fewer monthly views after June 2013 for the terrorism articles is consistent with a chilling effect. The comparator article groups show no similar statistically significant results.*

Wikipedia Article Group	Monthly trend pre-June 2013	Change in view count in June 2013	Change in monthly trend after June 2013	Model Fit
47 Terrorism Articles	41,420.51** <i>p</i> =0.00	-693,616.9** <i>p</i> =0.00	-67,513.1** <i>p</i> =0.00	Yes <i>F</i> =0.00
25 Security Articles	11,135.0 <i>p</i> =0.187	-24,638.34 <i>p</i> =0.84	-20,465.87 <i>p</i> =0.12	No <i>F</i> =0.45
34 Infrastructure Articles	-11,079** <i>p</i> =0.00	-12,721.0 <i>p</i> =0.77	2,431.84 <i>p</i> =0.61	Yes <i>F</i> =0.00
26 Popular Articles	-48,458 <i>p</i> =0.798	-1,716,643 <i>p</i> =0.53	177,324.7 <i>p</i> =0.551	No <i>F</i> =0.79

Statistically significant findings in bold (**p*<0.05, ***p*<0.01).

The most privacy-sensitive articles showed an even greater chilling effect in the Wikipedia data, while none of these comparator groups—which involved content that did not raise privacy concerns—showed similar impacts in June 2013.¹⁰¹ All of these findings are consistent with the conclusion that the public’s awareness of possible online surveillance thanks to intense media coverage of the Snowden revelations in June 2013, and the months after, had a chilling effect on Wikipedia users—leading them to avoid privacy sensitive “terrorism” content in June 2013 and in the months thereafter.

The problem is that Schauer’s theory cannot account for these results as there are no clear legal harms or threats involved. There is nothing illegal about accessing Wikipedia articles. Nor were there any media stories of internet users being arrested for accessing Wikipedia articles or any similar online content or information over the course of the thirty-two-month study. In short, there was no legal harm to cause the chilling effect observed. There is clearly something else going on here—a privacy or surveillance concern—which Schauer’s account cannot explain.

A final problem with Schauer’s chilling effects theory is that it is normatively thin. As earlier noted, its liberal or libertarian foundations and skepticism for state regulations offer justification for limits

100. *Id.* at 157–61.

101. *Id.* at 157–58.

on overreaching laws and governmental activities—as the chilling effects doctrine does within First Amendment jurisprudence. However, it has little to say about corporate or commercial actors whose activities also have chilling effects on people’s behavior—such as corporate surveillance or invasive forms of data collection.¹⁰² Such private sector activities likewise often pose no threat of “legal harm,” so Schauer’s theory both cannot explain these effects nor does it offer a normative justification for curtailing them. In fact, scholars like Amanda Shanor, Robert Post, and Mila Sohoni have documented how corporations have employed the First Amendment, and the chilling effects doctrine itself, toward neo-liberal and de-regulatory ends—what some scholars call a form of First Amendment Lochnerism.¹⁰³ For instance, in its controversial decision in *Citizens United v. FEC*,¹⁰⁴ the Supreme Court cited “chilling effects” on corporate speakers countless times to justify striking down restrictions on third party election spending under the First Amendment. From this angle, Schauer’s theory offers little to critique, normatively or theoretically, today’s most

102. See, e.g., Penney, *Internet Surveillance*, *supra* note 6 (finding evidence of corporate surveillance chilling effects on a range of online activities, including sharing, speech, and search).

103. *Lochner v. New York*, was a landmark Supreme Court decision that struck down a New York law limiting work hours. The notorious decision was emblematic of early twentieth century Supreme Court jurisprudence that was very interventionist, with the court striking down countless labor, health, and safety laws and effectively constitutionalized various tenants of *laissez-faire* capitalism. 198 U.S. 45 (1905); see Robert Post & Amanda Shanor, *Adam Smith’s First Amendment*, 128 HARV. L. REV. F. 165, 166 (2014); Amanda Shanor, *The New Lochner*, 2016 WIS. L. REV. 133, 135–36 (2016); see also Mila Sohoni, *The Trump Administration and the Law of the Lochner Era*, 107 GEO. L.J. 1323, 1383–84 (2019); Jeremy K. Kessler, *The Early Years of First Amendment Lochnerism*, 116 COLUM. L. REV. 1915, 1917–18 (2016); Samuel R. Bagenstos, *The Unrelenting Libertarian Challenge to Public Accommodations Law*, 66 STAN. L. REV. 1205, 1213 (2014); Richard Blum, *Labor Picketing, the Right to Protest, and the Neoliberal First Amendment*, 42 N.Y.U. REV. L. & SOC. CHANGE 595, 600–01 (2019). I use “neo-liberal” in the same sense as Blum. *Id.* at 631 n.162 (citing DAVID HARVEY, A BRIEF HISTORY OF NEOLIBERALISM 64 (2005) (“The legal framework is that of freely negotiated contractual obligations between juridical individuals in the marketplace. The sanctity of contracts and the individual right to freedom of action, expression, and choice must be protected.”)); see also Jedediah Purdy, *Neoliberal Constitutionalism: Lochnerism for a New Economy*, 77 L. & CONTEMP. PROBS. 195, 195 (2014); Timothy K. Kuhner, *Citizens United as Neoliberal Jurisprudence: The Resurgence of Economic Theory*, 18 VA. J. SOC. POLY & L. 395, 397 (2011).

104. 558 U.S. 310, 327–29 (2010); see also Erica Goldberg, *First Amendment Cynicism and Redemption*, 88 U. CIN. L. REV. 959, 963 n.15 (2020) (noting the decision was controversial).

complex challenges—like surveillance capitalism¹⁰⁵—and the legal rules and norms that enable it.¹⁰⁶

Schauer anticipates some of these problems and thus limits the focus of his theory to *lawful* activities and First Amendment protected speech, assuming as a premise the position that *more* speech is necessarily a positive for society.¹⁰⁷ But even here there are problems. Even *lawful* activities can have chilling effects—like forms of threatening speech and harassment, something that has been magnified in today’s social media environment. As Danielle Keats Citron has argued, cyber harassment and other forms of online abuse—like targeting an individual persistently with threats, defamation, and privacy invasions—can cause severe distress and fear of physical harm.¹⁰⁸ This online abuse can have a “totalizing and devastating impact” upon victims,¹⁰⁹ causing chilling of their own speech, sharing, and engagement online.¹¹⁰ Here, Schauer’s theory offers no way to resolve a conflict between *these* chilling effects and those that might arise due to state legislation—like a cyber harassment law—enacted to address them.¹¹¹ Schauer’s conventional theory, based on a fear of legal harms, helps us navigate chilling effects arising due to state actions, but little else. As such, it is too narrow both theoretically and normatively.

105. See generally ZUBOFF, *supra* note 5 (describing surveillance capitalism as a new economic order in which the human experience is treated as free raw material and studying the surveillance capital practices of corporations such as Google, Facebook, and Microsoft); COHEN, *supra* note 30 (describing the rise of networked information technologies as a method of extracting value used by market actors as informational capitalism); Kapczynski, *supra* note 34 (critiquing Shoshana Zuboff’s analysis of surveillance capitalism and expanding upon Julie Cohen’s account of informational capitalism).

106. See generally COHEN, *supra* note 30 (describing how laws and legal institutions have facilitated the rise of informational capitalism); Kapczynski, *supra* note 34 (describing “informational capitalism as contingent upon specific legal choices”).

107. Schauer, *supra* note 6, at 686–87 n.10, 691–92.

108. CITRON, *supra* note 33, at 6–8 (2014); Mary Anne Franks, *Sexual Harassment 2.0*, 71 MD. L. REV. 655, 657–58 (2012). See generally *Online Harassment*, PEW RSCH. CTR. (Oct. 22, 2014), http://assets.pewresearch.org/wp-content/uploads/sites/14/2014/10/PI_OnlineHarassment_72815.pdf [<https://perma.cc/86WT-MTGZ>] (studying the prevalence and effects of online harassment); Citron & Penney, *supra* note 6 (presenting empirical research demonstrating cyber harassment law’s effect on women’s online privacy and expression).

109. Citron & Penney, *supra* note 6, at 2319.

110. CITRON, *supra* note 33, at 5–6.

111. See generally Citron & Penney, *supra* note 6 (exploring the implications of study findings regarding cyber harassment law for victims of privacy invasions).

B. CHILLING EFFECTS AS FEAR OF PRIVACY HARM

A second conventional theory of chilling effects, focused on privacy harms, emerged in the early twenty-first century. Daniel Solove, a leading privacy scholar, moves beyond Schauer's account based on legal harms, to theorize privacy threats like "government information gathering."¹¹² There is some historical background to this development. Following the September 11, 2001 terrorist attacks, governments globally established new large scale surveillance infrastructure and data collection programs to address national security threats.¹¹³ These expansive new surveillance and data collection powers, and the emergence of new technologies, posed new threats to privacy, autonomy, and freedom, not just in the private sphere—as Warren and Brandeis and others in the Anglo-American tradition had theorized¹¹⁴—but in public spaces as well.¹¹⁵ Continental thinkers like Hannah Arendt, Jürgen Habermas, and Michel Foucault, who theorized the relationship between the public and private sphere, offered new ways to think about these emerging surveillance practices and privacy challenges, and how they impacted people's freedom, autonomy, and self-development.¹¹⁶ Arendt, for instance, wrote of the importance of sanctity in the private sphere to full engagement in public

112. Solove, *First Amendment*, *supra* note 6, at 152; Solove, *Taxonomy of Privacy*, *supra* note 6, at 487.

113. DAVID LYON, *THE CULTURE OF SURVEILLANCE: WATCHING AS A WAY OF LIFE* 82 (2018) [hereinafter LYON, *CULTURE OF SURVEILLANCE*]; David Lyon, *9/11, Synopticon and Scopophilia: Watching and Being Watched*, in *THE NEW POLITICS OF SURVEILLANCE AND VISIBILITY* (Kevin D. Haggerty & Richard V. Ericson eds., 2006) [hereinafter Lyon, *9/11*]; Lyon, *supra* note 88, at 8–9; Penney, *Transatlantic Privacy*, *supra* note 6, at 126–27.

114. Daniel J. Solove, *Conceptualizing Privacy*, 90 CALIF. L. REV. 1087, 1099–1202 (2002) [hereinafter Solove, *Conceptualizing Privacy*] (noting that their "right to be let alone" merely spoke to one dimension of privacy, possibly to privacy in the "private sphere", as a form of "seclusion"); Solove, *Taxonomy of Privacy*, *supra* note 6, at 552–53 (noting Blackstone and other writers concern with intrusion into private spaces); see also Neil M. Richards, *The Puzzle of Brandeis, Privacy, and Speech*, 63 VAND. L. REV. 1295, 1304–05 (2010) (noting how Warren and Brandeis' account of privacy was influenced by the "Gilded Age" conceptions of the private sphere).

115. LYON, *CULTURE OF SURVEILLANCE*, *supra* note 113, at 31 (noting that the term "surveillance society" was coined during the late twentieth century to coincide with the emergence of new threats to privacy in the public sphere like camera surveillance and commercial practices that track people's activities in public places, such as loyalty cards); Penney, *Transatlantic Privacy*, *supra* note 6, at 126–27; Solove, *Taxonomy of Privacy*, *supra* note 6, at 495–96 (noting surveillance impacts both public and private spaces); Richards, *Dangers of Surveillance*, *supra* note 6, at 1935 (noting surveillance transcends the public/private divide).

116. Paul De Hert & Serge Gutwirth, *Privacy, Data Protection and Law Enforcement. Opacity of the Individual and Transparency of the Power*, in *PRIVACY AND THE CRIMINAL LAW* 72–73 (Serge Gutwirth, Anthony Duff & Erik Claes eds., 2006); Mihály Szivos, *From*

life. Privacy was the “dark and hidden side of the public realm.”¹¹⁷ To “have no private place,” she wrote, was to be “no longer human.”¹¹⁸ And Foucault drew on Bentham’s concept of the “panopticon” prison—where prisoners disciplined their own behavior out of the *possibility* they were being monitored at all times—to theorize modern surveillance.¹¹⁹ David Lyon, founder of the surveillance studies field, would draw heavily on Foucault’s “panopticon” metaphor to understand the post-9/11 surveillance paradigm.¹²⁰

At the same time, as the internet and other new communication technologies emerged in the late 1990s, American legal scholars like Julie Cohen, Jeffrey Rosen, Anita Allen, and Paul Schwartz, grappled with the new challenges these technologies posed to privacy. Allen, for instance, cited Arendt and Habermas and wrote of privacy as “a matter of escaping as well as embracing encumbrances of identity” and lamented the “rapid erosion” of privacy new technologies were ushering in.¹²¹ Similarly, Cohen, Rosen, and Schwartz worried about the rise of “networked society” and the negative effects of new privacy invasive technologies and information, collection, and retention practices among government and industry.¹²²

This is the context in which Solove shaped a newly expanded account of chilling effects focused on privacy harms, in a series of articles in 2006 and 2007.¹²³ In fact, Solove cites both Lyon’s work,¹²⁴ as well

Individual Privacy to the Privacy of Groups and Nations: An Approach to the Problems of the Structure of the European Public Sphere 29 (EUI Working Paper No. 92/16, 1992); Penney, *Transatlantic Privacy*, *supra* note 6, at 126–27.

117. HANNAH ARENDT, *THE HUMAN CONDITION* 64 (2d ed., 1998).

118. *Id.*

119. David Lyon, *The Search for Surveillance Theories*, in *THEORIZING SURVEILLANCE: THE PANOPTICON AND BEYOND* 3–4 (David Lyon ed., 2006).

120. Lyon, *9/11*, *supra* note 113, at 40–41; Penney, *Chilling Effects and Transatlantic Privacy*, *supra* note 6, at 126–27.

121. Anita L. Allen, *Coercing Privacy*, 40 *WM. & MARY L. REV.* 723–24, 729–30, 754–55 (1999) (concerned about the “rapid erosion of expectations of personal privacy” and attributing it to an “avalanche” of new technologies).

122. Cohen, *Examined Lives*, *supra* note 14, at 1426 (“Pervasive monitoring of every first move or false start will, at the margin, incline choices toward the bland and the mainstream The condition of no-privacy threatens not only to chill the expression of eccentric individuality, but also, gradually, to dampen the force of our aspirations to it.”); Paul M. Schwartz, *Privacy and Democracy in Cyberspace*, 52 *VAND. L. REV.* 1609, 1656 (1999) (“[P]erfected surveillance of naked thought’s digital expression short-circuits the individual’s own process of decisionmaking.”); JEFFREY ROSEN, *THE UNWANTED GAZE: THE DESTRUCTION OF PRIVACY IN AMERICA* 8–12 (2000).

123. Solove, *First Amendment*, *supra* note 6; Solove, *Taxonomy of Privacy*, *supra* note 6.

124. Solove, *Taxonomy of Privacy*, *supra* note 6, at 495.

as Foucault's panopticon,¹²⁵ and the surveillance studies field more generally,¹²⁶ to elaborate the post-9/11 privacy threats. Solove does not discount legal harms Schauer targeted, but rather expanded his account to theorize how government surveillance and data collection practices can lead to self-censorship and other chilling effects.¹²⁷

Solove theorized chilling effects in two ways. First, on an individual level, where people are chilled from exercising their rights and freedoms not due to fear of legal harm or punishment but increased risk of future privacy-related harms—like harms to reputation if private or embarrassing information collected about a person under surveillance is publicly disclosed or shared¹²⁸ or increased risk of identity theft or fraud due to misappropriated information.¹²⁹ Second, he theorized on a broader societal level. Citing Foucault and the “panopticon effect,” he theorized that widespread surveillance and data collection about people creates a broader atmosphere comparable to “environmental harms or pollution” that promote self-censorship or chilling effects.¹³⁰ Here, people under surveillance perceived a “power imbalance” in society and are chilled by increased risk of “abuses of power”—like “fear” of reprisals for protesting government or engaging in unpopular or conventional things—creating an overall inhibiting effect.¹³¹ Furthermore, being under observation increases the possibility of being “caught in some form of illegal or immoral activity” that could lead to either privacy or legal harms,¹³² like avoiding engaging in certain activities “for fear that they will wind up on a watch list or suspicious persons list.”¹³³

Solove also enriched the normative dimensions of chilling effects theory, drawing on Cohen, Schwartz, and Gavison, among others, to link the threat chilling effects posed to a person's “moral autonomy,”¹³⁴ as well as their “self-development” and “self-determination.”¹³⁵ Other privacy scholars examining chilling effects have built upon these foundations. For example, Richards' powerful concept of

125. *Id.*

126. Solove, *Conceptualizing Privacy*, *supra* note 114, at 1130 n.247.

127. Solove, *Taxonomy of Privacy*, *supra* note 6, at 487–88.

128. *Id.*

129. *Id.* at 488.

130. *Id.* at 488, 496 (discussing the example of how information obtained by surveillance was used to discredit and blackmail Martin Luther King, Jr.).

131. *Id.* at 488.

132. *Id.* at 496, 498–99.

133. Solove, *First Amendment*, *supra* note 6, at 170, 157.

134. Solove, *Taxonomy of Privacy*, *supra* note 6, at 489 n.45.

135. *Id.* at 494.

“intellectual privacy”¹³⁶—which concerns an intimate zone where one has the freedom to read, think, and communicate privately—highlights the importance of guarding against certain privacy-related chilling effects to ensure personal freedom, autonomy, and self-development,¹³⁷ as well as deliberation in healthy democratic societies.¹³⁸ Indeed, by theorizing surveillance chilling effects not just as an individual concern but a societal one as well, Solove, Richards, Cohen, and others provide a stronger justification to take action on chilling effects that impact behavior beyond just speech alone, which Schauer focused almost exclusively on.

