

#FREESPEECH

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[T]he first amendment is not only protective of but exercised by human beings who are subject to all the vagaries of human nature and their emotions, motivations, limitations, integrity, insight and intelligence.¹

“It’s true, I read it on the Internet!” – five people in a one-mile radius while you read this sentence.²

I. INTRODUCTION—#INTRO #WHERE TO START

For better³ and sometimes—quite obviously—for worse,⁴ an enormous amount of expression now takes place online. The Internet has been described

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1. Jensen v. Times-Mirror, 647 F. Supp. 1525, 1526 (D. Conn. 1986).

2. Betsy Sparrow & Ljubica Chatman, *Social Cognition in the Internet Age: Same as It Ever Was?*, 24 PSYCHOL. INQUIRY 273, 273 (2013).

3. See, e.g., HUMANS OF N.Y., www.HumansofNewYork.com (last visited Jan. 14, 2017); see also Samuel D. Gosling & Winter Mason, *Internet Research in Psychology*, 66 ANN. REV. PSYCHOL. 877, 883 (2015) (noting the positive effect of “the opportunity to use [the Internet] as a public square or as a coordinating mechanism for social change” and providing the example of the Egyptian revolution of 2011).

4. See Gosling & Mason, *supra* note 3, at 880–83 (discussing possible negative effects of the Internet that have been studied, including addiction, cyberbullying, and the rapid and extensive spread of unfounded rumors); Brian Leiter, *Cleaning Cyber-Cesspools: Google and Free Speech*, in THE OFFENSIVE INTERNET: SPEECH, PRIVACY, AND REPUTATION (Saul Levmore & Martha C. Nussbaum eds., 2010). For just one of the innumerable examples of reprehensible speech that happens online (and that most people, including many researchers, believe would not happen in face-to-face interactions or via more traditional media), Sparrow and Chatman provide this account from a few years ago:

[a]t the beginning of the pregnancy of the Duchess of Cambridge, she was admitted to a hospital for severe morning sickness. A radio program in Australia called up the hospital pretending (apparently very badly) to be the Queen looking for information on her daughter-in-law. The nurse who put the call through, and who was then mercilessly mocked for incredible stupidity almost everywhere you looked online, committed suicide a few days later. And

as “a vast informational and social web that connects approximately 3 billion people around the globe, or 40% of the world’s population.”⁵ The magnitude of this recent change in the pace, content, culture, reach, and scope of communication is unprecedented in human history. As described (fittingly) in Wikipedia’s “History of the Internet” entry, “[t]he Internet’s takeover of the global communication landscape was almost instant in historical terms: it only communicated 1% of the information flowing through two-way telecommunications networks in the year 1993, already 51% by 2000, and more than 97% of the telecommunicated information by 2007.”⁶ Facebook was created in 2004;⁷ it currently has 1.7 billion monthly active users.⁸ This sea change “has transformed society and changed the way people think about and interact with the world and with each other.”⁹

It has become commonplace to note that courts often struggle with the challenge of applying analog legal concepts to digital spaces,¹⁰ and nowhere is this truer than in the context of the First Amendment. Doctrinal categories

she *then* was vilified in the comments sections of news articles detailing her suicide.

Sparrow & Chatman, *supra* note 2, at 284.

5. See Gosling & Mason, *supra* note 3, at 878.

6. *History of the Internet*, WIKIPEDIA, https://en.wikipedia.org/wiki/History_of_the_Internet#cite_note-HilbertLopez2011-7 (last updated Oct. 5, 2016) (citing Martin Hilbert & Priscila López, *The World’s Technological Capacity to Store, Communicate, and Compute Information*, 332 SCI. 60, 62 (2011)).

7. Nicolas Carlson, *At Last—The Full Story of How Facebook Was Founded*, BUS. INSIDER (Mar. 5, 2010), <http://www.businessinsider.com/how-facebook-was-founded-2010-3>.

8. *Number of Monthly Active Facebook Users Worldwide as of 2nd Quarter 2016 (in Millions)*, STATISTA, <http://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/> (last visited Jan. 14, 2017); see also Justin Kerby, *Here’s How Many People Are on Facebook Instagram, Twitter and Other Big Social Networks*, ADWEEK (Apr. 4, 2016, 3:40 PM), <http://www.adweek.com/socialtimes/heres-how-many-people-are-on-facebook-instagram-twitter-other-big-social-networks/637205>.

9. Gosling & Mason, *supra* note 3, at 880 (further noting that these changes have “both positive and negative effects”).