However, there are important problems here as well. Solove does not so much as depart from Schauer’s theory, but simply expands it to encompass privacy harms and concerns. As such, his theory remains consistent with conventional understanding of chilling effects and so inherits many of the same limitations. First, though offering a more sophisticated explanation for privacy chill, he still nevertheless theorizes chilling effects as deterrence. For instance, he writes that “[d]etermining the existence of a chilling effect is complicated by the difficulty of defining and identifying deterrence.”¹³⁹ And elsewhere that the value in guarding against chilling effects is not just apparent by focusing on the individual that is “deterred from exercising their rights,” but harms to society as well.¹⁴⁰ While chilling effects certainly does include a deterrence dimension—people *are* discouraged from certain speech or activities—focusing primarily on it neglects the productive side of chilling effects, the more inhibited and conforming speech and activities. Solove acknowledges these impacts, but focuses more heavily on the deterrence side, similar to Schauer’s focus on self-censorship.

First, in reasoning about chilling effects, Solove at times appears to accept the idea that people engage in decision-making comparable to a rational cost-benefit analysis, determining privacy “risks” before

136. RICHARDS, *supra* note 6, at 5. *See generally* Richards, *Intellectual Privacy*, *supra* note 6 (describing intellectual privacy, the protection of records of intellectual activities, as essential to free thought and expression).

137. RICHARDS, *supra* note 6, at 95–96; Richards, *Dangers of Surveillance*, *supra* note 6, at 1950.

138. RICHARDS, *supra* note 6, at 95–96. *See generally* Richards, *Intellectual Privacy*, *supra* note 6 (describing robust intellectual freedoms as critical to a creative and constructive democratic society).

139. Solove, *First Amendment*, *supra* note 6, at 155; *see also* Solove, *Privacy Misunderstandings*, *supra* note 6, at 765–66.

140. Solove, *Privacy Misunderstandings*, *supra* note 6, at 765.

acting,¹⁴¹ the only difference here being the assessment involves not just risks of legal harms but privacy ones as well. Cohen, among the most persistent critic of conventional conceptions of privacy, argues that most privacy scholars ignore how subjectivity “shapes” social and cultural processes,¹⁴² and thus privacy theories based on an assumed autonomous subject able to assess risks and consent to privacy choices are inevitably flawed.¹⁴³ As earlier noted, deterrence theory’s assumption that people engage in such rational decision-making is not well supported by empirical research. Moreover, there is also a substantial body of research illustrating what Alessandro Acquisti has deemed the “privacy paradox”—where people who self-report caring about privacy in practice are not willing to pay for it or will trade it away for small rewards.¹⁴⁴ But simply because people reason *badly* about privacy and chilling effects does not mean it is not happening. In fact, there are reasons to question the paradox¹⁴⁵ and Acquisti et al. have also found contrary results in other studies wherein people who begin with greater privacy in practice act in practice to preserve it.¹⁴⁶ In short, what the literature appears to show is that privacy reasoning

141. Solove, *First Amendment*, *supra* note 6, at 157; Solove, *Taxonomy of Privacy*, *supra* note 6, at 485, 488, 499, 515.

142. Cohen, *Studying Law*, *supra* note 6, at 98.

143. *Id.* at 94–96.

144. Alessandro Acquisti, *The Economics and Behavioral Economics of Privacy*, in *PRIVACY, BIG DATA, AND THE PUBLIC GOOD: FRAMEWORKS FOR ENGAGEMENT* 85–86 (Julia Lane, Victoria Stodden, Stefan Bender & Helen Nissenbaum eds., 2014) [hereinafter Acquisti, *Economics of Privacy*] (reviewing the literature on point); *see also* Alessandro Acquisti & Ralph Gross, *Imagined Communities: Awareness, Information Sharing, and Privacy on the Facebook*, *PRIV. ENHANCING TECHS.* (George Danezis & Philippe Golle eds., 2006) (finding that Facebook user attitudes concerning privacy differed from their actual behavior and privacy practices on the platform); Alessandro Acquisti, *Privacy in Electronic Commerce and the Economics of Immediate Gratification*, *PROC. 5TH ACM CONF. ELECT. COMMC’N* (2004), https://www.heinz.cmu.edu/~acquisti/papers/Acquisti_Privacy_Electronic_Commerce_Economics_Gratification.pdf [<https://perma.cc/PL8L-APTM>]; Bettina Berendt, Oliver Günther & Sarah Spiekermann, *Privacy in E-Commerce: Stated Preferences vs. Actual Behavior*, 48 *COMMC’N ACM* 101, 104 (2005).

145. Jim Harper & Solveig Singleton, *With a Grain of Salt: What Consumer Privacy Surveys Don’t Tell Us*, *COMPETITIVE ENTER. INST.* (2001), papers.ssrn.com/abstract=299930 [<https://perma.cc/5GQN-BB6Z>] (arguing that survey designs have been flawed, leading to exaggerated self-reported concerns); Alessandro Acquisti, Leslie K. John & George Loewenstein, *What Is Privacy Worth?*, 42 *J. LEGAL STUD.* 249, 267–70 (2013), <https://www.cmu.edu/dietrich/sds/docs/loewenstein/WhatPrivacyWorth.pdf> [<https://perma.cc/E8JV-L7QJ>] (advancing explanations for the disconnect between privacy attitudes and the lax or loose approach to privacy in practice); *see also* Penney, *Chilling Effects*, *supra* note 6, at 162 (arguing that findings of surveillance chilling effects in various empirical studies contradict the privacy paradox).

146. Acquisti, *Economic of Privacy*, *supra* note 144, at 86.

is complex and context-specific, and affected by “numerous heuristics and biases,” and is thus very unpredictable—at least when using behavioral economic models and theories.¹⁴⁷ So, at the very least, we can say that an account like Solove’s, which relies on a theory of assessment of privacy risks, has little predictive power, including as to the scope or magnitude of chilling effects in different contexts. And as such, as Cohen would argue, does not take the social shaping of the *subject* of chilling effects seriously.

Second, Solove still largely explains those impacts as a form of deterrence due to fear of privacy harms just on a societal-wide rather than an individual level. And often those privacy harms sound a lot like the kinds of legal harms that worried Schauer, like the fear of reprisal from law enforcement that Solove writes about in relation to people being chilled from engaging in unpopular or unconventional activities. Inevitably, largely due to the existing approaches in the law, including First Amendment doctrine, shaped by Schauer’s conventional account, his remains primarily a deterrence-based theory that relies, in part, on privacy or legal fears. This imports some of the empirical shortcomings of Schauer’s account.

Third, while this theory has more explanatory power for chilling effects beyond mere fear of legal harms, it still has important limitations. Solove’s theory, for instance, can easily explain the results of my Wikipedia study discussed earlier. There were no apparent legal risks for internet users to read the Wikipedia articles after Snowden revelations about NSA surveillance online, so Schauer’s account could not explain the results. By contrast, there certainly could be *privacy* concerns about that surveillance, like a concern that reading these articles on topics associated with “terrorism” may lead one to end up on a terrorism watch-list. Or perhaps information about these reading habits could be disclosed or shared with third parties later, leading to reputational damage or possible blackmail. This is no problem for Solove’s theory.

However, his account has difficulty explaining chilling effects in contexts where there is no obvious privacy harm, like those done for social reasons. For example, a growing body of research in social-psychology has documented what has been called a “watching eye” effect, wherein artificial surveillance cues—like simply a set of “watchful” human eyes in the presence of participants—can have a chilling effect on their behavior. That is, the awareness of surveillance—even where participants *know* it is artificial and nobody is *actually* watching—promotes socially conforming or compliant behavior in a wide range of

147. *Id.*

contexts.¹⁴⁸ This chilling effect leads participants to conform to pro-social norms like telling the truth, avoiding cheating, avoiding acting unconventionally, expressing views inconsistent with the perceived views of the group majority, and in other studies chilling anti-social behavior as well.¹⁴⁹ A typical experimental set up in this research involves participants carrying out activities or interacting with other people in the presence of an image of a pair of eyes.¹⁵⁰ Interestingly, research shows that even where the “watching eye” is clearly artificial (e.g., the “gaze” deployed is simply a photo or image of an eye) these effects on behavior remain.¹⁵¹ If the “watching eye” effect is real, it poses a problem for Solove’s theory, because there is no apparent privacy harm here. There is no government conducting surveillance or harvesting, processing, and retaining information or data. There is no private sector company doing the same. There is no apparent fear of future reprisal or data that could be disclosed to embarrass or harm

148. Costas Panagopoulos & Sander van der Linden, *The Feeling of Being Watched: Do Eye Cues Elicit Negative Affect?* 19 N. AM. J. PSYCH. 113, 113 (2017) [hereinafter Panagopoulos & van der Linden, *Being Watched*]; see also Stefan Pfattheicher & Johannes Keller, *The Watching Eyes Phenomenon: The Role of a Sense of Being Seen and Public Self-Awareness*, 45 EUR. J. SOC. PSYCH. 560, 560–61 (2015); Costas Panagopoulos & Sander van der Linden, *Conformity to Implicit Social Pressure: The Role of Political Identity?* 11 SOC. INFLUENCE 177 (2016) [hereinafter Panagopoulos & van der Linden, *Conformity*] (finding a watching eye effect concerning political identity and voter mobilization); Ryo Oda, Yuta Kato & Kai Hiraishi, *The Watching-Eye Effect on Prosocial Lying*, 13 EVOLUTIONARY PSYCH. 1, 1–2 (2015); Costas Panagopoulos, *I’ve Got My Eyes on You: Implicit Social-Pressure Cues and Prosocial Behavior*, 35 POL. PSYCH. 23 (2014). Recently, some have questioned the watching-eye effect, at least concerning donations after failed replication studies and meta-analyses. Stefanie Northover, William Pederson, Adam Cohen & Paul Andrews, *Artificial Surveillance Cues Do Not Increase Generosity: Two Meta-Analyses*, 38 EVOLUTION & HUM. BEHAV. 144, 144 (2019). However, subsequent studies and meta-analyses have confirmed watching eye’s effect on donation and generosity where participants are provided cues as to the social norm (they were informed that previous participants were given higher or lower amounts), pro-social work allocation. Ryo Oda, *Is the Watching Eye Effect a Fluke?*, 10 LETTERS ON EVOLUTIONARY BEHAV. SCI. 4, 4–5 (2019). This also holds in anti-social behavior contexts. Kevin Dear, Kevin Dutton & Elaine Fox, *Do ‘Watching Eyes’ Influence Antisocial Behavior? A Systematic Review & Meta-Analysis*, 40 EVOLUTION & HUM. BEHAV. 269 (2019); see also Costas Panagopoulos & Sander van der Linden, *Political Identity Moderates the Effect of Watchful Eyes on Voter Mobilization: A Reply to Matland and Murray*, 14 SOC. INFLUENCES 152, 156 (2019) [hereinafter Panagopoulos & van der Linden, *Reply to Matland*] (replying to criticisms in replication studies); Alex Bradley, Claire Lawrence & Eamonn Ferguson, *Does Observability Affect Prosociality?* PROC. ROYAL. SOC’Y B 1, 1 (2018) (noting Northover et al. excluded certain studies from their meta-analysis that may have led to different results).

149. See Oda et al., *supra* note 148, at 1–2; Pfattheicher & Keller, *supra* note 148, at 560; Panagopoulos & van der Linden, *Being Watched*, *supra* note 148, at 113–14.

150. See Oda et al., *supra* note 148, at 1–2; Pfattheicher & Keller, *supra* note 148, at 560; Panagopoulos & van der Linden, *Being Watched*, *supra* note 148, at 113–14.

151. Pfattheicher & Keller, *supra* note 148, at 560.

the individual. A theory based on privacy harm alone cannot explain these chilling effects.

Finally, this theory also has normative limitations. Solove, and others like Richards and Cohen who have built on his work, have certainly added normative heft to chilling effects theory, speaking to how these privacy-related impacts can negatively affect not just speech, but also core individual interests—like personal freedom, intellectual privacy, autonomy, and self-development—but also societal interests as well—like deliberative democracy and the need for diversity of views in society.¹⁵² These impacts can just as likely be applied to concerns about private sector surveillance, so Solove's theory provides a foundation to critique private sector practices beyond Schauer's exclusive focus on state action.¹⁵³

Furthermore, like Schauer's account, this theory of chilling effects as "fear of privacy harms"¹⁵⁴ offers no way to navigate cases of competing chilling effects. An example of this would be a privacy statute that might promote privacy—and thus guard against surveillance-related chilling effects that Solove talks about—but might also impact—or chill—speech. In fact, First Amendment scholars like Eugene Volokh have argued that such privacy and data protection measures are unconstitutional restrictions on First Amendment speech¹⁵⁵ Volokh openly acknowledges that forms of privacy invasion—like public exposure or disclosure of "embarrassing personal information"¹⁵⁶—can have a chilling effect on speech and public engagement, but he privileges speech, arguing it ought to be free of the chill of privacy restrictions or vague exceptions to such legislation.¹⁵⁷ Though Volokh's

152. See Solove, *Taxonomy of Privacy*, *supra* note 6, at 532 (discussing relation of speech and autonomy); Richards, *supra* note 6, at 412–21 (explaining relation between freedom and intellectual privacy); Cohen, *Studying Law*, *supra* note 14, at 91 (discussing impact of surveillance on communities).

153. See, e.g., Solove, *Taxonomy of Privacy*, *supra* note 6, at 526–35 (describing confidentiality breaches in various private sector settings).

154. *Id.* at 499 (defining chilling effect as "fear of systematic observation.").

155. Eugene Volokh, *Freedom of Speech and Information Privacy: The Troubling Implications of a Right to Stop People from Speaking About You*, 52 STAN. L. REV. 1049 (2000).

156. *Id.* at 1109.

157. *Id.* at 1098.

arguments have not gone uncontested,¹⁵⁸ versions of these same arguments are regularly advanced to oppose new privacy and data protection laws today.¹⁵⁹

A good example of this is the supposed “right to be forgotten,” which would involve a right for people to seek deletion or de-listing or de-prioritization of certain information about them in online contexts, like in search engine results.¹⁶⁰ Such laws aim to ameliorate the chilling effects of privacy invasions posed by the unrestricted circulation of personal information online,¹⁶¹ but are regularly criticized and opposed by American legal scholars as having improper chilling effects on speech.¹⁶² A comprehensive chilling effects theory ought to provide some normative guidance—via empirical or theoretical dimensions—to resolve these conflicts. However, Solove’s account, like Schauer’s, also offers no guidance beyond recognition of privacy-related chilling effects.

In fairness to Solove, his reasoning about chilling effects and privacy was constrained by the limits of First Amendment doctrine—and the predominant conventional view shaped by Schauer. Indeed, when moving beyond those limits, Solove clearly departs from a deterrence-based chilling effects theory—like when he speaks of the “panopticon effect” and how large-scale or mass surveillance can create broader societal dampening or inhibitory effects.¹⁶³ Often relying on the insights of surveillance studies and theorists like Cohen in these passages, Solove speaks to *what* privacy-related chilling effects produce,

158. See Neil M. Richards, *Reconciling Data Privacy and the First Amendment*, 52 UCLA L. REV. 1149, 1166 (2005) (contending that Volokh’s First Amendment argument on information privacy should be rejected); Paul M. Schwartz, *Free Speech vs. Information Privacy: Eugene Volokh’s First Amendment Jurisprudence*, 52 STAN. L. REV. 1559 (2000) (critiquing Volokh’s approach).

159. See, e.g., Fred H. Cate, *The Privacy Problem: A Broader View of Information Privacy and the Costs and Consequences of Protecting It*, 4 FREEDOM F. INST. 1, 11–20 (concurring with Volokh’s position).

160. Hermstrüwer & Dickert, *supra* note 39, at 39; see also Meg Leta Ambrose, *It’s About Time: Privacy, Information Life Cycles, and the Right to Be Forgotten*, 16 STAN. TECH. L. REV. 369, 371 (2013).

161. See Hermstrüwer & Dickert, *supra* note 39, at 39; Ambrose, *supra* note 160, at 376 (“This information haunts the individual, causing undesirable repercussions for the subject, as well as society which may be chilled by the prospect of permanence”).

162. See, e.g., Jeff Rosen, *The Right to Be Forgotten*, 64 STAN. L. REV. ONLINE 88 (2011); Robert Lee Bolton III, *The Right to Be Forgotten: Forced Amnesia in a Technological Age*, 31 J. MARSHALL J. INFO. TECH. & PRIV. L. 132, 137, 142 (2015).

163. Solove, *Taxonomy of Privacy*, *supra* note 6, at 495.

something Schauer largely neglects.¹⁶⁴ This is an essential insight that brings us beyond the limits of deterrence based theories.

C. THE LIMITS OF DETERRENCE-BASED THEORIES

I have argued that the two conventional theories of chilling effects—fear of legal harm and fear of privacy harm—have significant empirical, theoretical, and normative limitations. They are primarily deterrence-based theories and assume a rational assessment of privacy or legal risks, yet empirical research shows these assumptions are not well supported.¹⁶⁵ They lack explanatory power for chilling effects beyond contexts where harm—be it legal or privacy—are not present, and have normative limitations as well.¹⁶⁶ Finally, these theories are primarily focused on a narrow conception of chilling effects. These deterrence-based theories made assumptions about *why* people are chilled—by vague statutes or surveillance, for instance—and then examined the legal implications of this.¹⁶⁷ And in doing so, they have focused on an *absence*, that is, self-censorship—people want to speak or do and decide not to do so—to the exclusion of examining more fully the broader implications of the more cautious, conforming, and compliant speech. A key part of these limitations were born out by criticisms that often relied on insights from other fields of social science and research to question the assumptions of conventional chilling effects theories, and provide more insight on the implications of what chilling effects *produce*.¹⁶⁸

In the next Section, I advance a new theory of chilling effects that draws heavily on social theory and social science, and departs from the deterrence-based models of conventional theories. However, this is not to say that deterrence is no longer relevant to understanding chilling effects. It will remain so both in the literal sense as well as theoretically. In a literal sense, a “chill” will always involve a form of deterrence where a person is discouraged from speaking or acting freely, even if we might focus more clearly on the compliant and conforming speech and actions that chilling effects produce.¹⁶⁹ This more docile

164. See, e.g., *id.* at 499 (describing how people are chilled from speaking publicly or attending certain events due to privacy concerns).

165. See, e.g., Tyler, *Force of Law*, *supra* note 80, at 507 (noting sanction-independent factors are crucial in shaping behavior).

166. *Id.*; see also Prentice, *supra* note 24, at 1666.

167. See generally Schauer, *supra* note 6.

168. See Solove, *Taxonomy of Privacy*, *supra* note 6, at 499.

169. *Id.* at 488 (defining chilling effect).

and compliant speech and conduct is present because other more robust forms have been deterred.¹⁷⁰ In short, chills *do* involve a deterrence dimension. What my arguments have mostly taken issue with is deterrence *theory*, and its assumptions about why people are chilled. However, deterrence theory, as we will see, will also remain relevant to understanding chilling effects, in certain circumstances. There will be contexts where combining the insights of deterrence theory with my new proposed theory will best explain chilling effects—namely, in contexts where surveillance or legal enforcement is more tailored or targeted.

Nevertheless, Schauer himself admitted in his leading 1978 account—his theory and the chilling effects doctrine itself—rest on certain behavioral assumptions that if proven incorrect one day, his chilling effects theory ought to be abandoned.¹⁷¹ In the following Sections, I provide evidence that it is probably time to do so.

II. A SOCIAL CONFORMITY THEORY OF CHILLING EFFECTS

In this Section, I set out a new theory of chilling effects based on social compliance. Put simply, this theory holds that a chilling effect is best understood as an act of compliance with, or conforming to, social norms in that context. Chilling effects arise out of contexts of ambiguity—such as ambiguity in the law or a circumstance where a person is aware they *may* be monitored by the government.¹⁷² If a person wishes to say or do some particular thing, but face ambiguity as to whether their conduct is legal or may attract scrutiny if they are being monitored, they face uncertainty about how to act. And in such moments of uncertainty, behavioral social science tells that people tend to act the way they believe others would act in the same circumstance, that is, they follow the norm.¹⁷³

Here, the person is chilled from speaking or doing as they wished, and instead conforms their behavior to comply with what they perceive to be the norm. Most often, this will mean complying with the law as the law can be said to reflect or express widely accepted social

170. *Id.* (noting people will be less likely to criticize popular views due to chilling effects).

171. Schauer, *supra* note 6, at 730 (“Thus, if it can be demonstrated that the assumptions underlying the chilling effect doctrine are not based upon questionable experimental evidence or unresolved scientific conflict, the traditional objections to the use of chilling effect reasoning can be silenced.”).

172. Solove, *Taxonomy of Privacy*, *supra* note 6, at 488 (describing the effects of perceived government surveillance on individuals’ actions).

173. See Tyler, *Force of Law*, *supra* note 80, at 507 (noting that dispositions to abide by the law are influenced by normative behavior).

norms, even if they believe what they wanted to do was both legal and desirable in the circumstances.¹⁷⁴ Or, in the example of surveillance, they avoid engaging in an activity out of fear that they may be caught breaching a social norm.¹⁷⁵ This might mean conforming speech so as not to contradict the majority opinion, refusing to engage in an activity that might be flagged as unconventional or antisocial, or redirecting and engaging in a different activity that would be considered more socially acceptable.¹⁷⁶ A chilling effect is an act of social conformity or compliance, and the law, legal harms, and privacy harms, are all secondary considerations.

As a foundation for the social theoretical context for this theory, in the next Section I briefly discuss a range of social science literature exploring social reasons for chilling effects.

A. SOCIAL CHILLING EFFECTS

Many of the shortcomings in conventional understanding of chilling effects stem from its neglect of insights from social science and social theory. Schauer's influential theory, which is still today described as the leading and definitive treatment, has largely shaped this conventional understanding.¹⁷⁷ However, his theory, set out in 1978, draws heavily on rational choice and deterrence theory, showing the influence of "law and economics" on Schauer's work at the time, and legal scholarship more generally.¹⁷⁸ By the late 1970s, law and economics had already become the predominant paradigm of interdisciplinary legal analysis in the American legal academy.¹⁷⁹ As I noted earlier, Schauer explicitly describes chilling effects theory as "at bottom, just a branch of decision theory."¹⁸⁰ However, decision theory—and law and economics more generally—largely ignored insights from other fields of social science and social theory, at least until the 1990s, when social norms and factors were "discovered."¹⁸¹

174. *Id.*

175. *Id.*

176. Solove, *Taxonomy of Privacy*, *supra* note 6, at 488.

177. *See e.g.*, Prentice, *supra* note 24 (noting Schauer's school of thought has dominated the discourse for the last three decades).

178. *See supra* note 24 and accompanying text.

179. *Id.*

180. Schauer, *supra* note 6, at 731.

181. *See* Prentice, *supra* note 24, at 1710 (explaining factors discovered in laboratory experiments are mimicked with real world empirical evidence); Etzioni, *supra* note 24, at 157–58 (emphasizing the rediscovery of social norms by legal scholars); Juliet P. Kostrisky, *The Law and Economics of Norms*, 48 *TEX. INT'L L.J.* 465, 467 (2013) (discussing how until recently law and economics had ignored social norms).

That “discovery” was largely due to the work of socio-legal scholar Robert Ellickson on social norms. The standard definition of a “social norm” in social psychology is that social norms are “understood rules for accepted and expected behavior.”¹⁸² Ellickson famously showed in his 1991 book *Order Without Law: How Neighbors Settle Disputes* how such local norms, rather than the law, governed relations between neighboring ranchers in Shasta County, California.¹⁸³ In fact, ranchers ignored trespass law and other legal rights, and instead settled disputes over cattle trespass damage according to “neighborly norms,” local to the county, rather than going to court.¹⁸⁴ Informal conventions like self help and gossip were central features of social control.¹⁸⁵ The ranchers were strongly motivated to adhere to norms, believing, for example, that if they did not, they would be gossiped about and their “family name” and reputations besmirched in the closely knit rural community.¹⁸⁶ As Ellickson noted in his book, these findings, among other things, debunked the famous “farmer and rancher” parable Ronald Coase used to illustrate the Coase Theorem—a “central proposition” and shibboleth in law and economics.¹⁸⁷ But it also introduced to mainstream legal scholarship an essential insight of sociological approaches to law, about the power of social norms and how they can shape and regulate conduct not just outside the law and formal legal instruments and institutions, but far more effectively as well.¹⁸⁸

If social norms can be more effective at shaping behavior than the law, then surely they also play a role in chilling effects. Indeed, they

182. Amir N. Licht, *Social Norms and the Law: Why Peoples Obey the Law*, 4 REV. L. & ECON. 715, 727 (2008); see also DAVID G. MYERS, SOCIAL PSYCHOLOGY 202–08 (3d ed. 1999) (discussing the social conformity phenomenon).

183. ROBERT ELLICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES (1991); see also Robert C. Ellickson, *Of Coase and Cattle: Dispute Resolution Among Neighbors in Shasta County*, 38 STAN. L. REV. 623, 628–29 (1986) [hereinafter Ellickson, *Of Coase and Cattle*]; Robert C. Ellickson, *Law and Economics Discovers Social Norms*, 27 J. LEGAL STUD. 537 (1998) [hereinafter Ellickson, *Law and Economics*]; McAdams & Rasmusen, *supra* note 24, at 1575, 1589.

184. Ellickson, *Of Coase and Cattle*, *supra* note 183 at 623–29; McAdams & Rasmusen, *supra* note 24, at 1575, 1589.

185. Ellickson, *Of Coase and Cattle*, *supra* note 183, at 628.

186. *Id.* at 623–29; ELLICKSON, *supra* note 183, at vii, 209; McAdams & Rasmusen, *supra* note 21, at 1589.

187. ELLICKSON, *supra* note 183, at 57; Ellickson, *Of Coase and Cattle*, *supra* note 183, at 677.

188. See Ellickson, *Law and Economics*, *supra* note 183, at 537–40.

do. Though social scientists do not always use the term “chilling effects,”¹⁸⁹ a range of behavioral social science fields, including social-psychology, sociology, behavior economics, and surveillance studies, among many others, pursue research on forms of self-censorship, self-restraint, and socially conforming or socially complying behavior.¹⁹⁰ In fact, I have already talked about an example of a kind of chilling effects in social psychology research, where social norms play an essential part.¹⁹¹

In the previous Section, I discussed the “watching eye” effect, awareness of surveillance—even where participants *know* it is artificial and nobody is *actually* watching—leads participants to engage in more socially conforming or compliant behavior.¹⁹² So, what causes this chilling effect? There are different theories, but social norms are a key part of the story. A leading theory is that “negative” behavioral motivations, that is, fear of traversing social norms, explain the conforming effect.¹⁹³ In other words, the “watching eye” reminds participants of the possibility of being watched—much like Bentham’s Panopticon—which heightens the possibility that they face social sanction if they break social norms, and they seek to avoid negative judgments or evaluations by others.¹⁹⁴ The “watching eyes” can also encourage participants to be more self-aware and evaluate their own behavior, in light of the same constraining social norms, also leading to conforming and compliant behavior.¹⁹⁵ This conforming and compliant behavior is produced in different ways. In some cases, it leads people to conform to typical pro-social norms such as telling the truth, sharing, cooperating, and being more generous.¹⁹⁶ In others, it leads them to avoid anti-social behavior like cheating, lying, acting unconventionally, or expressing views inconsistent with the perceived views of the group majority.¹⁹⁷

189. The term is most often used by lawyers, journalists, and policymakers. *See supra* notes 1–11. There are exceptions, most notably among communications scholars. *See, e.g.*, Stoycheff, *supra* note 6, at 307; Stoycheff et al., *supra* note 39, at 605; Büchi et al., *supra* note 22; Hermstrüwer & Dickert, *supra* note 39, at 39; Ambrose, *supra* note 160, at 371.

190. *See, e.g.*, CITRON, *supra* note 33, at 6–8.

191. *Id.*

192. *See* Panagopoulos & van der Linden, *Being Watched*, *supra* note 148, at 113.

193. Pfattheicher & Keller, *supra* note 148, at 564.

194. *Id.*; Oda et al., *supra* note 148, at 1–2; Panagopoulos & van der Linden, *Being Watched*, *supra* note 148, at 113–14.

195. *See* Kiki J. Chu, *Power of the Eyes: Deterring Sexual Harassment in Tokyo Subways Using Images of Watchful Eyes*, 1 BEHAV. PUB. POL’Y 1, 2–4 (2019); Pfattheicher & Keller, *supra* note 148, at 560.

196. *See* Oda et al., *supra* note 148, at 1–2.

197. *Id.*

The “watching eye” effect also has deeper psychological dimensions—simply being under the gaze of watching eyes created more “negative” psychological states in participants, including anxiety, anger, distress, and nervousness, prompting conformity and compliance.¹⁹⁸ The fact that people in these studies also engage in privacy protective behavior—like turning away from the “watchful eyes,” or raising a book to cover their own face—are also forms of chilling effects that likewise suggest deeper psychological impacts and a wish to avoid surveillance that, for example, may scrutinize behavior.¹⁹⁹ More recent studies and literature meta-analysis cast doubt about the “watching eye” effect in some contexts,²⁰⁰ but other studies have confirmed it in donation games, work allocation, and in chilling anti-social behavior (lying, dishonesty).²⁰¹ Chilling effects on anti-social behavior, again, makes sense if the “watchful eye” effect stems from a concern about social sanction for breaching social norms that lead to reputational harms later.

In other words, simply visual cues of being monitored or watched—even with knowledge that the observation is artificial—can have a dampening or chilling effect.²⁰² These chilling effects, and their leading explanations, are best understood in terms of social norm theory, which is what Ellickson also relied on for his case study on Shasta County ranchers.²⁰³ On this theory, people often look to social norms to gain an accurate understanding of, and effectively respond to, social situations.²⁰⁴ Social norms have been found to influence a wide array of behaviors in a range of different contexts.²⁰⁵ In the “watching eye” literature, social norms have a chilling effect—leading people to conform their behavior.²⁰⁶

This is just one example of research exploring social reasons for chilling effects—with social norms taking the center stage. There are many others. A key thread linking the literature is that the *social chilling effects* involve a form of *social conformity*.²⁰⁷ One well studied

198. Panagopoulos & van der Linden, *Being Watched*, *supra* note 148, at 113–14.

199. *Id.*

200. *See* Northover et al., *supra* note 148.

201. *See* Oda et al., *supra* note 148, at 2–4; Dear et al., *supra* note 148.

202. *See* Panagopoulos & van der Linden, *Being Watched*, *supra* note 148, at 113.

203. Ellickson, *Law and Economics, Discovers Social Norms*, *supra* note 183.

204. *See* Robert B. Cialdini & Noah J. Goldstein, *Social Influence: Compliance and Conformity*, 55 ANN. REV. PSYCH. 591, 597 (2004); ROBERT B. CIALDINI, INFLUENCE: SCIENCE AND PRACTICE 101 (2001) (elaborating on the principle of social proof).

205. Cialdini & Goldstein, *supra* note 204, at 597.

206. *See, e.g.*, Solove, *Taxonomy of Privacy*, *supra* note 6, at 532.

207. *See, e.g., id.*; Panagopoulos & van der Linden, *Being Watched*, *supra* note 148, at 113.

such phenomenon is the “Hawthorne Effect”—which speaks to the proposition, now accepted across a wide range of social science fields, that people change their behavior when aware they are being watched or observed.²⁰⁸ Here, rather than exploring artificial surveillance, these observability studies explore the impact that passive or active *human* observation has on people’s behavior.²⁰⁹ Again, there are chilling effects. Alex Bradley et al. recently conducted an extensive review and meta-analysis of observation studies and literature and found observation effects in a range of contexts, including promoting more prosocial behavior with passive observers, where tasks were more consequential, and where participants faced social dilemmas.²¹⁰ These results make sense from a social norm psychology perspective. If people are concerned about social sanction and their long-term reputation and place in social groups, more consequential and social dilemma contexts—the latter having larger audiences, for example—force participants to focus more on those long-term interests.²¹¹

Similar social chill involving social conformity can be observed in a large body of research in political science, communications, and sociology examining the “spiral of silence.”²¹² This concept, introduced

208. Though the original “Hawthorne Effect” research referred to gains in worker productivity when being watched—an effect that has been questioned in subsequent research—the term is today most often used for the more general proposition that people alter their behavior while being watched. See Jennifer O’Mahoney, Lorraine Grieve, & Allison Torn, *Ireland’s Magdalene Laundries and the Psychological Architecture of Surveillance*, in SURVEILLANCE, ARCHITECTURE AND CONTROL 187, 192 (Susan Flynn & Antonia MacKay eds., 2019); John G. Adair, *The Hawthorne Effect: A Reconsideration of the Methodological Artifact*, 69 J. APPLIED PSYCH. 334 (1984); Janina Steinmetz, Qian Xu, Ayelet Fishbach & Ying Zhang, *Being Observed Magnifies Action*, 111 J. PERSONALITY & SOC. PSYCH. 852, 853 (2005); Guillermo Ramirez-Prado, Bashar Barmada & Veronica Liesaputra, *Non-Intrusive Behavior Awareness for Residents of a Smart House*, IEEE INTERNATIONAL CONFERENCE ON BIG DATA 5269 (2019); Kendra Cherry, *The Hawthorne Effect and Behavioral Studies*, VERY WELL MIND (Oct. 13, 2020), <https://www.verywellmind.com/what-is-the-hawthorne-effect-2795234> [https://perma.cc/T85S-P8MF].

209. Oda et al., *supra* note 148, at 2–4; Dear et al., *supra* note 148.

210. Bradley et al., *supra* note 148, at 1.

211. *Id.* at 3–4.

212. James Shanahan, Carroll Glynn & Andrew Hayes, *The Spiral of Silence: A Meta-Analysis and Its Impact*, in MASS MEDIA EFFECTS RESEARCH: ADVANCES THROUGH META-ANALYSIS 415–27 (R. W. Preiss, B. M. Gayle, N. Burrell, M. Allen & J. Bryant eds., 2007) (providing an extensive review of the research); Stoycheff, *supra* note 6, at 297 (“[E]xtensively tested”); see also Keith N. Hampton, Lee Rainie, Weixu Lu, Maria Dwyer, Inyoung Shin & Kristen Purcell, *Social Media and the ‘Spiral of Silence’*, PEW RSCH. CTR. 8, 23 (2014), https://www.pewresearch.org/internet/wp-content/uploads/sites/9/2014/08/PI_Social-networks-and-debate_082614.pdf [https://perma.cc/BP8T-ZR24].

by German political scientist Elisabeth Noelle-Neumann,²¹³ contends that people with views consistent with the majority are more likely to express them, while those with dissenting or minority opinions self-censor or silence, if they believe their views contradict the majority.²¹⁴ Motivated by fear of social sanction like isolation or negative evaluation, people thus continuously monitor the environments for cues as to whether their beliefs align with or contradict majority opinion.²¹⁵ The “spiral of silence” is the process of certain groups expressing their views more frequently over time, while another is consistently silenced.²¹⁶ People take cues from their environment as to what the *norm* is in terms of group opinion, and conform or self-censor their views accordingly.²¹⁷

Again, the “spiral of silence,” which political scientist Elizabeth Stoycheff has described as a “chilling effect” in her innovative work on the point,²¹⁸ can be understood as an example of a broader phenomena studied in psychology as *conformity*. Conformity is the tendency for people to change their beliefs, attitudes, or behavior to match or conform to those of others.²¹⁹ The literature suggests two primary categories of motivations behind conformity: informational and normative conformity.²²⁰ In the former, people are motivated to achieve an accurate understanding of reality and their circumstances.²²¹ In the latter, the motivation is, among other things, to achieve “approval” from others, to enhance reputation as well as self-image.²²² There are a range of factors that influence these motivations, including perceived consensus, the desire to conform to the views of those who might judge the actions of the person, as well as subconscious factors like behavioral mimicry, which involves people subconsciously matching posture, expression, and mannerisms.²²³ Also driving these

213. See Stoycheff, *supra* note 6, at 297; Jörg Matthes, *Observing the “Spiral” in the Spiral of Silence*, 27 INT’L J. PUB. OP. RSCH. 155, 155 (2015); Elisabeth Noelle-Neumann, *The Spiral of Silence A Theory of Public Opinion*, 24 J. COMM’N 43, 51 (1974); ELISABETH NOELLE-NEUMANN, *THE SPIRAL OF SILENCE: PUBLIC OPINION—OUR SOCIAL SKIN* 62 (2d ed. 1993) (discussing how perceived popularity is contingent upon following the consensus opinion).