10. See, e.g., M. Margaret McKeown, *The Internet and the Constitution: A Selective Retrospective*, 9 WASH. J. L. TECH. & ARTS 135, 138 (2014) (“In talking with lawyers and scholars, the first reaction is the story of a system overwhelmed . . . by whole areas of doctrine, like the First Amendment, that are an uncomfortable fit with the Internet . . .”).

like fighting words,¹¹ incitement,¹² and true threats,¹³ which took shape in a pre-Internet world, often seem ill-suited when transposed into the e-marketplace of ideas. There is a growing body of legal scholarship focused on issues at the intersection of the Internet and the First Amendment.¹⁴ In this Essay,¹⁵ we focus on one very specific aspect of the Internet and social media revolution—the impact on human behavior of this distinct medium of communication. We propose to examine whether, and how, the fact that communication takes place in an online context can be expected to affect the behavior either of the speakers or the audience in ways that might be relevant to First Amendment theory and doctrine.¹⁶

As a general matter, many legal doctrines are based—whether explicitly or implicitly—on assumptions about human nature, behavior, and psychology. A primary function of law is to channel behavior in prosocial

11. See *Chaplinsky v. New Hampshire*, 315 U.S. 568, 571–72 (1942) (“There are certain well-defined and narrowly limited classes of speech, the prevention and punishment of which has never been thought to raise any Constitutional problem. These include . . . the insulting or ‘fighting’ words—those which by their very utterance inflict injury or tend to incite an immediate breach of the peace.”) (footnotes omitted).

12. See *Brandenburg v. Ohio*, 395 U.S. 444, 447 (1969) (“[T]he constitutional guarantees of free speech and free press do not permit a State to forbid or proscribe advocacy of the use of force or of law violation except where such advocacy is directed to inciting or producing imminent lawless action and is likely to incite or produce such action.”) (footnote omitted).

13. See *Virginia v. Black*, 538 U.S. 343, 344 (2003) (“[T]he First Amendment permits a State to ban ‘true threats,’ . . . which encompass those statements where the speaker means to communicate a serious expression of an intent to commit an act of unlawful violence to a particular individual or group of individuals . . .”) (citation omitted).

14. See, e.g., Leiter, *supra* note 4; Lyriisa Barnett Lidsky, *Incendiary Speech and Social Media*, 44 TEX. TECH L. REV. 147 (2011); Caleb Mason, *Framing Context, Anonymous Internet Speech, and Intent: New Uncertainty About the Constitutional Test for True Threats*, 41 SW. L. REV. 43 (2011); Dawn C. Nunziato, *The Death of the Public Forum in Cyberspace*, 20 BERKELEY TECH. L.J. 115 (2005); Jason M. Shepard & Genelle Belmas, *Anonymity, Disclosure and First Amendment Balancing in the Internet Era: Developments in Libel, Copyright, and Election Speech*, 15 YALE J.L. & TECH. 92 (2012).

15. This Essay represents the first step in a larger interdisciplinary project that seeks to explore the First Amendment issues raised by online communication.

16. This inquiry is distinct from the related one of how certain features of the Internet as a medium might affect the First Amendment calculus. For example, where the size of the audience is relevant to a particular free speech analysis—such as the likelihood of imminent lawless action under the *Brandenburg* test—the fact that the speech occurs online becomes significant because the potential audience for online speech is enormous. See *Brandenburg v. Ohio*, 395 U.S. 444, 447 (1969). But that aspect of the Internet’s impact on the legal analysis is not dependent on any effect that the online context per se has on human behavior. Note, however, that audience size might also influence speaker or audience psychology, such that the same person delivering (or receiving) the identical speech might behave differently based on whether the audience is (perceived as) small or large.

directions and to prevent or punish antisocial behavior; thus it makes sense that law would be grounded in some understanding of how and why people behave as they do. The more robust and complete the law's model of human behavior, the more effectively it can accomplish its goals.¹⁷ First Amendment law is no exception: it is replete with assumptions about how people are likely to think, make decisions, and behave.¹⁸ For First Amendment law to most effectively serve the values of freedom of speech,¹⁹ it must rest on a valid set of assumptions about human psychology and behavior.²⁰

Since the birth and exponential growth of the Internet over the past two decades, a rapidly growing theoretical and experimental literature has sprung up and begun to study the effects of the online environment.²¹ With the emergence of the field of cyberpsychology²² over the past decade, as well as

17. See Julie A. Seaman, *Form and (Dys)Function in Sexual Harassment Law: Biology, Culture, and the Spandrels of Title VII*, 37 ARIZ. ST. L.J. 321, 329 (2005).

18. As the Fifth Circuit put it in a case involving government employee speech, "the Constitution has not repealed human nature." *McBee v. Jim Hogg Cty.*, 730 F.2d 1009, 1017 (5th Cir. 1984). Concerns about chilling valid First Amendment claims, assumptions about how and why people choose to believe one thing or another, and musings about how people are likely to react to speech they believe is false or dangerous are just a few examples that come readily to mind. *E.g.*, *Abrams v. United States*, 250 U.S. 616, 630 (1919) (Holmes, J., dissenting) ("If you have no doubt of your premises . . . and want a certain result with all your heart you naturally express your wishes in law and sweep away all opposition."). This observation holds true for both consequentialist and deontological approaches to the First Amendment. For consequentialist approaches, measuring benefits and harms of speech (either categorically or at a more granular level) is impossible without some idea of psychology and behavior. Intrinsic rationales for speech protection, such as human autonomy and human flourishing, also rest heavily on assumptions about, for example, the basic human need for self-expression.