214. Matthes, *supra* note 213, at 155.

215. *Id.*

216. *Id.*

217. *Id.*

218. Stoycheff, *supra* note 6, at 297; Stoycheff et al., *supra* note 39, at 603.

219. Cialdini & Goldstein, *supra* note 166, at 606; Bar-Tal, *supra* note 12, at 37, 50; SAUL KASSIN, STEVEN FEIN & HAZEL ROSE MARKUS, *SOCIAL PSYCH.* 257–58 (9th ed. 2013).

220. Cialdini & Goldstein, *supra* note 204, at 606.

221. *Id.*

222. *Id.* at 610–11.

223. *Id.* at 606–11.

conforming effects is “affiliation”—humans are “fundamentally” motivated to create and maintain meaningful social relationships, so they look to social norms and behavioral cues of others for affiliation, reciprocity, and approval.²²⁴

Social conformity shapes behavior online just as it does offline.²²⁵ So, applying social theory to today’s social media and digital environment provides new insights as to other forms of socially motivated chilling effects. Sociologist Erving Goffman’s theory of strategic self-presentation is one such example, offering another way to understand subtle forms of behavioral chilling effects in our social interactions.²²⁶ Communications scholars have applied and extended this theory in the context of digital media today, particularly social network sites.²²⁷ Goffman’s leading work *The Presentation of the Self in Everyday Life* (1959) speaks of different fronts or “stages”—different social circles or contexts in which people manage how they present themselves.²²⁸ Under strategic self-presentation theory, people desire to give positive impressions and use self-presentation as a tool to control aspects of their environment and identity, including suppressing information about themselves to manage such impressions.²²⁹

This impression management, however, often becomes impossible in a digital or social media environment, with multiple audiences and a lack of effective social cues as to expectations of all possible audiences. This can have a chilling effect as it leads to what Alice Marwick and danah boyd call “context collapse,” wherein the person simply uses certain self-presentation strategies to cope, including self-

224. *Id.* at 598.

225. See Jonas Colliander, “*This Is Fake News*: Investigating the Role of Conformity to Other Users’ Views When Commenting on and Spreading Disinformation in Social Media,” 97 COMPS. IN HUM. BEHAV. 202, 208 (2019) (“[P]revious studies have demonstrated that conformity is not confined to physical interactions but is also very much a factor online.” (internal citation omitted)); see also Michael Rosander & Oskar Eriksson, *Conformity on the Internet—The Role of Task Difficulty and Gender Differences*, 28 COMS. IN HUM. BEHAV. 1587 (2012).

226. See generally ERVING GOFFMAN, *THE PRESENTATION OF SELF IN EVERYDAY LIFE* (1959) (explaining how we “perform” during social interactions). See also Roy F. Baumeister, Dianne M. Tice & Debra G. Hutton, *Self-Presentational Motivations and Personality Differences in Self-Esteem*, 57 J. PERSONALITY 547, 548 (1989).

227. See danah boyd & Nicole Ellison, *Social Network Sites: Definition, History, and Scholarship*, 13 J. COMPUT.-MEDIATED COMM’N 210, 222 (2007).

228. GOFFMAN, *supra* note 226, at 29.

229. *Id.* at 30 (discussing how individuals infuse activity with signs highlighting desirable traits).

ensorship, disengagement, and others forms of self-restraint.²³⁰ Indeed, researchers have found evidence of large scale self-censorship and chilling effects on social media platforms like Facebook, with users engaging in forms of self-censorship—much like in “spiral of silence” literature—most often out of fear that their opinion would offend one or more audience.²³¹ Marder et al. have called these impacts “chilling effects,” and described them as behavior intended to avoid “undesired image.”²³²

This discussion was not intended to be an exhaustive discussion of social science literature that relates to chilling effects. Rather, the point has been to provide some broader context to chilling effects, and its understanding, beyond a conventional focus predominantly on legal or privacy harms. In fact, social science literature, spanning multiple disciplines illustrate various forms of chilling effects for social reasons, with social norms often playing an important if not central role in shaping social conformity, compliance, self-censorship, and other forms of chilling effects observed.²³³

Much of this research, however, does not address the impact of law or forms of police, corporate, or governmental surveillance—the types of actions we typically associate with chilling effects. In the next Section, I tie some various theoretical strands together in relation to chilling effects and an essential dimension to how they arise—ambiguity and uncertainty. In fact, legal and privacy scholars have not ignored these findings monolithically, rather they have only been examined at piecemeal in specific areas of privacy or law. For example, Alan Westin, echoing the psychological impact of observation, wrote of the importance of privacy and “solitude” from surveillance—where one is “freed” from “observation” of others; a place of “emotional release” from the demands of public life.²³⁴ And Ruth Gavison similarly wrote of the importance of private respite from the “inhibitory effects” of the “casual observation.”²³⁵ More recently, privacy scholars like Julie Cohen, Ryan Calo, Margot Kaminski, and Neil Richards have applied some of these insights to aspects of privacy law.²³⁶ As we will see, their

230. Alice E. Marwick & danah boyd, *I Tweet Honestly, I Tweet Passionately: Twitter Users, Context Collapse, and the Imagined Audience*, 13 MEDIA & SOC'Y 114, 124 (2010); see also Marder et al., *supra* note 39, at 583.

231. Das & Kramer, *supra* note 39; Sleeper et al., *supra* note 39; Marder et al., *supra* note 39.

232. Marder et al., *supra* note 39, at 582.

233. See *supra* note 21 and accompanying text.

234. ALAN WESTIN, *PRIVACY AND FREEDOM* 33–34, 37–38 (1967).

235. Ruth Gavison, *Privacy and the Limits of Law*, 89 YALE L.J. 421, 447 (1980).

236. See *supra* notes 39–41.

insights, as well as this broader literature on social chilling effects, will also help us understand what chilling effects *produce*.

B. SITUATIONAL UNCERTAINTY, SOCIAL NORMS, AND CONFORMITY

In the previous Section, I examined social reasons for chilling effects and highlighted the role of social norms. This is not to privilege social norms over other social factors that impact how people decide to act in the face of a law or privacy threat like surveillance. When it comes to legal compliance, for example, research suggests that social norms, moral values, and perceptions as to legitimacy and fairness of the law itself all influence whether people obey the law,²³⁷ as well as both deterrence and expressive law theory.²³⁸ So, understanding how law, social processes, and people interact more generally is often complex and simple or singular answers do not “advance the ball very far.”²³⁹

However, the picture is somewhat clearer, I will argue, when it comes to chilling effects. Chilling effects stem from uncertainty and ambiguity—when a person is faced with ambiguity or uncertainty about whether conduct is legal or not, or faced with ambiguity or uncertainty about the scope, nature, and possibility of surveillance, to cite two typical examples.²⁴⁰ And in contexts of ambiguity and uncertainty, the social science literature is clear: social norms are the predominant influence on people’s law-related behavior, leading them to conform their behavior to those norms.²⁴¹ Hence, theories of social norms—and how they lead to *conformity*—are essential to understanding chilling effects.

Nearly all behavior can be viewed through the lens of how people understand, explicitly or implicitly, prevailing social norms and the importance the person might attach to them.²⁴² However, ambiguity

237. See Tyler, *Force of Law*, *supra* note 80, at 507 (“There is a large body of social science evidence showing that social norms, moral values, and judgments about legitimacy all influence law-related behavior and, relying upon it, social scientists generally suggest that while sanctions matter sanction-independent forces are central to and often dominate the factors shaping people’s law-related behaviors.”); Ellickson, *Law and Economics Discovers Social Norms*, *supra* note 183, at 539–41 (discussing socialization and social norms as influential). See generally TYLER, *supra* note 80.

238. See Nadler, *supra* note 78, at 60.

239. *Id.*

240. See, e.g., Solove, *Taxonomy of Privacy*, *supra* note 6, at 532.

241. See *supra* note 21 and accompanying text.

242. Thomas Gilovich & Dale Griffin, *Judgment and Decision Making*, in HANDBOOK ON SOCIAL PSYCHOLOGY, VOL. 1, at 542, 565 (Susan T. Fiske, Daniel T. Gilbert & Gardner Lindzey eds., 5th ed. 2010); see also Adrienne Chung & Rajiv N. Rimal, *Social Norms: A Review*, 4 REV. COMM’N RSCH. 1, 4 (2016) (noting how Asch’s classic study reaffirmed this notion).

or uncertainty raises the impact of social norms. Social psychology has long established that the more uncertain a person is about a situation, decision, or other course of action, the more likely they will be susceptible to social influences in making their decision.²⁴³

The pioneering work of Muzafer Sherif, one of the founders of modern social psychology, was among the first to document this behavioral tendency in the 1930s.²⁴⁴ In his classic study using “auto-kinetic effects”—an optical illusion where a stationary object appears to move—he placed people individually in a dark room and asked how far they believed a point of light moved.²⁴⁵ Alone, people reported varying degrees of movement, showing the ambiguity of the correct answer. He ran the experiment again, and this time people observed the point of light in groups of threes, and reported out loud.²⁴⁶ Each time he ran the experiment in groups, participants tended to report the same distance as others in the group.²⁴⁷ In other words, he showed that people resolved the ambiguity and uncertainty by seeking information about social consensus, or social norm, and then *conforming* their answer according to that norm.²⁴⁸ Interestingly, these conforming effects held even *after* the groups left, and individuals continued to participate alone in future rounds of the experiment. This demonstrated that people had internalized the social norm, and came to personally accept it.²⁴⁹ The findings showed what social psychologists

243. See CIALDINI, *supra* note 204; Chung & Rimal, *supra* note 242, at 18 (“[U]ncertain individuals look to others for more information.”); Rajiv N. Rimal & Maria K. Lapinski, *A Re-Explication of Social Norms, Ten Years Later*, 25 COMM’N THEORY 393 (2015); see also Morton Deutsch & Harold B. Gerard, *A Study of Normative and Informational Social Influences upon Individual Judgment*, 51 J. ABNORMAL & SOC. PSYCH. 629, 635 (1955); ROBERT B. CIALDINI & MELANIE R. TROST, *Social Influence: Social Norms, Conformity, and Compliance*, in THE HANDBOOK OF SOCIAL PSYCHOLOGY 151 (Daniel T. Gilbert, Susan T. Fiske & Gardner Lindzey eds., 1998).

244. MUZAFER SHERIF, *THE PSYCHOLOGY OF SOCIAL NORMS* 89 (1936); THOMAS HEINZEN & WIND GOODFRIEND, *SOCIAL PSYCHOLOGY* 203 (2019); see KASSIN ET AL., *supra* note 219, at 13–14.

245. SHERIF, *supra* note 244, at 95; HEINZEN & GOODFRIEND, *supra* note 244, at 203; Chung & Rimal, *supra* note 242, at 2–3; KASSIN ET AL., *supra* note 219, at 258.

246. SHERIF, *supra* note 244, at 98; HEINZEN & GOODFRIEND, *supra* note 244, at 203; Chung & Rimal, *supra* note 242, at 2–3.

247. SHERIF, *supra* note 244, at 104–5; HEINZEN & GOODFRIEND, *supra* note 244, at 203; Chung & Rimal, *supra* note 242, at 2–3.

248. SHERIF, *supra* note 244, at 105–07; HEINZEN & GOODFRIEND, *supra* note 244, at 203; Chung & Rimal, *supra* note 242, at 2–3; Kenworthy Bilz & Janice Nadler, *Law, Psychology, and Morality*, in 50 PSYCH. LEARNING AND MOTIVATION 101, 108–09 (2009).

249. See HEINZEN & GOODFRIEND, *supra* note 244, at 203; Chung & Rimal, *supra* note 242, at 2–3; cf. Bilz & Nadler, *supra* note 248, at 108–09.

call “public conformity”—conforming behavior publicly in the presence of others—as well as “private conformity,” doing so while alone or in private.²⁵⁰

When faced with uncertainty, social psychology finds that people seek out both informational and normative influences to decide how to act or behave, and conform their behavior accordingly.²⁵¹ The uncertainty that leads to conforming behavior can arise because we are unsure of ourselves, the situation is unclear or ambiguous, or new and unfamiliar.²⁵² People conform their behavior according to informational influences because they want to make accurate judgments about the world—to get things right.²⁵³ And they conform to normative influences because they fear or wish to avoid social sanction or ostracism—like negative judgments from others—for behaving contrary to broader social norms.²⁵⁴ Ostracism and social sanction can cause people “emotional distress,” so they “feel[] alone, hurt, angry, and lacking in self-esteem.”²⁵⁵ Sociologists likewise have documented various mechanisms of social influence, such as the importance of social norms and social sanctions in shaping behavior.²⁵⁶

Social psychologists have further elaborated these normative influences people draw on. There are *descriptive norms*, which are derived from what other people *do* in the same situation. Then there are *injunctive norms*, which is what people *say* is the right thing to do in the same situation.²⁵⁷ Research suggests that people look for consensus, so the more people that appear to follow a norm, the more influential it will be in conforming behavior.²⁵⁸ Social norms performed or expressed by legitimate authorities also have particularly influential

250. HEINZEN & GOODFRIEND, *supra* note 244, at 203.

251. CIALDINI, *supra* note 204, at 119–20.

252. KASSIN ET AL., *supra* note 219, at 260; HEINZEN & GOODFRIEND, *supra* note 244, at 202.

253. KASSIN ET AL., *supra* note 219, at 260; HEINZEN & GOODFRIEND, *supra* note 244, at 202; Cialdini & Goldstein, *supra* note 204, at 606 (writing that normative motivations are based on the desire to form “an accurate interpretation” of reality).

254. KASSIN ET AL., *supra* note 219, at 260–61; Cialdini & Goldstein, *supra* note 204, at 606; HEINZEN & GOODFRIEND, *supra* note 244, at 202.

255. KASSIN ET AL., *supra* note 219, at 260–61; *see also* Cialdini & Goldstein, *supra* note 204, at 606.

256. Brent Simpson & Robb Willer, *Beyond Altruism: Sociological Foundations of Cooperation and Prosocial Behavior*, 41 ANN. REV. SOCIO. 43, 45–46 (2015).

257. CIALDINI & TROST, *supra* note 243, at 155; Cialdini & Goldstein, *supra* note 204, at 597; HEINZEN, & GOODFRIEND, *supra* note 244, at 204.

258. CIALDINI & TROST, *supra* note 243, at 157; HEINZEN & GOODFRIEND, *supra* note 244, at 204. *But see* Cialdini & Goldstein, *supra* note 204, at 597 (“[N]orms direct behavior only when they are in focus.”).

impact in these circumstances.²⁵⁹ In short, we look for what Robert Cialdini calls “social proof” in the behavioral norms of others, especially those we perceive to be “similar” to us.²⁶⁰

We rely on “social proof” as a behavioral heuristic for a number of reasons. Some are relating to efficiency—we conform to social norms because it saves us time and cognitive effort.²⁶¹ We also do it because there is a higher likelihood the decision will turn out to be right; will be approved by others and not lead to social sanction and will avoid a self-image of being different, deviant, or intransigent.²⁶² There is also likely an evolutionary basis to these conforming effects.²⁶³ Evolutionary psychologists see commonalities across all forms of social influence usually treated as distinct—conformity, compliance, and obedience, for instance.²⁶⁴ Indeed, social conformity is a “highly rewarding process that is known to activate reward systems in the brain.”²⁶⁵ From an evolutionary perspective, behaving like others was likely to lead to “fitness-enhancing decisions,” thus selecting for imitation, mimicry, and other forms of social conformity over time.²⁶⁶ For example, these types of psychological strategies are less likely to lead to social sanction and ostracism, which would impact survival.²⁶⁷ Thus, research also shows that conformity is amplified when threats of physical harm are salient, in addition to times of situational uncertainty.²⁶⁸

Given these deeper psychological foundations, conforming effects, are not always a product of a conscious or deliberative process because of social norms in uncertain situations, as Cialdini’s influen-

259. CIALDINI & TROST, *supra* note 243, at 170; Steven L. Neuberg, Douglas T. Kenrick & Mark Schaller, *Evolutionary Social Psychology*, in 1 HANDBOOK OF SOCIAL PSYCHOLOGY 761, 778 (Susan T. Fiske, Daniel T. Gilbert & Gardner Lindzey eds., 5th ed. 2010).

260. CIALDINI, *supra* note 204, at 125–26; CIALDINI & TROST, *supra* note 243, at 155.

261. CIALDINI & TROST, *supra* note 243, at 168.

262. *Id.*

263. Neuberg, *supra* note 261, at 778.

264. *Id.*; see also KASSIN ET AL., *supra* note 219, at 261.

265. RUTHIE PLISKIN, AMIT GOLDENBERG, EFRAT AMBAR & DANIEL BAR-TAL, *Speaking Out and Breaking the Silence*, in SELF-CENSORSHIP IN CONTEXTS OF CONFLICT: THEORY AND RESEARCH 243, 250 (Daniel Bar-Tal, Rafi Nets-Zehngut & Keren Sharvit eds., 2017).