19. Broadly speaking, these are discovery of truth, democratic decision-making, and autonomy. See generally FREDERICK SCHAUER, *FREE SPEECH: A PHILOSOPHICAL ENQUIRY* 16–17 (1982).

20. See Julie A. Seaman, *Winning Arguments*, 41 LAW & PSYCHOL. REV. (forthcoming 2017). Recent critiques of the marketplace of ideas model of the First Amendment assert that its assumptions about people's behavior are incorrect. See, e.g., Derek E. Bambauer, *Shopping Badly: Cognitive Biases, Communications, and the Fallacy of the Marketplace of Ideas*, 77 U. COLO. L. REV. 649, 696–703 (2006).

21. For a recent overview, see Samuel D. Gosling & Winter Mason, *Internet Research in Psychology*, 66 ANN. REV. PSYCHOL. 877 (2015). As others have pointed out, earlier work in social psychology and other fields is foundational and should not be ignored. See Tom Postmes & Russell Spears, *Psychology and the Internet: Building an Integrative Social Cognitive Research Agenda*, 24 PSYCHOL. INQUIRY 326 (2013) (replying to target article Sparrow & Chatman, *supra* note 2).

22. See *What is Cyberpsychology?*, CYBERPSYCHOLOGY.ORG, <http://cyberpsychology.org/cyberpsychology/> (last visited Jan. 5, 2017) ("The new and exciting field of Cyberpsychology encompasses all psychological phenomena that are associated with or affected by emerging technology."); see also JOHN SULER, *PSYCHOLOGY OF THE DIGITAL AGE: HUMANS BECOME ELECTRIC* (2015).

several academic journals solely devoted to computer mediated communication (CMC),²³ the complex universe of the online social brain has begun to reveal itself. While much of this space is thus far only roughly mapped and much else is yet to be discovered, there are a number of preliminary findings that have implications for thinking about freedom of speech on the Internet. The nature and effects of disinhibition online,²⁴ the effect of online social communication on memory and belief about facts and events in the physical world,²⁵ the drivers of antisocial behaviors such as flaming, shaming, and trolling,²⁶ the proliferation of gender-based online aggression,²⁷ and the so-called “filter bubble” effect and its relation to social and political polarization²⁸ are all fertile ground for analysis and further research as they relate to First Amendment theory, doctrine, and values.

In this Essay, we hazard our first and very tentative steps into this varied and treacherous terrain at the crossroads of the First Amendment, social media,²⁹ and human behavior. We proceed from an interdisciplinary perspective, considering research in various subfields of psychology, anthropology, and political science. Our overall framework, however, draws on the evolutionary science of group dynamics and cooperation, which has much to say about how individuals behave within groups, how groups behave with respect to other groups, and the features that can make some groups successful, constructive, egalitarian, and prosocial while others are destructive, hierarchical, violent, and antisocial. In particular, we draw on the Nobel Prize-winning work of Elinor Ostrom regarding the eight fundamental

23. These include *Computers in Human Behavior*; *Cyberpsychology & Behavior*; *Cyberpsychology, Behavior, and Social Networking*; *Journal of Psychosocial Research in Cyberspace*; *Journal of Computer Mediated Communication*; *Computers in Human Behavior*; and *Cyberpsychology*.

24. See generally John Suler, *The Online Disinhibition Effect*, 7 *CYBERPSYCHOLOGY & BEHAV.* 321 (2004).

25. See generally Sparrow & Chatman, *supra* note 2.

26. See Erin E. Buckels et al., *Trolls Just Want to Have Fun*, 67 *PERSONALITY & INDIVIDUAL DIFFERENCES* 97 (2014); Chris Chambers, *Psychology's Answer to Trolling and Online Abuse*, *GUARDIAN* (Aug. 12, 2013, 11:47 BST), <https://www.theguardian.com/science/headquarters/2013/aug/12/psychology-trolling-online-abuse>.

27. See Danielle Keats Citron, *Law's Expressive Value in Combatting Cyber Gender Harassment*, 108 *MICH. L. REV.* 373 (2009); Michael M. Kasumovic & Jeffrey H. Kuznekoff, *Insights into Sexism: Male Status and Performance Moderates Female-Directed Hostile and Amicable Behavior*, *PLOS* (July 15, 2015), <http://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0131613&type=printable>.

28. See Gosling & Mason, *supra* note 3, at 882–83.

29. We view most online activity as, more or less, participation in “social media” to the extent that most of what individuals do and say online is influenced by its relation to other people.

design principles that underlie successful group management of common resources and the extension of that work to other types of groups trying to accomplish other goals.³⁰ We then explore the implications of these ideas as they relate to groups³¹ that operate in cyberspace.