266. Neuberg, *supra* note 261, at 778–79; see also KASSIN ET AL., *supra* note 219, at 261.

267. See KASSIN ET AL., *supra* note 219, at 261.

268. Neuberg, *supra* note 261, at 778–79; see also KASSIN ET AL., *supra* note 219, at 261.

tial focus theory of normative conduct and Latane's social impact theories suggest.²⁶⁹ As Cialdini observes, there is substantial evidence in social science that shifting a person's attention to a specific source of information or motivation tends to alter their response in ways more consistent with the now more salient information.²⁷⁰ Social norms are no different, and theories of normative behavior in both social psychology and communications find that social norms that are more "activated"—made more salient or focused upon—have more influence on behavior.²⁷¹ An example might be a sign communicating the wrongfulness of littering near a food stand, such that people are focused on the non-littering norm, rather than looking to whether others are littering or not. This would be an example of highlighting an *injunctive* norm—which provides information on what is the *correct* thing to do—as contrasted by a *descriptive* norm, that provides information about what other people tend to do in the same situation. The more salient social norm will have greater influence and conforming effects. This research suggests the value in micro-targeted or tailored social norm messaging strategies in contexts like communications or politics.²⁷² These deeper psychological foundations likely also explain the phenomena of "primitive automaticity," where sometimes in heightened uncertainty, stress, and fatigue, people ignore most information available to them and simply use the "single-piece-of-good-evidence" approach to decision-making.²⁷³ Often that one good piece of evidence is the behavior of others.²⁷⁴ Here, conformity resolves uncertainty quickly.

269. YUVAL FELDMAN, *THE LAW OF GOOD PEOPLE: CHALLENGING STATES' ABILITY TO REGULATE HUMAN BEHAVIOR* 111 (2018); *see also* Robert B. Cialdini, Carl A. Kallgren & Raymond R. Reno, *A Focus Theory of Normative Conduct: A Theoretical Refinement and Reevaluation of the Role of Norms in Human Behavior*, 24 *ADVANCES EXPERIMENTAL PSYCH.* 201, 203 (1991); Bibb Latane, *The Psychology of Social Impact*, 36 *AM. PSYCH.* 343 (1981); Jessica Nolan, P. Wesley Schultz, Robert B. Cialdini, Noah J. Goldstein & Vidas Griskevicius, *Normative Social Influence Is Underdetected*, 34 *PERSONALITY SOC. PSYCH. BULL.* 913, 913 (2008) (finding that normative social influences are a "powerful lever" of persuasion, but their influence is under-detected).

270. Cialdini, *supra* note 269, at 203; Chung & Rimal, *supra* note 242, at 7–8, 10–11.

271. Cialdini, *supra* note 269, at 203; Chung & Rimal, *supra* note 242, at 8; JANICE RICHARDSON, NORMANN WITZLEB & MOIRA PATERSON, *Political Micro-Targeting in an Era of Big Data Analytics*, in *BIG DATA, POLITICAL CAMPAIGNING AND THE LAW* 54 (Normann Witzleb, Moira Paterson & Janice Richardson eds., 2020) (drawing on focus theory of normative conduct to suggest targeted and tailored political messaging is most effective at shaping preferences and choices).

272. CIALDINI & TROST, *supra* note 243, at 155; *see, e.g.*, CIALDINI, *supra* note 204, at 125–26.

273. CIALDINI, *supra* note 244, at 222.

274. *Id.*

Finally, as the previous Section on social reasons for chilling effects makes clear, social conformity does not necessarily have to lead to *actual* norm-following behavior or mimicry. Sometimes conformity can simply mean self-censorship and self-restraint, where a person decides not to speak or act out of fear of contradicting their social group or acting contrary to a social norm.²⁷⁵ It is therefore not surprising that people often self-censor and refuse to “break the silence” even on issues of “major societal significance,” where those issues are, among some groups, contentious or unpopular.²⁷⁶ Thus, Keren Sharvit notes that self-censorship tends to also accompany other forms of chilling effects like social conformity and compliance.²⁷⁷ This is certainly demonstrated in the “spiral of silence” research whereby people who believe their opinion to be in the minority self-censor to avoid contradicting the majority held opinions of the group.²⁷⁸

This is what social psychology and related social science tells us about how people make decisions in moments of uncertainty—they are far more likely to be influenced by social norms and conform their behavior accordingly. It would make sense for these findings to hold for behavior decisions that lead to chilling effects as well. This is because chilling effects are also most often a product of uncertainty about the law, surveillance, and other circumstances. With these empirical and theoretical foundations drawn from law, social science, and beyond, in the next Section I set out more clearly my theory of chilling effects.

C. CHILLING EFFECTS AS SOCIAL CONFORMITY

On this theory, a chilling effect is best understood as an act of conformity with, or in compliance to, social norms in that context. Chilling effects often arise out of contexts of ambiguity and uncertainty, such as ambiguity in the law or a circumstance where a person is aware they *may* be monitored by government or by their peers on social media. At the same time, chilling effects also have deeper psychological foundations. For instance, simply being aware of surveillance or being

275. See PLISKIN ET AL., *supra* note 265, at 250; Karen Sharvit, *Speaking Self-Censorship: Emerging Themes and Remaining Questions*, in SELF-CENSORSHIP IN CONTEXTS OF CONFLICT: THEORY AND RESEARCH 269, 274 (Daniel Bar-Tal, Rafi Nets-Zehngut & Keren Sharvit eds., 2017).

276. PLISKIN ET AL., *supra* note 265, at 254; see also SHARVIT, *supra* note 275, at 274–75.

277. SHARVIT, *supra* note 275, at 274–75.

278. See, e.g., Keith Hampton, Lee Rainie, Weixu Lu, Maria Dwyer, Inyoung Shin & Kristen Purcell, *Social Media and the ‘Spiral of Silence’*, PEW RES. CTR. (Aug. 26, 2014), <https://www.pewresearch.org/internet/2014/08/26/social-media-and-the-spiral-of-silence> [https://perma.cc/G7BN-RH3K].

watched has conforming and compliance effects, even in cases where we know that surveillance itself is artificial. Under observation or in moments of uncertainty, behavioral social science indicates that people tend to act the way they believe others would act in the same circumstance.²⁷⁹ That is, they look for “social proof” in the behavior of others and follow the norm.²⁸⁰ Chilling effects are thus social conformity and compliance effects.

Following this theory, a person is chilled from speaking or doing as they wish, and instead conform their behavior to comply what they perceive to be the norm. Most often, this will mean complying with the law, even if they believe what they wanted to do was both legal and desirable in the circumstances. Or, in the example of surveillance, they avoid engaging in an activity, believing that in doing so they may be caught breaching a social norm. This might mean conforming speech so as not to contradict the majority opinion or refusing to engage in an activity that might be flagged as unconventional or antisocial. A chilling effect is an act of social conformity and compliance, and the law, legal harms, and privacy harms, are all secondary considerations.

Social conformity is central to understanding chilling effects, but the closely related concept of social *compliance* is also important as well; chilling effects concern not just social pressures to conform but also laws, surveillance, and other forms of personal or regulatory threats that interact with those social pressures. Therefore, chilling effects will in many cases involve *compliance*—through self-censorship, conformity, and other means—in response to these threats, requirements, and processes. In the ensuing discussion, I use the theory to explain a range of different forms of chilling effects.

1. Legal / Regulatory / Statutory Chill

A theory of chilling effects as social conformity can explain forms of legal and regulatory chilling effects. This seems like a counter-intuitive idea—complying with the legal command or requirement would seem to involve acquiescing to that legal command to avoid repercussions, not *conformity* to social pressures. Yet, that is precisely how legal chilling effects work. A vast literature over the last few decades shows that most people comply with the law because they believe it is moral and legitimate.²⁸¹ This, in a sense, is a social norm: people obey legitimate laws and legal rules. Chilling effects arise in moments of situational uncertainty about the law’s requirements—a person thinks

279. See *supra* Part II.B.

280. See CIALDINI, *supra* note 204, at 125–26; CIALDINI & TROST, *supra* note 243, at 155.

281. See FELDMAN, *supra* note 269, at 185.

their conduct is legal, but they are unsure. In those moments, social science tells us that people look to social norms and other “social proofs” for guidance as to how to act.²⁸² And the widely accepted social norm of following the law will have a powerful conforming impact on the person—leading them to avoid the action, or change their behavior, to ensure they comply with the law. However, on this theory, and research supporting it, there is also reason to believe that chilling effects arising from a typical statute or regulation will be less common, and if it happens, they will be among the weaker and least impactful forms of chilling effects.²⁸³

A central dimension to my theory is situational uncertainty, which leads people to seek out social norms to resolve the uncertainty despite believing their behavior or speech was lawful, which can lead to self-censorship, conformity, and other forms of chilling effects. A law or regulation could, of course, create such uncertainty as legal rules are inherently uncertain.²⁸⁴ That uncertainty can arise as a result of unclear, vague, or ambiguous legal terms or statutory language, as well as uncertainty about the likelihood of enforcement of a given law or legal rule.²⁸⁵ Legal uncertainty was an important element of Schauer’s chilling effects theory. He emphasized the uncertain in the legal process—“all litigation, and indeed the entire legal process, is surrounded by uncertainty.”²⁸⁶ This included the “interplay” of various human actors coupled with the “imprecision of ‘people-made’ rules,” and the overall lack of predictability in legal outcomes.²⁸⁷ And a standard tenet of behavioral law and economics research has held that when laws are uncertain, people are likely to over-comply with the law—chilling lawful and even desirous behavior—due to being risk averse.²⁸⁸

Indeed, there is empirical legal research, consistent with findings in social psychology, that when faced with legal uncertainty, people also are more likely to rely on social norms to make a decision about their law-related behavior. Early research on legal ambiguity and or-

282. See CIALDINI, *supra* note 204, at 125–26; CIALDINI & TROST, *supra* note 243, at 155.

283. See FELDMAN, *supra* note 269, at 62 (discussing the motivators of law-abiding people).

284. Yuval Feldman & Doron Teichman, *Are All Legal Probabilities Created Equal?*, 84 N.Y.U. L. REV. 980, 985 (2009). See generally FELDMAN, *supra* note 269.

285. Feldman & Teichman, *supra* note 284, at 985.

286. Schauer, *supra* note 6, at 687.

287. *Id.*

288. See, e.g., Feldman & Teichman, *supra* note 284, at 1012.

ganizations by Lauren Edelman found that uncertainty in the law invites responses that engage broader societal norms and interests.²⁸⁹ Similarly, experimental research by Yuval Feldman and Alon Harel demonstrated, among other findings, that when facing legal ambiguity, people rely primarily on social norms to decide how to behave, and that the level of ambiguity is an important factor in that reliance.²⁹⁰ That is, the greater the uncertainty or ambiguity, the heavier the reliance a person will place on social norms to decide how to act.²⁹¹ In another study, Feldman and Doron Teichman also found strong reliance on social norms in contexts of legal uncertainty, but also found that if the law is too unclear, it might undercut the law's expressive function, which normally can help guide a person's law-related actions when uncertain.²⁹²

So, there is situational uncertainty in the law that could lead a person to seek guidance in the norms of others, which can lead to chilling and conforming effects—following others in how they speak or act in the circumstances. Furthermore, this tendency will be informed by social norms around legal compliance in society. If we understand social norms as behaviors that are seen as “desirable or legitimate” in broader society and whose violation thus may at least lead to social sanction or “informal disapproval,” then certainly legal obedience is a widely accepted social norm in society.²⁹³ Richard McAdams and Eric Rasmusen refer to this social norm as the norm of legal compliance while Licht calls it the “rule of law” norm, arguing that it serves a critical interface between informal social norms and formal laws and legal requirements in society.²⁹⁴ Whether this rule-of-law social norm is a product of other norms concerning following rules that

289. Lauren B. Edelman, *Legal Ambiguity and Symbolic Structures: Organizational Mediation of Civil Rights Law*, 97 AM. J. SOC. 1531, 1542 (1992).

290. Yuval Feldman & Alon Harel, *Social Norms, Self-Interest and Ambiguity of Legal Norms: An Experimental Analysis of the Rule vs. Standard Dilemma*, 4 REV. L. & ECON. 81, 82 (2008).

291. *Id.* at 82–83.

292. Feldman & Teichman, *supra* note 284, at 989.

293. See Licht, *supra* note 182, at 717.

294. Compare McAdams & Rasmusen, *supra* note 24, at 1591, 1606 (“People often feel obliged to obey laws, or at least laws they perceive to be ‘legitimate,’ from the very fact that they are laws, rather than from any other motivation. These people suffer guilt, shame, or disapproval from breaking the law Where it once seemed that legal compliance was simply a function of deterrence and incapacitation, we can now explain why the norms of legal obedience and the rule of law matter too”), with Licht, *supra* note 182, at 718.

are moral and fair, or socialization processes, it has a powerful conforming effect on a person uncertain about the legality of their course of action.²⁹⁵

So, at least as a threshold matter, legal uncertainty and ambiguities can lead people to engage in the same process that leads to social conformity in other contexts—resolving ambiguity by looking to social norms of others. And, absent some other social norms suggesting rampant non-compliance, the rule-of-law social norm's prevalence and power can explain how someone would be chilled from speaking or doing, even if they might believe their action was legal under the law—they were just uncertain and instead were chilled and conformed their behavior to avoid social sanction and other social repercussions. On this count, Schauer was right about the uncertainty in the law being a key part of chilling effects, but wrong about *how* and *why*, in the end, a person may be chilled.²⁹⁶ That said, there are countervailing factors that suggest such legal and regulatory chilling effects are far less common than other forms, and when they do occur, are weak. In Part IV, I elaborate more fully.

2. Surveillance / Data Collection Chill

Chilling effects associated with surveillance and related data and information practices would likewise have a more significant chilling effect. To begin with, surveillance can cause chilling effects even if there is no uncertainty or ambiguity. As apparent from my review of social chilling effects literature, not just actual surveillance and observation—but simply the possibility or reminder of it in the “watching eye” studies—had a conforming effect on people,²⁹⁷ leading them to act more in conformity with pro-social norms, and also avoiding actions that may lead to negative judgments or social sanction, like anti-social behavior.²⁹⁸ This makes sense, as surveillance and observation has been found to activate deeper psychological states, like emotional distress, anger, and anxiety—the same mental states associated with threat perception.

295. Licht, *supra* note 182, at 717, 736–37; Tyler, *Force of Law*, *supra* note 80, at 507 (“There is a large body of social science evidence showing that social norms, moral values, and judgments about legitimacy all influence law-related behavior and, relying upon it, social scientists generally suggest that while sanctions matter sanction-independent forces are central to and often dominate the factors shaping people’s law-related behaviors.”); Ellickson, *Law and Economics*, *supra* note 183, at 539–41 (characterizing socialization and social norms as influential). *See generally* TYLER, *supra* note 80 (explaining how the law coerces conformity).

296. *Contra* Schauer, *supra* note 6, at 689–701.

297. *See, e.g.*, SHERIF, *supra* note 244, at 95–105.

298. *See supra* Part II.B.

As noted earlier, privacy experts have recognized these dimensions of these chilling effects, with Westin writing about the need for “solitude” and a place of “emotional release” that is free from surveillance and the observation of others.²⁹⁹ And Gavison similarly writes about the importance of private respite from the “inhibitive effects” of “casual observation.”³⁰⁰ Solove likewise acknowledges social and psychological factors in chilling effects, noting that not only does awareness of surveillance make a person “feel extremely uncomfortable,” but it also alters behavior leading to “self-censorship and inhibition.”³⁰¹ As a result, surveillance is a “tool of social control” that enhances the “power of social norms” when people are being observed.³⁰²

However, modern surveillance practices compound these conforming effects by also breeding ambiguity and uncertainty as to its aims, purposes, and present and future impacts. Indeed, one of the key insights from surveillance studies is that surveillance is inherently ambiguous. Ambiguity and uncertainty go to the very heart of Foucault’s use of the panopticon metaphor to understand modern surveillance; in Bentham’s panopticon prison, the prisoners were always in a state of uncertainty about whether they were being watched, and conformed their behavior accordingly.³⁰³ As Lyon writes, the “panoptic urge” is to “generate regimes of self-discipline through uncertainty.”³⁰⁴ Similarly, Ayse Ceyhan writes:

As Lyon posits, surveillance is ambiguous, and is understood in its ambiguity from care to control, and the role of visibility of the surveilled [sic] is taken as seriously as the process of observing, classifying and studying. Surveillance covers all aspects of the public and private life of individuals as they are implemented in the real-time and also in terms of future intentions and projects.³⁰⁵

Surveillance studies have focused on highlighting the harms of surveillance beyond merely the “Big Brother state,” speaking to its aims

299. WESTIN, *supra* note 234, at 2.

300. Gavison, *supra* note 235.

301. Solove, *Taxonomy of Privacy*, *supra* note 6, at 493.

302. *Id.*

303. Calo, *Boundaries*, *supra* note 31, at 1146–47 (“This is the exact lesson of the infamous Panopticon. The tower is always visible, but the guard’s gaze is never verifiable.”).

304. Lyon, *9/11*, *supra* note 113, at 44.

305. AYSE CEYHAN, *Surveillance as Biopower*, in ROUTLEDGE HANDBOOK OF SURVEILLANCE STUDIES 38, 41 (Kirstie Ball, Kevin Haggerty & David Lyon eds., 2012) (internal citations omitted).

like “social control” and “social sorting,” which are pursued via complex and ambiguous apparatuses and processes.³⁰⁶ Zygmunt Bauman’s concept of “[l]iquid surveillance” also describes how these attributes of surveillance “seep[] and stream[]” into all aspects of life: surveillance is ambiguous and constantly shifting.³⁰⁷

Similarly, Solove also emphasized the uncertainty and ambiguity of surveillance and information collection, use, and retention in vast databases.³⁰⁸ Elsewhere, he elaborated this dimension to surveillance and information collection further, drawing on the character Joseph K. in Franz Kafka’s *The Trial*, who pursues a “frustrating quest” to seek exoneration for his unknown crimes, which involves attempting to determine the contents of the secretive “dossier” that has allegedly been created on him and his unknown crimes, leaving him feeling “powerless, uncertain, and uneasy.”³⁰⁹ Uncertainty plays another role in surveillance chilling effects—it magnifies them. Those who are more *uncertain* about what to say or do in a given context are more affected by surveillance, and more likely to conform as result.³¹⁰ This makes perfect sense. For the same reason that being uncertain about the legality of an act may lead a person to over comply with law in order to avoid breaking a social norm, awareness that you are being watched increases the risk that your norm breaking could be seen or captured by others, increasing the likelihood of conformance and compliance.