Following this Introduction, Part II takes a brief foray into the legal landscape, surveying the treatment by courts and commentators of the Internet and its impact on issues involving freedom of speech. Part III then enters the psychological and behavioral thicket, attempting to see the forest for the trees and offer a birds-eye view while suggesting some organizing principles drawn from an evolutionary understanding of group behavior. In concluding remarks, we suggest what we view as some promising areas for future exploration.

II. INTERNET SPEECH IN COURT—#INTERNETEXCEPTIONALISM #THEMEDIUMISTHEMESSAGE #ONTHEINTERNETNOBODYKNOWSYOU'READOG

The conceit of the Supreme Court's free speech jurisprudence is that, as a general matter, First Amendment protection does not depend on the particular medium of the expression's transmission.³² In an oft-quoted passage

30. See ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION 90–102 (1990) [hereinafter OSTROM, GOVERNING THE COMMONS]; Elinor Ostrom, *Beyond Markets and States: Polycentric Governance of Complex Economic Systems*, 100 AM. ECON. REV. 641 (2010) [hereinafter Ostrom, *Beyond Markets*] (revised version of the Nobel Prize lecture). Ostrom, a political scientist by training, was awarded the Nobel Prize in Economics for this work. She subsequently collaborated with one of us—David Sloan Wilson—to take an explicitly evolutionary approach and generalize her theory to apply to a wider range of groups than the common pool resource groups Ostrom originally examined. See David Sloan Wilson, Elinor Ostrom & Michael E. Cox, *Generalizing the Core Design Principles for the Efficacy of Groups*, 90S J. ECON. BEHAV. & ORG. S21 (2013).

31. Our definition of a group, for purposes of analysis with respect to the eight core design principles elaborated *infra* Part III is “the set of individuals influenced by the expression of a trait.” Thus, when we speak of online speech and social media groups, we mean to encompass formal as well as informal groups, including individuals who consider themselves members of somewhat amorphous groups. We also include larger, umbrella groups such as Facebook and Twitter (which, obviously, each contain multitudes of smaller sub-groups).

32. Here, it is necessary to drop the requisite footnote about the Supreme Court's peculiar treatment of the broadcast media and its acceptance of a much greater degree of government regulation of speech delivered over the “public airwaves.” See *FCC v. Pacifica Found.*, 438 U.S. 726 (1978); *Red Lion Broad. Co. v. FCC*, 395 U.S. 367, 386 (1969) (“Although broadcasting is clearly a medium affected by a First Amendment interest, differences in the characteristics of new media justify differences in the First Amendment standards applied to them.”). The Court has repeatedly emphasized that the lesser free speech protection afforded such speech is based on the

concerning whether state censorship of “motion pictures” was subject to the constraints of the First Amendment, the Court explained that “the basic principles of freedom of speech and the press, like the First Amendment’s command, do not vary.”³³ The Court explicitly rejected the notion that the new medium’s “greater capacity for evil, particularly among the youth of a community, than other modes of expression” should allow censorship beyond the boundaries of the First Amendment. In perhaps the most expansive articulation of this idea, and one especially fitting in light of the character of the Internet, Justice Black insisted that “all present instruments of communication, as well as others that inventive genius may bring into being, shall be free from governmental censorship or prohibition.”³⁴

Yet at the same time, the Court has often suggested that the context surrounding particular speech—including features of the medium over which it is delivered—may be relevant to application of its broader First Amendment categories and doctrines to individual cases.³⁵ Indeed, in the same passage in which it held that their alleged “greater capacity for evil” did not disqualify motion pictures from the protection of the First Amendment, the Court also allowed that “[i]f there be capacity for evil it may be relevant in determining the permissible scope” of regulation,³⁶ and that each “method [of communication of ideas] tends to present its own peculiar problems” and thus is not necessarily subject to the precise rules governing any other particular method of expression.³⁷ In a recent case that involved threatening

distinctive history and technology of the medium and has made clear that it will not extend those rationales beyond the confines of broadcast television and radio. At the same time, the Court has yet to revisit its decisions in that area, despite changes that make it obvious that all of the reasons (save history) no longer support treating broadcast media differently. *See generally* Radio-Television News Dir. Ass’n v. FCC, 184 F.3d 872 (D.C. Cir. 1999).

33. *Joseph Burstyn, Inc. v. Wilson*, 343 U.S. 495, 503 (1952).

34. *Kovacs v. Cooper*, 336 U.S. 77, 102 (Black, J., dissenting). Of course, Justice Black was considered a free speech absolutist—“no law . . . mean[s] means no law”—so it is not surprising that he would take this position. *Smith v. California*, 361 U.S. 147, 157 (1959) (Black, J., concurring); *see also* *N.Y. Times v. United States*, 403 U.S. 713, 714–20 (1971) (Black, J., concurring).

35. Many free speech tests include contextual factors: government employee speech; whether speech is on a matter of public concern in defamation and intentional infliction of emotional distress cases; and others. *See, e.g.*, *Beyer v. Borough*, 428 Fed. App’x 149, 154 (3d Cir. 2011) (fact that government employee speech was communicated via the Internet was a factor that weighed in favor of finding that the speech was on a matter of public concern); *Hadley v. Doe*, 12 N.E.3d 75, 88 (Ill. App. Ct. 2014) (the fact that statement was made on Internet message board weighs in favor of finding that a reasonable reader would not take it as a factual assertion).

36. *Joseph Burstyn, Inc.*, 343 U.S. at 502.

37. *Id.* at 503.

speech presented in the form of rap lyrics and posted by a woman's ex-husband on Facebook, Justice Alito wrote separately to note:

[C]ontext matters. "Taken in context," lyrics in songs that are performed for an audience or sold in recorded form are unlikely to be interpreted as a real threat to a real person. . . . Statements on social media that are pointedly directed at their victims, by contrast, are much more likely to be taken seriously.³⁸

Thus, it is apparent that the context—there, in the form of the medium of communication—can matter, and that courts are attuned to the distinctive settings of particular speech (whether geographic, institutional, or virtual).³⁹

A few of the relative smattering of Supreme Court opinions that specifically involve the Internet⁴⁰ discuss—to a greater or, often, lesser

38. *Elonis v. United States*, 135 S. Ct. 2001, 2016 (2015) (Alito, J., concurring in part and dissenting in part) (citation omitted). In *Elonis*, the Court declined to address the question whether *Elonis*'s troubling and aggressive social media posts qualified as "true threats"—and therefore as unprotected speech—under the First Amendment. *Id.* at 2014. The Court instead decided the case on statutory grounds, holding that the federal criminal law under which *Elonis* was convicted requires a showing of "subjective intent to threaten." *Id.* at 2012, 2017.

39. As Mark Tushnet recently noted, whether the distinctive features of a new medium are addressed through special rules or by way of their effect on the application of an existing test, the result is frequently the same. See Mark Tushnet, *Internet Exceptionalism: An Overview from General Constitutional Law*, 56 WM. & MARY L. REV. 1637, 1641 (2015) ("[T]he alternative forms of regulation—categorical rules or balancing tests—can be indistinguishable in practice [W]ell-performed balancing will take precisely those same characteristics into account and give them appropriate weights in generating outcomes."). Thus, Tushnet suggests that exceptionalism versus "standard doctrine with tweaks" may not be the right question, but rather that approach in any case should depend on the "specific regulation of [a] specific problem." *Id.* at 1672; see also Frank H. Easterbrook, *Cyberspace and the Law of the Horse*, 1996 U. CHI. LEGAL F. 207, 215.

40. Judge Margaret McKeown, a federal judge with substantial expertise in this area, reports that from 1996 to 2012, of nearly 1,400 opinions issued by the United States Supreme Court, "seventeen mention the Internet substantively, and only seven were actually about the Internet." McKeown, *supra* note 10, at 152. She observes that "[f]or a technology that has been so pervasive in our lives, this tiny handful of cases is remarkable." *Id.* In the four years since, the Supreme Court has mentioned the Internet substantively in six cases. See generally *Dietz v. Bouldin*, 136 S. Ct. 1885 (2016) (smartphone technology and jurors); *Direct Mktg. Ass'n v. Brohl*, 135 S. Ct. 1124 (2015) (e-commerce); *Williams-Yulee v. Fla. Bar*, 135 S. Ct. 1656 (2015) (Internet access to political contribution data); *McCutcheon v. FEC*, 134 S. Ct. 1434 (2014) (Internet access to political contribution data); *Am. Broad. Co. v. Aereo, Inc.*, 134 S. Ct. 2498 (2014) (cloud-based television streaming subscription services); *Riley v. California*, 134 S. Ct. 2473 (2014) (cell phone technology and cloud-based storage of personal materials). One was actually "about" the Internet, in the sense of specifically considering the copyright law implications of an internet-based technology. See *Am. Broad. Co.*, 134 S. Ct. at 2510–11 (holding that a cloud-based television streaming service "publicly perform[ed]" copyrighted material under the terms of the Copyright Act, by analogizing that service to CATV).

degree—the medium’s distinctive qualities.⁴¹ Ironically, the Court’s first and most extended consideration of the special context of speech on the Internet was largely devoted to explaining why the Internet is unlike the traditional broadcast media, to which the Court applies lesser First Amendment scrutiny, and therefore that speech online would enjoy full First Amendment protection. In *Reno v. ACLU*,⁴² the majority rejected the government’s argument that its broadcast media precedents should apply because the federal statute at issue, like the FCC’s regulations of radio and television, was aimed at protecting children from sexually explicit speech.⁴³ The Court stated that “[e]ach medium of expression . . . may present its own problems,” and that the “special justifications for regulation of . . . broadcast media . . . are not applicable to other speakers.”⁴⁴ Online communication was entitled to full First Amendment protection for several reasons, including the Internet’s history of openness and lack of regulation,⁴⁵ and the fact that “the Internet can hardly be considered a ‘scarce’ expressive commodity,” unlike the broadcast spectrum in its early years.⁴⁶ Rather, in this “dynamic, multifaceted” medium, “any person with a phone line can become a town crier with a voice that resonates farther than it could from any soapbox.”⁴⁷ The Court noted that the “growth of the Internet has been and continues to be phenomenal.”⁴⁸