A theory of chilling effects as social conformity thus easily explains surveillance chilling effects. Observation alone has chilling and conforming effects, which Margot Kaminski and Shane Witnov note are amplified and compounded by the ambiguity and uncertainty of modern surveillance practices.³¹¹ And there is substantial empirical support for such surveillance chilling effects. Elizabeth Stoycheff’s Facebook-based experimental study, published in 2016, found that exposing participants to “terms of agreement”—which reminded participants that their online activities could be “monitored”—lead to a

306. Kirstie Ball, Kevin Haggerty & David Lyon, *Introduction: Surveillance as Sorting*, in ROUTLEDGE HANDBOOK OF SURVEILLANCE STUDIES 111, 119 (Kirstie Ball, Kevin Haggerty & David Lyon eds., 2012).

307. LYON, *CULTURE OF SURVEILLANCE*, *supra* note 113, at 31–32.

308. Solove, *Taxonomy of Privacy*, *supra* note 6, at 522 (“The potential for secondary use generates fear and uncertainty over how one’s information will be used in the future, creating a sense of powerlessness and vulnerability.”).

309. DANIEL J. SOLOVE, *THE DIGITAL PERSON: TECHNOLOGY AND PRIVACY IN THE INFORMATION AGE* 36–37, 226 (2004).

310. Deutsch & Gerard, *supra* note 243, at 630 (“The more uncertain the individual is about the correctness of his judgment, the more likely he is to be susceptible to social influences in making his judgment.”); Kaminski & Witnov, *supra* note 29, at 500.

311. See, e.g., Kaminski & Witnov, *supra* note 29, at 500.

significant “spiral of silence” chilling effect, whereby participants who believed their political opinions were outside the mainstream were chilled from expressing them.³¹² In a 2015 study, Catherine Tucker and Alex Marthews likewise found evidence of surveillance chilling effects in Google search queries.³¹³ My own study on Wikipedia, discussed earlier, also found government surveillance chilling effects. In a 2017 study, I examined corporate and private sector forms of surveillance and likewise found chilling effects on a range of online activities for internet users.³¹⁴

3. Personalized Law / Threats / Enforcement Chill

Though general statutes may have weaker to negligible chilling effects, if legal rules and their enforcement become more specific, personalized, and tailored, there is good reason to believe the associated chilling effects would be far more substantial. One example of such law and legal enforcement would be the “personalized law” that Cass Sunstein, Ariel Porat, and Lior Jacob Strahilevitz write about, where rules are personalized and tailored to each individual.³¹⁵ Another example is what Anthony Casey and Anthony Niblett call “microdirectives”—a future form of highly specific machine-enforced legal directions.³¹⁶

Why would such personalized law and more personally targeted legal enforcement have greater chilling effects? First, as noted earlier, social psychology says conformity and related chilling effects are amplified when threats are more personal and specific, in this case it would be a legal threat or directive. Second, theories of social norm behavior, like Cialdini’s focus theory, suggest that a norm that is activated or brought into focus, and made more salient, has more impact

312. Stoycheff, *supra* note 6, at 306–07 (finding “spiral of silence” effect due to online social media surveillance).

313. Marthews & Tucker, *supra* note 39, at 446 (“[A]cross the 41 countries we studied, we found that the Google Trends search index fell for ‘high government trouble’ search terms by roughly 4 percent after the Snowden revelations.”).

314. Penney, *Internet Surveillance*, *supra* note 39 (finding evidence of government and corporate surveillance chilling effects on a range of online activities, including sharing, speech, and searches).

315. See Ariel Porat & Lior Jacob Strahilevitz, *Personalizing Default Rules and Disclosure with Big Data*, 112 MICH. L. REV. 1417, 1440, 1477 (2014) (arguing for the benefits of personalization, including using automation in certain contexts); Cass R. Sunstein, *Deciding by Default*, 162 U. PA. L. REV. 1, 57 (2013) (“[P]ersonalized default rules are the wave of the future. We should expect to see a significant increase in personalization as greater information becomes available about the informed choices of diverse people.”).

316. Anthony J. Casey & Anthony Niblett, *The Death of Rules and Standards*, 92 IND. L.J. 1401 (2017).

on behavior. A specific legal directive could be interpreted or understood as bringing into focus a key legal norm or a social norm it reflects. Third, a more personalized and personally received legal directive may also bring deterrence theory into play. Deterrence theory, as noted earlier, has “modest to negligible” impact, but under certain conditions—not often attained today, but possibly more common in the future with more AI-driven targeted deterrence—it can have a greater effect.³¹⁷ With this more tailored and personalized enforcement, those conditions—intensity, temporal proximity, likelihood of swift and certain enforcement for breach of the directive—would arguably be present.³¹⁸ So, a theory of chilling effects as social conformity predicts that a more personalized legal rule or a micro-directive that is also received personally would have far more chilling effects.

For many of the same reasons, it is easy to see why forms of targeted online abuse, harassment, and defamation—like targeting an individual persistently with threats, defamation, and privacy invasions—can have such a devastating chilling effect on victims and their own speech, sharing, and engagement online.³¹⁹ First, threats of violence and physical harm are a powerful force for self-censorship,³²⁰ which trigger deeper psychological states of fear, anxiety, and severe emotional distress that then in turn amplify social conformity.³²¹ Such personal online threats and abuse also possess the intensity, proximity, and, perceived likelihood of swift punishment, typically required for a deterrent effect that can contribute to chilling effects.

4. Social Media Chill and Disinformation / Online Abuse

A theory of chilling effects as social conformity can also explain a range of different social media chilling effects, both those that lead to certain forms of self-censorship, but also some of the more abusive behavior seen today on social media—like increasing online hate, harassment, and bullying. To begin with, the same situational uncertainty

317. Pratt et al., *supra* note 80, at 383.

318. *Id.*

319. See, e.g., CITRON, *supra* note 33, at 5–6; Citron & Penney, *supra* note 6, at 2319.

320. PLISKIN ET AL., *supra* note 265, at 255; Sagi Elbaz, Tamir Magal, Rafi Nets-Zehngut & Guy Abutbul, *Self-Censorship of Narratives of Political Violence in the Media*, in SELF-CENSORSHIP IN CONTEXTS OF CONFLICT: THEORY AND RESEARCH 119, 129 (Daniel Bar-Tal, Rafi Nets-Zehngut & Keren Sharvit eds., 2017) (“[J]ournalists may choose to keep silent regarding sensitive and delicate issues for fear for their personal safety. These fears may include arrests, torture, and even murder of state officials by private citizens. In South America, several journalists have been murdered or have disappeared following investigative reporting into drug-related deals.”).

321. See Neuberg, *supra* note 261, at 778–79; KASSIN ET AL., *supra* note 219, at 261.

and ambiguity seen in other contexts involving chilling effects are present on social media, and in some cases exacerbated by the nature of the medium. Earlier, I discussed the challenges social media users face in engaging in impression management, with multiple online audiences and a lack of effective social cues as to expectations of each of those audiences. People in such situational uncertainty, on this theory, constantly scan their environment for “social proof,” such as norms as to group opinions or behavioral norms, looking to conform to those norms. But on social media and similar digital environments, multiple audiences create uncertainty about social norms.

This can cause different kinds of chilling effects. First is the “context collapse” that Alice Marwick and danah boyd describe, wherein people—unable to determine the appropriate social norm or cue due to countless audiences and unknowable expectations—simply default to certain self-presentation strategies to cope, including self-censorship, disengagement, and others forms of self-restraint.³²² Such chilling effects, observed in other social media studies,³²³ can all be explained by a theory of chilling effects as social conformity. The chilling effects are further compounded by the ambiguities and uncertainty of social surveillance. Beyond the fact that users endure platforms collecting data about their behavior at immense scale, as well as possible government surveillance, they are also aware of social surveillance—how *users* on social media are surveilling each other. The sociologically influenced field of surveillance studies offers insights on this count, through the concept of “surveillance culture.”³²⁴ This term describes how people are not only under surveillance by government or corporate interests—even in our most mundane day-to-day tasks—but also engage and participate in surveillance of other people, like observing others on social media.³²⁵ Much like “context collapse,” awareness of large scale peer-to-peer surveillance also has chilling effects.³²⁶ Interestingly, these chilling effects can extend from online contexts to offline and real world contexts. Lavertu et al. recently

322. Marwick & boyd, *supra* note 230, at 125; *see also* Marder et al., *supra* note 39, at 584.

323. *See, e.g.*, LYON, CULTURE OF SURVEILLANCE, *supra* note 113, at 65–69.

324. *See id.*

325. *Id.* at 2–3, 59.

326. Marder et al., *supra* note 39, at 583; LYON, CULTURE OF SURVEILLANCE, *supra* note 113, at 68 (discussing chilling effects on Muslim Canadians); *see also* Mark Andrejevic, *Surveillance and Alienation in the Online Economy*, 8 SURVEILLANCE & SOC'Y 278, 286–87 (2011).

found that self-presentation and identity management in online contexts can lead to increasing conforming behavior offline.³²⁷

However, these same social media conditions, rather than fostering self-censorship, can also lead to *greater* antisocial behavior among users online. Typically, we associate social conformity with forms of self-censorship and restraint—with a person being more restrained, polite, respectful, and perhaps at the same time less original, dynamic, or individualistic. So, a theory of chilling effects as social conformity means chilling effects can, and do, involve these forms of self-restraints. But conformity can also mean conforming to more problematic behavioral norms as well. Where social media users face uncertainty within certain online communities, social media groups, or with certain online audiences, they may turn to norms typical to that group—or one of those groups or audiences—that are more polarizing and anti-social, leading people to online hate, bullying, trolling, and abuse. Multiple studies have documented the role of conformity in such anti-social online behavior.³²⁸ A theory of chilling effects as social conformity also helps explain how situational uncertainty due to social media surveillance and unclear social cues can encourage conformity with more anti-social norms.

This line of reasoning can also explain another form of online chilling effects that communications scholar Zeynep Tufekci talks about—disinformation chill. Today, online actors, often with malicious intent, spread disinformation, gossip, rumor, and “fake news,” as well as trolling and other polarizing behavior, in order to create chilling effects on democratic engagement and collective action. Tufekci, for instance, has written about viral harassment campaigns and how governments have deployed “troll armies” and automated processes like “botnets” in order to sow what she calls “censorship by

327. Laura Lavertu, Ben Marder, Antonia Erz & Robert Angell, *The Extended Warming Effect of Social Media: Examining Whether the Cognition of Online Audiences Offline Drives Prosocial Behavior in 'Real Life'*, COMPS. HUM. BEHAV. 1 (Sept. 2020).

328. See, e.g., Markus Kaakinen, Anu Sirola, Iina Savolainen & Atte Oksanen, *Impulsivity, Internalizing Symptoms, and Online Group Behavior as Determinants of Online Hate*, PLOS ONE, Apr. 22, 2020, at 3 (“Self-stereotyping and conformity to emergent group norms can make hostile online behavior more prevalent.”); Wai Yen Tang & Jesse Fox, *Men's Harassment Behavior in Online Video Games: Personality Traits and Game Factors*, 42 AGGRESSIVE BEHAV. 513, 513 (2016) (finding that social conformity plays a role in harassment in online gaming); Jesse Fox & Wai Yen Tang, *Sexism in Online Video Games: The Role of Conformity to Masculine Norms and Social Dominance Orientation*, 33 COMPUTS. IN HUM. BEHAV. 314 (2014) (“[C]onformity to some types of masculine norms . . . predict[s] higher scores on the Video Game Sexism Scale . . .”); Colliander, *supra* note 225 (finding social conformity to impact people's willingness to share false news and disinformation online).

disinformation,” that is, the digital public sphere is flooded with information, much of it distorted and false, with an aim to simply “confuse and overwhelm” the public.³²⁹ Tim Wu has called these tactics “flooding strategies” a kind of “reverse” censorship in rather than censoring speech directly, it seeks to drown it out.³³⁰

A social conformity theory of chilling effects helps explain how these strategies work. The spread of disinformation creates situational uncertainty for a social media user, leading them to seek out information in social norms about online speech and engagement. But in an environment of troll armies, fake news, inauthentic amplified messaging, and viral harassment campaigns, some social media users—like the “spiral of silence” effect—are chilled into silence and disengagement—itsself an act of conformity—as speaking or acting in such an environment creates risk of social sanction and disapproval. While others, at the same time, end up engaging in more anti-social norms like trolling and sharing false news and disinformation—either because they are a norm of a community with which they self-identify, or are mistaken about the norm—which in turn contributes to a broader environment that is more polarized, abusive, and chilling. Indeed, such abusive behavior, in turn, can also lead to chilling effects on targets of such online hate, harassment, trolling, and abuse. The result is a corrosive chilling effect on collective action and democratic understanding, due to confusion and mistrust, and a downward spiral of conformity, division, and silence.

III. BENEFITS / IMPLICATIONS OF THIS THEORY

A. CLARIFYING WHAT CHILLING EFFECTS THEORY IS FOR

A full accounting of what chilling effects theory is “for” takes us beyond this Article, but some elaboration here is necessary. In our Post-Snowden and Post-Cambridge-Analytica scandal era, concerns about chilling effects have taken hold in “everyday discourse.”³³¹ So, the need to develop an accurate theoretical and empirical understanding on the phenomenon has itself taken on greater public importance.

329. ZEYNEP TUFEKCI, TWITTER AND TEAR GAS: THE POWER AND FRAGILITY OF NETWORKED PROTEST 239 (2017); Zeynep Tufekci, *It's the (Democracy Poisoning) Golden Age of Free Speech*, WIRED (Jan. 16, 2018), <https://www.wired.com/story/free-speech-issue-tech-turmoil-new-censorship> [<https://perma.cc/4QGK-QKTV>] (“The most effective forms of censorship today . . . look like viral or coordinated harassment campaigns.”).

330. Tim Wu, *Is the First Amendment Obsolete?*, 117 MICH. L. REV. 547, 565–68 (2018).

331. Townend, *supra* note 8, at 1.

A theory of chilling effects as social conformity does so, better explaining and illustrating *what* chilling effects are, and what they produce, to clarify discourse and understanding about chilling effects and their impact. Without an accurate understanding we cannot hope to respond effectively. Furthermore, it complements and supports privacy and legal strategies aimed at guarding against the corrosive impact of chilling effects while also providing a sounder normative, theoretical, and empirical foundation to unpack, understand, and resist the processes and impact of broader societal shifts like the current surveillance and information capitalism paradigm.

1. What Chilling Effects Produce

I noted in my Introduction that lawyers, privacy theorists, and social scientists have long been skeptical whether such chilling effects actually exist, and if so, whether they are anything more than a trivial or temporary phenomenon.³³² Courts have also questioned chilling effects, especially those associated with surveillance and modern information collection, retention, and analytics practices.³³³ There are many reasons for this skepticism, but an important part of the problem is common misconceptions about chilling effects—what they look like, and their impact. Here, lawyers, experts, and members of the general public have a tendency to expect that chilling effects, like those caused by government surveillance would, if they exist, have clear and widespread societal impacts on democratic rights and freedoms, like society-wide suppression of speech, controversy, or democratic engagement. And when these effects are not seen, it breeds skepticism.

A good example of this sort of reasoning is this passage by Eric Posner who conveys his skepticism about the “threat” posed by National Security Agency (NSA) surveillance after the Snowden revelations in June 2013:

This brings me to another valuable point you made, which is that when people believe that the government exercises surveillance, they become reluctant to exercise democratic freedoms. This is a textbook objection to surveillance, I agree, but it also is another objection that I would place under ‘theoretical’ rather than real. Is there any evidence that over the last 12 years, during the flowering of the so-called surveillance state, Americans have become less politically active? More worried about government suppression of

332. See Penney, *Chilling Effects*, *supra* note 6, at 120–22 (discussing skepticism of the judiciary, legal commentators, privacy theorists, security researchers, and social scientists); Sklansky, *supra* note 36, at 1094–100; De Mot & Faure, *supra* note 36, at 121.

333. Penney, *Chilling Effects*, *supra* note 6, at 120–21 (describing skepticism of the U.S. Supreme Court in the *Laird* and *Clapper* decisions); Kaminski & Witnov, *supra* note 29, at 479–82 (examining the skepticism of the U.S. Supreme Court in recent cases).

dissent? Less willing to listen to opposing voices? All the evidence points in the opposite direction.³³⁴

For Posner, the very fact that people are still politically active and engaging with “opposing voices” is strong evidence that surveillance chilling effects are mythical or simply trivial.

Similarly, David Sklansky also finds compelling evidence “all around us” contradicting the idea that surveillance would “chill independent thought, robust debate, personal growth, and intimate friendship.”³³⁵ Among that evidence is the widespread “sharing of personal information” online; how employer monitoring has not deterred employee emailing; how freedom of information laws have not deterred “intra-governmental communication;” and how young people share and engage online more than previous generations.³³⁶ Like Posner, Sklansky finds that simply because people are doing all of these things—and not ceasing all of these activities—as good evidence that chilling effects do not exist or are not “worth worrying about.”³³⁷

Elsewhere, I have argued these misconceptions can be attributed to George Orwell’s popularized dystopian vision of society under mass surveillance³³⁸—but they are further compounded by conventional theories of chilling effects that emphasize self-censorship and an absence of action, to the neglect of the productive dimensions of chilling effects. A theory of chilling effects as social conformity shows how their assumptions are wrong. So what do chilling effects, like those associated with corporate and state surveillance, *produce*? Simply because social and political discussion or debate appears today in democratic societies does not mean there are no such chilling effects, or that they are trivial. Rather, people are chilled in more subtle ways. Yes, this can mean being discouraged from speaking or doing entirely, but often chilling effects still involve speech and activities, just more socially conforming ones. That is, speech and activities are less robust, creative, innovative, and experimental. The research that *has* been done³³⁹ supports this theory, and it shows how these commonly held assumptions are wrong.

334. Eric Posner, Opinion, *The Secrecy Paradox*, N.Y. TIMES: (June 9, 2013), <https://www.nytimes.com/roomfordebate/2013/06/09/is-the-nsa-surveillance-threat-real-or-imagined> [<https://perma.cc/NVF6-AV9Q>].

335. Sklansky, *supra* note 36, at 1094, 1097, 1099.

336. *Id.* at 1099–100.