Justice O’Connor, writing separately, agreed that “[t]he electronic world is fundamentally different” from the physical world of geographic spaces and face-to-face communication.⁴⁹ She elaborated on the specific ways in which the Internet context is distinctive, as relevant to the First Amendment

41. On the other hand, some cases that squarely involve the Internet scarcely discuss it—in the sense of acknowledging its relevance to the case—at all. *See generally* *Elonis*, 135 S. Ct. at 2008–13 (where the majority opinion’s reasoning essentially ignored the Internet context); *United States v. Am. Library Ass’n*, 539 U.S. 194, 213–14 (2002) (upholding funding condition that required Internet filtering by public libraries and largely ignoring relevant differences between Internet and traditional library collections).

42. *Reno v. ACLU*, 521 U.S. 844 (1997).

43. *Id.* at 868–70. The case involved a First Amendment challenge to the Communications Decency Act of 1996, which attempted to regulate the transmission of “obscene or indecent” material to minors via the Internet. *Id.* at 858–65.

44. *Id.* at 868 (citations omitted).

45. *See id.* at 868–69 (“Neither before nor after enactment of the CDA have the vast democratic forums of the Internet been subject to the type of government supervision and regulation that has attended the broadcast industry.”).

46. *Id.* at 870.

47. *Id.*

48. *Id.* at 885.

49. *Id.* at 889 (O’Connor, J., concurring in in part and dissenting in part).

challenge to the statute.⁵⁰ For one thing, Justice O'Connor noted the relative anonymity that often prevails online, especially when sexually themed material is involved: "cyberspace allows speakers and listeners to mask their identities. . . . Since users can transmit and receive messages on the Internet without revealing anything about their identities or ages,"⁵¹ under a First Amendment calculus it is much more burdensome in cyberspace than in real space to hold senders responsible for transmitting indecent material to children.⁵²

In other instances, the Justices might give a nod to contemporary technological and social realities, though they are not dispositive in the given case. Recently, for example, in a decision that permitted trial judges discretion to recall a jury after it had already been briefly discharged, the majority allowed that, in addition to other relevant factors, "courts should also ask to what extent just-dismissed jurors accessed their smartphones or the internet, which provide other avenues for potential prejudice."⁵³ Seeming to take pains to demonstrate its connection to the real world,⁵⁴ the Court noted that "[i]t is a now-ingrained instinct to check our phones whenever possible. Immediately after discharge, a juror could text something about the case to a spouse, research an aspect of the evidence on Google, or read reactions to a verdict on Twitter. Prejudice can come through a whisper or a byte."⁵⁵

Justice Kennedy seems particularly attuned to the ways in which the rise of the Internet might impact the Court's analysis, even in cases not directly "about" the Internet. Last term, in a case involving collection of out-of-state sales tax under the Commerce Clause, Justice Kennedy wrote separately to highlight the doctrinal questions raised by recent technological developments:

The Internet has caused far-reaching systemic and structural changes in the economy, and, indeed, in many other societal dimensions. Although online businesses may not have a physical presence in some States, the Web has, in many ways, brought the average American closer to most major retailers. A connection to a shopper's favorite store is a click away—regardless of how close or far the nearest storefront. . . . Today buyers have almost instant

50. *Id.* at 889–91.

51. *Id.* at 889–90.

52. *Id.* at 894.

53. *Dietz v. Bouldin*, 136 S. Ct. 1885, 1895 (2016).

54. "And of course, there is the old joke about how we judges are too old to possibly understand the '[i]nterwebs.'" McKeown, *supra* note 10, at 138.

55. *Dietz*, 136 S. Ct. at 1895.

access to most retailers via cell phones, tablets, and laptops. As a result, a business may be present in a State in a meaningful way without that presence being physical in the traditional sense of the term.⁵⁶

In another 2015 opinion, in dissent from the majority's decision upholding a state rule that prohibited judicial candidates from personally soliciting campaign contributions, Justice Kennedy again pointed out the potential relevance of the Internet, noting that "[t]he Internet . . . has increased in a dramatic way the rapidity and pervasiveness with which ideas may spread," and that it "can reveal almost at once how a candidate sought funds; who the donors were; and what amounts they gave," thus arguably permitting "more speech" to advance an informed political debate.⁵⁷

In sum, while the Supreme Court has certainly signaled its recognition that the Internet is a significant social and technological phenomenon, it has yet to treat Internet speech differently than it would treat the same expression over more traditional media. Furthermore, it has offered precious few clues about whether, and if so how, the Internet's distinctive qualities might be relevant to First Amendment doctrine generally or to its application in specific cases. The bulk of the Supreme Court's discussion of Internet speech has resulted from cases that involve attempts to protect children from sexually explicit materials.⁵⁸

Lower courts, lacking the same freedom to avoid these issues, have gone a bit further in charting the topography of the Internet landscape through a First Amendment lens. Because the Supreme Court has indicated that the usual rules apply,⁵⁹ broadly speaking, to Internet speech just as they would to

56. *Direct Marketing Ass'n v. Brohl*, 135 S. Ct. 1124, 1135 (2015) (Kennedy, J., concurring).

57. *Williams-Yulee v. Fla. Bar*, 135 S. Ct. 1656, 1684 (2015) (Kennedy, J., dissenting).

58. *See Ashcroft v. ACLU*, 542 U.S. 656, 656 (2004) (challenge to Child Online Protection Act); *United States v. Am. Library Ass'n*, 539 U.S. 194, 194 (2003) (requirement of internet filtering software in libraries to prevent minors from accessing porn); *Reno v. ACLU*, 521 U.S. 844, 844 (1997) (challenge to sections of the Communications Decency Act aimed at protecting minors from exposure to sexually explicit speech); *see also* McKeown, *supra* note 10, at 151 (noting that despite the diverse possibilities, "the Supreme Court's landmark Internet free speech cases in the past two decades have centered on regulations seeking to protect children from exploitation and from viewing obscene and indecent material").

59. *See, e.g., Ashcroft v. ACLU*, 535 U.S. 564, 583 (2002) ("we do not believe that the medium's 'unique characteristics' justify adopting a different approach . . .") (section joined by only three justices); *Reno*, 521 U.S. at 868–70 (holding that the First Amendment applies fully to speech over the Internet); *see also Doe v. Shurtleff*, 628 F.3d 1217, 1222 (10th Cir. 2010) ("The Supreme Court has also made clear that First Amendment protections for speech extend fully to communications made through the medium of the Internet."). It is not just the First Amendment

speech on a sidewalk, in a pamphlet, or in a newspaper, lower courts have predictably—and necessarily—analyzed online speech relative to existing free speech doctrines and categories.⁶⁰ In a recent case in which the Texas Supreme Court addressed a defamation plaintiff’s “argument that the Internet is a game-changer . . . because it ‘enables someone to defame his target to a vast audience in a matter of seconds,’” the court acknowledged that these features of the medium might be relevant to application of the governing First Amendment standard, but it declined the invitation to revisit the basic tenets of prior restraint doctrine in light of these differences.⁶¹

One issue that lower courts have repeatedly addressed is whether the particular culture of certain Internet forums should lead courts to find that statements made in those forums constitute opinion, or are otherwise not actionable under relevant free speech doctrine. Thus, for example, in *Hadley v. Doe*,⁶² the defendant argued that where a statement is made on an Internet message board, blog, chat room, or the like no reasonable reader could understand it as a serious factual assertion.⁶³ Instead, he argued, a statement in such a forum was akin to “an anonymous scrawl on the wall of a public restroom.”⁶⁴ The Court acknowledged that “case law across

categories, but also the relevant criminal statutes, that often require plaintiffs, prosecutors, and courts to fit objectionable Internet speech into pre-existing categories such as true threats or incitement. *See, e.g.*, *United States v. Havelock*, 664 F.3d 1284, 1284 (9th Cir. 2012); *United States v. Kosma*, 951 F.2d 549, 549 (3d Cir. 1991).

60. *See, e.g.*, Lyriisa Barnett Lidsky, *Incendiary Speech and Social Media*, 44 TEX. TECH. L. REV. 147, 163–64 (2011) (discussing two examples of “incendiary” online speech that confound the usual doctrinal strictures of the *Brandenburg* test for incitement and the requirements of the true threats category of unprotected speech).

61. *Kinney v. Barnes*, 443 S.W.3d 87, 100 (Tex. 2014).

62. *Hadley v. Doe*, 12 N.E.3d 75 (Ill. App. Ct. 2014), *aff’d*, 34 N.E.3d 549 (Ill. 2015). The full name of the appellant in the case caption is “Subscriber DOE, a/k/a Fuboy, Whose Legal Name Is Unknown.”

63. *Id.* at 87. The specific issue under consideration was whether a defamation plaintiff had alleged sufficient facts to permit the court to order that the John Doe defendant’s identity be revealed. To meet the substantive standard for defamation, the plaintiff was required to demonstrate that a reader of the allegedly defamatory statement—here, implying that the defendant was a pedophile—could reasonably take the allegation as an assertion of fact. The defendant argued that *Hustler Magazine, Inc. v. Falwell*, 485 U.S. 46, 57 (1988), supported his position because the Supreme Court there determined that no reasonable reader of the ad parody in that case would understand it as an assertion of fact about Rev. Falwell. Doe a/k/a Fuboy argued that statements on the Internet should be treated similarly. *See also* *Beyer v. Borough*, 428 F. App’x 149, 153 (3d Cir. 2011) (fact that public employee’s statement was posted pseudonymously on the Internet weighed in favor of finding that he was speaking as a citizen rather than a public employee, for purposes of his First Amendment retaliation claim).