337. *Id.* at 1101.

338. See Jonathon W. Penney, *(Mis)conceptions About the Impact of Surveillance*, FREEDOM TO TINKER (Feb. 14, 2018), <https://freedom-to-tinker.com/2018/02/14/misconceptions-about-the-impact-of-surveillance> [<https://perma.cc/P2UL-KUTT>].

339. See *supra* note 39 and accompanying text.

While not resulting in widespread suppression of speech and engagement, these more subtle impacts of chilling effects, in the long term, are no less dangerous to free and healthy democratic societies. First, from an individual privacy perspective, chilling effects—as a powerful agent of social conformity—threaten our “moral autonomy,”³⁴⁰ “self-development,” and “self-determination.”³⁴¹ And, especially in an era of surveillance capitalism where surveillance and manipulation pervades all aspects of our lives, it threatens intellectual privacy—that intimate zone where we can read, think, and speak freely beyond the gaze or reach of government or industry, especially with significant others.³⁴² If people are consistently chilled into more socially conforming speech and behavior, especially in the most intimate and private settings, then actual personal development and self-actualization is impossible.³⁴³ So, on an individual level, chilling effects produce more compliant, conformed, docile, and disengaged individuals.

Second, from a societal perspective, as chilling effects impact and encroach on privacy, they also erode trust, which underpins sharing, dialogue, intercourse, and engagement. As Neil Richards and Woodrow Hartzog note, trust is “essential” to “healthy relationships and healthy societies.”³⁴⁴ It is, in Ari Waldman’s terms, a “natural, almost designed-in aspect of social life.”³⁴⁵ Trust is essential to forging relationships.³⁴⁶ Such relationships, including both casual and intimate, develop through a process of social interactions—primarily sharing and disclosure.³⁴⁷ Culturally, greater conformity means less creativity, experimentalism, dynamism, and innovation, but also less sharing.³⁴⁸ But conformity can also mean more anti-social behavior in certain contexts, including online hate, trolling, bullying, and abuse, leading to more division, polarization, and tribalism.³⁴⁹ These are destructive not only to relationships but also the broader social fabric and cohesion of democratic societies.

340. Solove, *Taxonomy of Privacy*, *supra* note 6, at 488 n.45.

341. *Id.* at 488.

342. RICHARDS, *RETHINKING CIVIL LIBERTIES*, *supra* note 6, at 95–97; Richards, *Dangers of Surveillance*, *supra* note 6, at 1945–52.

343. Kaminski & Witnov, *supra* note 29, at 513–14.

344. Richards & Hartzog, *supra* note 27, at 448.

345. WALDMAN, *supra* note 18, at 52.

346. Danielle K. Citron, *Why Sexual Privacy Matters for Trust*, 96 WASH. U. L. REV. 1189, 1199 (2019).

347. *Id.* at 1199.

348. Kaminski & Witnov, *supra* note 29, at 513.

349. See Kaakinen et al., *supra* note 328.

Third, the chilling and conforming effects of commercial and state surveillance threaten democratic deliberation, self-government, and collective action. Without the intellectual privacy, space, and freedom from surveillance and its conforming effects, democracy and self-government is impossible.³⁵⁰ Furthermore, disinformation chill also undermines democratic engagement and collective action.³⁵¹ As commercial interests, governments, and other malicious actors manipulate our online and social media environments, misdirect our attention, and “flood the zone” with manipulative and false information, people are chilled into silence and disengagement. So chilling effects also produces less healthy and engaged democracies, by undercutting collective action as well as collective understanding of societal challenges. *Chilling effects paralyze.*

However, Julie Cohen, a prolific critic of conventional privacy and legal theories, would argue that these ideas assume an autonomous “liberal subject” that does not exist.³⁵² Rather than employing theories and strategies to protect a non-existing subject, privacy and legal theories must embrace what Cohen calls the “emergent and relational character of subjectivity,”³⁵³ which is to say, embrace the reality that people’s identity and self-hood is entirely socially shaped and constructed.³⁵⁴ Thus, she recommends engaging with social science literature beyond the law, including “cognitive science, sociology, and social psychology” among others, to understand subjectivity as “socially constructed.”³⁵⁵ Privacy is inherently tied to socially shaped subjectivity. It is, she writes, a “function of the interplay between emergent self-hood and social shaping,”³⁵⁶ and privacy allows that interplay to happen, providing “breathing room”—beyond the “efforts of commercial and government actors”³⁵⁷—for people to navigate existing social forces and allow “self-making” and “self-determination” in this process.³⁵⁸

My chilling effects theory embraces Cohen’s call for privacy scholars to move beyond the “liberal subject” and engage with literature, particularly social-psychology, which I have relied on heavily in this

350. RICHARDS, *RETHINKING CIVIL LIBERTIES*, *supra* note 6, at 99–100; Kaminski & Witnov, *supra* note 29, at 512–13.

351. Kaminski & Witnov, *supra* note 29, at 512–13.

352. Cohen, *What Privacy Is For*, *supra* note 14, at 1905.

353. *Id.* at 1908.

354. *Id.*

355. *Id.*

356. *Id.* at 1911.

357. *Id.* at 1905.

358. *Id.* at 1908.

account. A central part of my argument is that people are indelibly shaped by social influences, particularly in moments of uncertainty, and though some of these social shaping forces are conscious, others are subconscious. In Cohen's words, their subjectivity is shaped by social forces.³⁵⁹ The theory embraces the reality that humans are social animals and a product of social-cultural influences and interactions. Furthermore, chilling effects theory provides a helpful companion to Cohen's conception of privacy. For Cohen, the role of privacy—"what it is for"—is to ensure that the development of subjectivity and the development of communal values "do not proceed in lockstep."³⁶⁰ My theory helps illustrate how chilling effects would disrupt and undermine this process. This is because chilling effects, as a force for social conformity and compliance, would lead communal values and social norms to dictate subjectivity.

If privacy is concerned with fostering social conditions for autonomy, intellectual freedom, and self-determination, then privacy theorists must consult and understand chilling effects theory. This is because chilling effects foster competing social conditions—self-censorship, social conformity, and compliance—that frustrate and undermine these very things. A social conformity theory of chilling effects helps explain *how* these contrary social conditions are promoted, by surveillance and other commercial and governmental activities, thus helping expose them, and their long-term impact. Only with better understanding can chilling effects be effectively addressed through law and policy.

2. Law's Multidimensional Role in Addressing Chilling Effects

A social conformity theory of chilling effects also helps us understand the different ways in which law can be effectively used to address the kinds of chilling effects discussed here. Of course, an important but more conventional approach to law's role in this context is to provide a means to *regulate* different activities—like government or corporate surveillance and information gathering or online abuse—that may cause chilling effects, to reduce or mitigate those impacts.³⁶¹ An example would be restrictions on the nature and scope of

359. *Id.*

360. *Id.* at 1911.

361. See, e.g., Margot E. Kaminski, *Regulating Real-World Surveillance*, 90 WASH. L. REV. 1113, 1113 (2015) (providing "guidance to legislators for the enactment of new laws governing a range of new surveillance technologies"); A. Michael Froomkin, *Regulating Mass Surveillance as Privacy Pollution: Learning from Environmental Impact Statements*, 2015 U. ILL. L. REV. 1713, 1747 (presenting a "domesticated form of regulation" for mass surveillance); Katelyn Ringrose, *Religious Profiling: When Government*

data collection and sharing, like the influential General Data Protection Regulation enacted in Europe, that itself sought to reduce chilling effects associated with data collection and processing, by reducing uncertainty about the scope and invasiveness of such practices.³⁶² Another would be outright prohibitions—like a ban on facial recognition technology³⁶³—that arguably *avoids* chilling effects by proscribing technologies or practices that would cause them. Laws can also mandate *transparency*, which can likewise reduce chilling effects on the theory that increasing transparency about how data is being used or shared may reduce uncertainty and, with it, chilling and conforming effects.³⁶⁴ Legal, regulatory, and statutory *design* and *drafting* also has a role to play here, at least in the case of statutory or regulatory chilling effects. I have argued these kinds of chilling effects are likely much less common and significant than other forms, and their effects could be further mitigated and reduced with more carefully and narrowly tailored laws and statutes, that would also reduce uncertainty that contributes to chilling effects.

But lawyers and legal scholars have arguably focused too heavily on these regulatory dimensions of law when it comes to privacy and chilling effects.³⁶⁵ A social conformity theory places social norms at the center of our understanding of chilling effects, thus highlighting another powerful and important role for law here—its expressive function in shifting social norms over time. Expressive law theory explores law’s symbolic and expressive impact—sending a strong societal message as to what is acceptable and unacceptable conduct.³⁶⁶ Laws can regulate and restrict surveillance and other data practices,

Surveillance Violates the First and Fourth Amendments, 2019 U. ILL. L. REV. ONLINE 1 (discussing government surveillance of American Muslims).

362. See Penney, *Transatlantic Privacy*, *supra* note 6, at 132–35 (2019).

363. Lindsey Barrett, *Ban Facial Recognition Technologies for Children—And for Everyone Else*, 26 B.U. J. SCI. & TECH. L. 223 (2020); Bruce Schneier, Opinion, *We’re Banning Facial Recognition. We’re Missing the Point*, N.Y. TIMES (Jan. 10, 2020), <https://www.nytimes.com/2020/01/20/opinion/facial-recognition-ban-privacy.html> [<https://perma.cc/PJX4-EP6M>].

364. Paulina Perlin, *ACLU v. NSA: How Greater Transparency Can Reduce the Chilling Effects of Mass Surveillance*, YALE L. SCH.: MFIA BLOG (Dec. 6, 2017), <https://law.yale.edu/mfia/case-disclosed/aclu-v-nsa-how-greater-transparency-can-reduce-chilling-effects-mass-surveillance> [<https://perma.cc/XBD4-NSWD>].

365. Cohen, *Surveillance Versus Privacy*, *supra* note 14, at 456 (“Legal scholars have been inclined to consider surveillance simply as a collection of techniques that together constitute (potential) subjects of regulation.”).

366. Nadler, *supra* note 78, at 60.

but it can also impact social norms over time, leading to shifts in attitudes.³⁶⁷ This is due to the law's function. Expressive law theorists argue that the law can shape legal behavior by impacting social norms and changing the social meaning of behavior.³⁶⁸

Social norms are not universal behavioral norms or practices; they are often tied to specific social and cultural contexts, so social norms will vary across cultures.³⁶⁹ So, conformity to social norms will lead to different sorts of behavior—or chilling effects—depending on the broader social and cultural context. Furthermore, research shows social norms, including ones that people do not necessarily even believe or accept as proper or moral can nevertheless be difficult to change once entrenched, with some having influence across multiple generations, through inter-generational transmission and social learning.³⁷⁰ This entrenching process is fed by chilling effects, as conformity breeds silence or encourages speech, perspectives, and other behavioral norms, that may not reflect those of the broader democratic majority. But social norms can and do shift over time, due to different cultural influences.³⁷¹ In fact, among the most powerful sources for social norms change is the law,³⁷² as it reflects widely accepted social norms that influence people's law-related behavior over time. As such, it can be a "especially persuasive source" for the development of social norms.³⁷³ Law, via this expressive function, sends a powerful

367. *Id.* at 60.

368. Alex C. Geisinger & Michael A. Stein, *Expressive Law and the Americans with Disabilities Act*, 114 MICH. L. REV. 1061, 1061–62 (2016); Nadler, *supra* note 78, at 70–73; Richard H. McAdams, *An Attitudinal Theory of Expressive Law*, 79 OR. L. REV. 339, 339 (2000); Richard H. McAdams, *A Focal Point Theory of Expressive Law*, 86 VA. L. REV. 1649, 1650 (2000); Elizabeth S. Anderson & Richard H. Pildes, *Expressive Theories of Law: A General Restatement*, 148 U. PA. L. REV. 1503, 1504–05 (2000); Alex Geisinger, *A Belief Change Theory of Expressive Law*, 88 IOWA L. REV. 35, 37 (2002); Dhammika Dharmapala & Richard H. McAdams, *The Condorcet Jury Theorem and the Expressive Function of Law: A Theory of Informative Law*, 5 AM. L. & ECON. REV. 1, 1 (2003); Alex Geisinger & Ivan E. Bodensteiner, *An Expressive Jurisprudence of the Establishment Clause*, 112 PENN ST. L. REV. 77, 78 (2007); Alex Geisinger, *Reconceiving the Internal and Social Enforcement Effects of Expressive Regulation*, 58 WM. & MARY L. REV. ONLINE 1, 4–5 (2016).

369. KASSIN ET AL., *supra* note 219, at 269–70.

370. HEINZEN & GOODFRIEND, *supra* note 244, at 203–04; KASSIN ET AL., *supra* note 219, at 451–52.

371. KASSIN ET AL., *supra* note 219, at 269–70.

372. *Id.* at 199.

373. Kenworthy Bilz & Janice Nadler, *Law, Psychology, and Morality*, in 50 PSYCHOLOGY OF LEARNING AND MOTIVATION 101, 108 (2009); Paul H. Robinson & John M. Darley, *Intuitions of Justice: Implications for Criminal Law and Justice Policy*, 81 S. CAL. L. REV. 1 (2007).

message to society about what behavior will be approved and disapproved—leading to social sanction or praise—and would likewise impact behavior, especially in situational uncertainty.³⁷⁴ For example, Danielle Citron and I have elsewhere demonstrated how the expressive power of a cyber harassment law can have salutary effects on victims—essentially reducing the chilling effects of online abuse.³⁷⁵ In other words, law has a central and multidimensional role in addressing, reducing, and mitigating chilling effects. Beyond regulation and other more conventional legal applications, law also can play a key role in shifting social norms and helping break problematic generational patterns and cultural practices.

3. Chilling Effects and Surveillance Capitalism

Since social conformity theory holds that chilling effects *produce* social conformity and compliance, it also has implications for broader social, political, and economic shifts. Shoshana Zuboff, in her recent book, has argued that we live in an “age of surveillance capitalism,” where commercial interests claim human activity and experience as “free raw material for translation into behavioral data,” to analyze and process that data to “anticipate what you will do now, soon, and later.”³⁷⁶ Powerful social media companies like Facebook, Twitter, and Google now wield the capability to harvest vast amounts of data and use it to “shape our behavior at scale,”³⁷⁷ which undercuts autonomy and freedom.³⁷⁸ Echoing similar currents, in her recent book *Between Truth and Power: The Legal Constructions of Informational Capitalism*,³⁷⁹ Julie Cohen makes a powerful case that we are amid a transformative shift in political economy from an industrial capitalism paradigm to an informational one.³⁸⁰ A sweeping and comprehensive account, Cohen’s book also offers a clearer explication of how law has played a role in enabling, reflecting, and “constituting” this shift.³⁸¹

However, as Amy Kapczynski has noted, Zuboff mostly *declares*, but does not soundly defend, the proposition that mass behavioral influence and manipulation through surveillance and data analytics is

374. Geisinger & Stein, *supra* note 368, at 1062; Cass R. Sunstein, *On the Expressive Function of Law*, 144 U. PA. L. REV. 2021, 2022, 2035–36 (1996); Nadler, *supra* note 78, at 70–71.

375. Citron & Penney, *supra* note 6.

376. ZUBOFF, *supra* note 5, at 8.

377. *Id.* at 8.

378. Kapczynski, *supra* note 34, at 1472–74; ZUBOFF, *supra* note 5, at 11.

379. COHEN, *supra* note 30.

380. *Id.* at 6.

381. *Id.* at 8; Kapczynski, *supra* note 34, at 1480.

the core tenant of this new capitalism paradigm.³⁸² In fact, the evidence on whether behavioral advertising can impact and influence the way that Zuboff claims has yet to be established.³⁸³ Kapczynski is correct that dismissing Zuboff's warning would be "foolish" despite the lack of empirical support, but a fuller explanation is still lacking. It is puzzling that Zuboff cites *some* research on chilling effects—noting only aspects of social media chilling effects³⁸⁴—but draws no other connections, neglecting other important work relating to the chill of corporate surveillance and the kind of data-driven profiling she warns about.

Chilling effects theory can help fill in some of these gaps. The key is looking to what they produce. When people are chilled from speaking or from engaging in activities they would otherwise pursue, then there is more opportunity for their attention to be hijacked or their activities influenced and manipulated for informational or surveillance capitalist purposes. Moreover, since chilling effects on this theory are, at bottom, social conformance and compliance effects, then they also help explain how these new capitalist paradigms can be entrenched over time. Chilling effects involve following, and not challenging, social norms that would themselves be shaped and in some cases engineered by capitalist forces. In short, chilling effects help perpetuate and entrench this new capitalism paradigm. More conformity means more surveillance and informational capitalism, and vice versa. Interestingly, Zuboff even dismisses the relevance of conformity as it suggests a possibility of "escape," suggesting near the end of the book that there may be "no exit."³⁸⁵ But as noted earlier, this is not what social science tells us about social norms.³⁸⁶ They are not static, and they can be shaped, impacted, and changed, not just by dissenters, authority figures, or broader economic and cultural shifts, but by laws, and not just through regulation—which Zuboff does consider in a later chapter³⁸⁷—but also through their expressive effects.³⁸⁸ By not investigating social norms more in depth, Zuboff misses these possible exits. Meanwhile, Cohen's account offers a far more sophisticated analysis of the role of law in the shift to informational capitalism, but could do more to demonstrate how the law protects private power from democratic control, thus enabling the informational capitalism

382. Kapczynski, *supra* note 34, at 1472-74; ZUBOFF, *supra* note 5, at 11-12.

383. Kapczynski, *supra* note 34, at 1473-74.

384. Das & Kramer, *supra* note 39; Marder et al., *supra* note 39.

385. ZUBOFF, *supra* note 5, at 445-74.

386. KASSIN ET AL., *supra* note 219, at 269-70.

387. ZUBOFF, *supra* note 5, at 445-74.

388. See *supra* note 368 and accompanying text.

shift.³⁸⁹ One particular “legal move” Kapczynski suggests to supplement Cohen’s work, is a transformation of First Amendment doctrine that, as noted earlier, has been employed by corporations to de-regulatory ends—like having courts strike down or gut positive regulations.³⁹⁰ In the next Section, I offer an idea on this count.

B. THE CHILLING EFFECTS CURVE: EXPLANATORY / PREDICTIVE POWER

A theory of chilling effects as social conformity has far more explanatory power than any conventional theory of chilling effects, and is supported by a growing body of empirical work. Schauer’s theory of chilling effects as “fear of legal harm” was correct to highlight the role of uncertainty, but wrong about how and why people may be chilled.³⁹¹ Moreover, his theory offered no explanation for chilling effects beyond simply statutory and regulatory forms. Solove’s theory extended Schauer’s work so that it could better account for and explain privacy related chilling effects.³⁹² And, in fact, there was a lot that Solove had right about the impact of surveillance and its inhibiting effects.³⁹³ However, his theory also had limited explanatory power as it could not, among other things, explain chilling effects that did not involve any privacy harms.

By contrast, a social conformity theory of chilling not only can explain more conventional forms of chill due to laws or surveillance but also new emerging ones as well, such as social media and disinformation chilling effects. Additionally, the theory has *predictive* power. In the previous Section, I explained that the theory predicted that statutory or regulatory chilling effects would be uncommon and if present, likely weak for a variety of reasons. By contrast, the theory would predict that surveillance related chilling effects would be more powerful and conforming, as would forms of legal enforcement that were more personalized and direct. There is comparative empirical evidence to support these theoretical findings.³⁹⁴

Beyond the existing empirical evidence, supporting the varying forms of chilling effects in different contexts, my 2017 published and peer-reviewed study³⁹⁵ on comparative chilling effects, involving over

389. Kapczynski, *supra* note 34, at 1472–74.

390. *Id.* at 1510–12.

391. See Schauer, *supra* note 6 (stating the basis of chilling is the “fear of punishment”).

392. See *supra* note 6 and accompanying text.

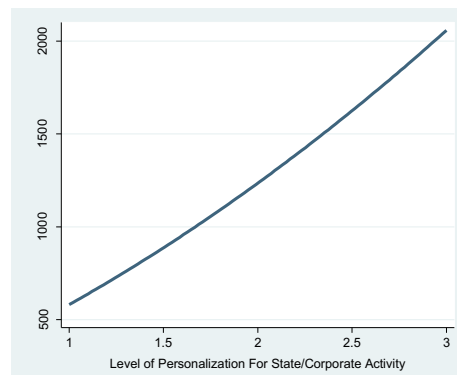
393. See *supra* note 6 and accompanying text.

394. Penney, *Chilling Effects Online*, *supra* note 6.

395. Penney, *supra* note 338 (finding evidence of government and corporate surveillance chilling effects on a range of online activities, including sharing, speech).

twelve thousand online participants, demonstrates these more *comparative* theoretical predictions. The scenario with the statute had the least chilling effects.³⁹⁶ This scenario involved a new statute targeting online speech but there was no information that participants were targeted with enforcement. Next, were scenarios involving government and corporate surveillance which produced substantial evidence of chilling effects. In these scenarios, participants were made aware that their online activities may be monitored either by the government or an internet company. So, there was *some* level of personalization. Finally, the most chilling was the scenario with personalized and personally received legal direct/threat. This, obviously, had the most personalization. Aggregating the data, I created what I call the chilling effects curve (**Figure 3**).

Figure 3: The Chilling Effects Curve³⁹⁷ Based on this theory of chilling effects as social conformity, the greater the level of personalization, the greater the chilling effect.



This “chilling effect curve,” and the relationship it represents, can be used to predict the magnitude of chilling effects in other contexts. Moving from corporate or governmental actions that are less general (statutory) to more personalized (surveillance, algorithmic profiling, micro-targeting, and targeted legal enforcement) increase the scope

396. *Id.*

397. This graph illustrates a simple regression analysis—created by plotting a quadratic line-of-best-fit for two variables, one that combines all participant responses indicating a chilling effect from three primary scenario in the study (a vague Internet statute, government surveillance, and a personal legal threat received online relating to online activity) and another based on the level of personalization for each scenario (for example, a general internet statute being the least personalized, while surveillance more personalized, and a personally received legal threat being the most personal).

and magnitude of chilling effects. While obviously there will be exceptions and nuances—and more work needs to be done to document it in other contexts—this relationship should hold in more general terms. As I will argue in the next Section, these comparative findings also have important implications for balancing competing forms of chilling effects.

C. NAVIGATING COMPETING / DIFFERING CHILLING EFFECT CLAIMS

Conventional theories of chilling effects offer no way to navigate cases of competing chilling effects. The example I discussed earlier would be a privacy statute enacted to reduce surveillance or mitigate surveillance chilling effects, but that might be challenged with a Volokhian argument that this statute would have an improper (and unconstitutional) chilling effect on speech. A theory of chilling effects as social conformity provides a means to navigate and better resolve such competing chilling effect concerns. The theory predicts—and existing empirical research supports—that privacy and surveillance related chilling effects would be greater than statutory chilling effects, including those on speech.³⁹⁸ Using the scope and magnitude of chilling effects as a metric, it would be possible to resolve the conflict in favor of the privacy statute. Of course, existing First Amendment doctrine does not yet contemplate such a balancing, but as doctrine on chilling effects evolves, it provides a compelling argument to defend privacy statutes against First Amendment claims. This can also provide a means to free the First Amendment doctrine from commercial interests using it to promote a deregulatory agenda and guarantee greater democratic control over private power in an age of surveillance capitalism.

These impacts also provide a foundation to discriminate between desirable and undesirable forms of chilling effects. This Article has approached chilling effects as involving *lawful* activities. But not all lawful activities are necessarily desirable, which raises the question—how to determine whether a chilling effect is desirable or not? Though a fully theorized normative framework for determining “good” and “bad” chill goes far beyond the scope of this Article, I will at least lay a thin foundation here. Helen Nissenbaum’s influential work on privacy as contextual integrity provides some helpful theoretical and normative guidance, as she also sets out an ambitious framework that relies heavily on social norms—around information practices—and seeks to not just determine when new practices have breached those norms,

398. Penney, *Chilling Effects Online*, *supra* note 6.

but when those new practices should be welcomed or resisted.³⁹⁹ What would such a framework look like? Nissenbaum sets out a “decision heuristic” with a series of “evaluative factors” and I will briefly do the same here.⁴⁰⁰ Also as with her framework, any determination of desirable and undesirable chilling effects will rely on prior work in privacy, expression, and other relevant areas of research,⁴⁰¹ as well as moral and political thought.⁴⁰²

However, a key difference with a theory of chilling effects as social conformity is that it has greater predictive and explanatory power when it comes to chilling effects. So, one key evaluative factor would be *impact*, which can be predicted and evaluated using existing empirical research on chilling effects, as well as my “chilling effects curve” (Figure 3) as a decision heuristic. Here, the greater the impact on the individual, and broader society, the less desirable the chilling effect.

Also, a theory of chilling effects as social conformity, by definition and understanding, also speaks to broader social concerns. It speaks to the influence of social norms on people’s behavior, and those social norms are steeped in broader social, cultural, political, and economic forces and currents. The true impact of chilling effects is *not only* that it chills or deters certain speech and activities, but, in doing so, helps foster the production of more conforming speech and activities, which will almost always be more consistent with, and conforming to, existing power structures in society.

Other evaluative factors would be the *nature* of the chilling effect. If, for instance, the source of the chilling effect has mass application—like mass surveillance—then it would be less desirable. More tailored, depending on the source, may be more desirable. Additionally, how the chilling effect relates to broader relations of power in society is also an important consideration. For instance, if a chilling effect impacts the voices or engagement of marginalized individuals or groups, this would be indicative of a less desirable chilling effect. There would also need to be evaluative factors for the *source* of the chilling effect itself. If the source of the chilling effect is a democratically enacted law, then it would be a more desirable chilling effect—due to its democratic legitimacy—than where a source is an unaccountable corporate actor or an authoritarian state. Both of these “sources” would color the chilling effect as less desirable. The point here has not been to set out a comprehensive decision heuristic, but to set out some markers as to

399. HELEN NISSENBAUM, *PRIVACY IN CONTEXT: TECHNOLOGY, POLICY, AND THE INTEGRITY OF SOCIAL LIFE* (2010).

400. *Id.* at 186–230.

401. *Id.* at 128.

402. *Id.* at 16–62.

how my theory of chilling effects, and its application, can provide stronger normative guidance. A more authoritative approach goes beyond the scope of this Article.

D. LEGAL AND CONSTITUTIONAL IMPLICATIONS

This new theory of chilling effects also has doctrinal implications, though a comprehensive discussion would take us beyond the scope of this Article. However, I will discuss a few such implications here. One implication is that there should be changes to how the law of standing deals with chilling effects. The different laws and legal doctrine that concern chilling effects or chilling effects related claims—often referred to as “chilling effects doctrine”—is deeply entangled with the doctrine of standing,⁴⁰³ which is based on Article III’s grant of jurisdiction to the federal judiciary to hear and decide “Cases” and “Controversies.”⁴⁰⁴ The standard is that a plaintiff must show an “injury-in-fact” that is both “concrete” and “particularized” as well as “actual or imminent, not conjectural or hypothetical.”⁴⁰⁵ And the injury must be “fairly traceable” to the conduct of the defendant, and not the result of action by an independent third party, and it must be “likely” and not “merely speculative.”⁴⁰⁶ If a litigant does not have standing, the federal courts will not hear them.

Courts have often employed standing rules to decline to hear chilling effects claims, particularly those based on privacy related chill.⁴⁰⁷ For example, in *Clapper*, the Supreme Court dismissed chilling effects due to government surveillance activities as merely “self-inflicted injuries” based on “subjective fear.”⁴⁰⁸ This aspect of constitutional doctrine must change. First, a growing body of related studies

403. Jennifer M. Kinsley, *Chill*, 48 LOY. U. CHI. L.J. 253, 257–58 (2016).

404. U.S. CONST. art. III, § 2, cl. 1; Danielle K. Citron & Daniel J. Solove, *Privacy Harms*, 102 B.U. L. REV. (forthcoming 2022) (manuscript at 6–7); Brian Calabrese, *Fear-Based Standing: Cognizing an Injury-in-Fact*, 68 WASH. & LEE L. REV. 1445, 1447 (2011); Matthew A. Wasserman, *First Amendment Limitations on Police Surveillance: The Case of the Muslim Surveillance Program*, 90 N.Y.U. L. REV. 1786, 1804 (2015); Margot E. Kaminski, *Standing After Snowden: Lessons on Privacy Harm from National Security Surveillance Litigation*, 66 DEPAUL L. REV. 413, 413 (2017); Margot E. Kaminski, *Privacy and the Right to Record*, 97 B.U. L. REV. 167, 236–37 (2017); cf. Courtney M. Cox, *Risky Standing: Deciding on Injury*, 8 N.E. U. L.J. 75, 87 (2016).

405. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560 (1992); *Friends of the Earth Inc. v. Laidlaw Env’t Servs. (TOC), Inc.*, 528 U.S. 167, 180–81 (2000).

406. *Lujan*, 504 U.S. at 560–61.

407. Jonathan R. Siegel, *Chilling Injuries as a Basis for Standing*, 98 YALE L.J. 905, 909–10 (1989); Penney, *Chilling Effects*, *supra* note 6, at 120–21 (describing skepticism of the U.S. Supreme Court in the *Laird* and *Clapper* decisions); Kaminski & Witnov, *supra* note 29, at 475–83.

408. *Clapper v. Amnesty Int’l*, 568 U.S. 398, 418 (2013).

has now substantiated chilling effects in a range of contexts, and it is now without question not something “too speculative.”⁴⁰⁹ Second, as is clear from this Article, chilling effects is an inherently social and an *external* behavioral effect, and not merely a “subjective fear” that is “self-inflicted.” It is a product of social norms and other external social behavioral influence that have great impact—both consciously and subconsciously—leading to powerful chilling and conforming effects. This happens when people are under the observation and gaze of passive onlookers, let alone powerful private sector companies and governmental actors. Indeed, laws, surveillance, and other public and private sector actions all create, shape, and magnify chilling effects. The law of standing should recognize these corrosive chilling effects for standing purposes.

Chilling effects doctrine should also change. For example, the doctrine should abandon its privileging of regulatory chilling effects claims over other forms. Though courts, as noted, have been deeply suspicious of chilling effects associated with privacy threats like surveillance or misappropriation of information, courts have by contrast regularly granted standing for regulatory chilling effect cases involving supposed vague or overly broad laws, statutes, or regulations, tend to treat such laws “with suspicion,” and frequently invalidate them as void-for-vagueness or overly broad.⁴¹⁰ There is even a special exception to normal standing rules for such regulatory chilling effect claims under the overbreadth doctrine, which allows a party to challenge a law based not on their own speech or injuries but on the hypothetical speech and activities of third parties not even before the court.⁴¹¹

But this privileging of regulatory chilling effects should end. Overbreadth doctrine, for example, should be expanded to allow for similar hypothetical chilling effects arguments based on privacy threats like surveillance or misappropriation of personal information. The rationale for the overbreadth doctrine is that the very *existence* of a statute would chill the speech of third parties not before the court, so they would never actually speak or act, just self-censor, and therefore never have an opportunity to challenge the statute on First Amendment grounds or otherwise.⁴¹² But, on a social conformity theory of chilling effects, that reasoning applies more appropriately to

409. See *supra* note 39 and accompanying text.

410. Kinsley, *supra* note 403, at 255; Margot E. Kaminski, *supra* note 404, at 425 (“The chilling effect is a classic, well-recognized First Amendment injury, which occurs when an individual self-censors in response to government action.”).

411. Kinsley, *supra* note 403, at 255.

412. *Broadrick v. Oklahoma*, 413 U.S. 601, 612 (1973) (“Litigants . . . are permitted to challenge a statute not because their own rights of free expression are violated, but

surveillance chilling effects, not regulatory. The very *existence* of observation, or a reasonable threat of government surveillance, has chilling and conforming effects. Those impacts occur even when the observed person is aware that the surveillance is artificial; just the awareness of being watched, and not even targeted, can lead to chill. By contrast, though legal uncertainty and ambiguities in a statute *can* lead people to chilling effects, there are also countervailing factors that would suggest such legal and regulatory chilling effects are far less common than other forms, and when they do occur, are weak.

First, as noted earlier in my critiques of deterrence theory, people are often not sufficiently aware of the legal or regulatory requirements that they would be regularly uncertain about the legality of their course of conduct.⁴¹³ They would simply act or speak, ignorant of any law applying to their conduct. Second, the studies by Feldman and Harel, in addition to finding that people rely on social norms to decide how to act when the law is uncertain, they also found that general, vague, and uncertain laws—those that Schauer’s conventional account associated with speech chill—open the door to self-interested motivations, where people or entities like corporations interpret the law or perceived legal obligations narrowly out of self-interest, to justify non-compliance.⁴¹⁴ Finally, they also found the greater the uncertainty or ambiguity in the law, the expressive power or effects of the law are undercut, which would similarly dictate against over-compliance and chilling effects.⁴¹⁵ But if the law is not clear, then any message about appropriate behavior may be frustrated. In short, even where a person is aware of a possibly relevant legal prohibition or requirement, but is uncertain about its application, there is good reason to believe non-compliance, rather than chilling effects, would be the behavioral outcome.

For these reasons, I would argue that though legal and regulatory chilling effects in response to a typical regulation or statute certainly happen, they are less common and weaker than other forms of chilling

because of a judicial prediction or assumption that the statute’s very existence may cause others not before the court to refrain from constitutionally protected speech or expression.”).

413. Nadler, *supra* note 78, at 62–63 (“Knowledge of the relevant legal rule is often weak, even among those who have reasons to know the rules.”); Robinson & Darley, *supra* note 78, at 175–78; Prentice, *supra* note 24, at 1666–67, 1667 n.6; *see also* Cardi et al., *supra* note 78, at 568–70 (discussing “the assertion that tort liability serves as a general deterrent”).

414. Feldman & Harel, *supra* note 290, at 81–84.

415. *Id.* at 81–84; Nadler, *supra* note 78, at 69–71; Citron & Penney, *supra* note 6, at 2321–23.

effects, like those associated with surveillance. In fact, in my own empirical legal study published in 2017,⁴¹⁶ this was precisely my finding—the scenario involving a statute that was enacted to regulate harassing speech online had the *least* chilling effect on speech, sharing, and other activities online, compared to other scenarios. In fact, the chill was negligible, as many participants reported a salutary effect in response to the statute. However, the point is not to say such chilling effects may not occur, just that there are important countervailing forces. Courts applying the overbreadth doctrine should acknowledge this and expand its scope for other chilling effect claims, rather than continuing to privilege regulatory chill when the empirical and theoretical evidence runs counter to that privilege. And as new more personal and personalized forms of law and enforcement drawing on machine learning and AI are deployed—like automated legal micro-directives or personalized law—the doctrine should likewise treat such law and legal enforcement more suspiciously, as these likely would have the greatest form of chilling effect.

CONCLUSION

Despite a growing body of related studies, lawyers, privacy theorists, and social scientists have long been skeptical whether such socially conforming chilling effects actually exist and, if they do, whether they are passing, trivial, or ephemeral. And there remains a clear dearth in systematic theoretical and empirical work on point. This Article has attempted to fill that void, synthesizing theoretical and empirical insights from law, privacy, and a range of social science fields toward a clear and unified account of chilling effects. Conventional theories of chilling effects are narrow, empirically weak, cannot explain chilling effects in a range of different contexts, and neglect insights from a range of social science fields about how chilling effects shape behavior. I have argued that chilling effects are best understood as an act that conforms to, or is in compliance with, social norms in that context. They arise out of contexts of ambiguity and uncertainty—like the ambiguity of public or private sector surveillance—but have deeper psychological foundations—such that mere observation is enough to create chilling effects. This theory has many benefits, including greater explanatory and predictive power, clarifying what chilling effects actually produce, and providing a foundation for navigating competing and differing chilling effects.

416. Penney, *Chilling Effects Online*, *supra* note 6.