64. *Hadley*, 12 N.E.3d at 87. This analogy brings to mind a quotation attributed to the late David Foster Wallace that the Internet is “the bathroom wall of the U.S. psyche.” D.T. Max, *In*

jurisdictions supports the proposition that the forum or medium of an Internet message board, chat room, or blog is a factor”⁶⁵ It insisted, however, that “there is no special factual-assertion test for statements posted on such casual Internet forums,” and rejected the defendant’s argument that his statement could not be reasonably construed as factual.⁶⁶ In *Ghanam v. Does*, in contrast, the Michigan Court of Appeals approved the reasoning of courts that have “concluded that Internet message boards and similar communication platforms are generally regarded as containing statements of pure opinion rather than statements or implications of actual, provable fact.”⁶⁷ As others have pointed out, the recognition that certain online neighborhoods tend to be areas pervaded by blatant disregard for honesty, civility, and respect—and thus that potential libelous, threatening, or inciting statements made in those places should be taken with less seriousness—would tend to be self-fulfilling and would drive the culture downward toward its lowest common denominator. If courts hold that the worst, most anti-social speech is beyond the reach of civil or criminal sanctions because, essentially, it is so awful that nobody could take it seriously, the predictable result would be that such speech would increase in volume (in both senses of the term). Those courts that have declined to give definitive weight to the “freewheeling” culture of certain Internet forums so as to excuse false or threatening speech seem to be reluctant to participate in this type of validation process.

This tension between the First Amendment value of “uninhibited, robust, and wide-open” conversation that will necessarily include “vehement, caustic” elements and the desire to rein in socially harmful speech was present well before the invention of the Internet.⁶⁸ Yet the Internet age has brought it into stark relief, perhaps most notably in the context of online

the D.F.W. Archives: An Unfinished Story About the Internet, NEW YORKER (Oct. 11, 2012), <http://www.newyorker.com/books/page-turner/in-the-d-f-w-archives-an-unfinished-story-about-the-internet>.

65. *Hadley*, 12 N.E.3d at 88.

66. *Id.* at 88, 92.

67. *Obsidian Fin. Group, LLC v. Cox*, 812 F. Supp. 2d 1220, 1223–24 (D. Or. 2011); *Doe v. Cahill*, 884 A.2d 451, 465 (Del. 2005); *Ghanam v. Does*, 845 N.W.2d 128, 144 (Mich. Ct. App. 2014) (citing *Summit Bank v. Rogers*, 142 Cal. Rptr. 3d 40, 59–62 (Ct. App. 2012)); *Sandals Resorts Int’l Ltd. v. Google, Inc.*, 925 N.Y.S.2d 407, 415–16 (App. Div. 2011). The court further reasoned that “the use of the ‘:P’ emoticon makes it patently clear that the commenter was making a joke.” *Ghanam*, 845 N.W.2d at 145.

68. See Cass R. Sunstein, *The Dark Side of New York Times v. Sullivan*, BLOOMBERG VIEW (Mar. 25, 2014), <https://www.bloomberg.com/view/articles/2014-03-25/the-dark-side-of-new-york-times-v-sullivan>.

anonymity.⁶⁹ The ability to speak anonymously or pseudonymously, to restrict or fictionalize one's revealed identity online, has been the subject of both adulation and dismay. The fact that "on the Internet, nobody knows you are a dog"⁷⁰ can be liberating, leveling, and democratizing; it can also be frightening, debasing, and dehumanizing.⁷¹ As a contextual factor, the fact that particular statements are made anonymously might be relevant to whether a court finds those statements to constitute unprotected threats or incitement.⁷²

A number of courts and legal scholars have grappled with the delicate balance between the need to protect anonymity under the First Amendment and the countervailing values served by disclosing speakers' identities in certain circumstances.⁷³ In a 2009 survey of the growing body of cases that attempt to strike this balance in "John Doe" defamation litigation, Professor Lidsky concludes that courts have become more sophisticated in their understanding and weighing of the complex array of reputational, privacy, democracy, and equality considerations raised by these cases.⁷⁴ While the current state of the law remains "disheartening," she suggests that courts may be doing the best they can, given the technological world in which they

69. For additional analysis of the nature and psychology of anonymity online, see Choon-Ling Sia et al., *Group Polarization and Computer-Mediated Communication: Effects of Communication Cues, Social Presence, and Anonymity*, 13(1) INFO. SYS. RES. 70 (2002).

70. One of the earliest and most prevalent Internet memes, the original source of this quotation was a *New Yorker* cartoon by Peter Steiner. See Glenn Fleishma, *Cartoon Captures Spirit of the Internet*, N.Y. TIMES (Dec. 14, 2000), <http://www.nytimes.com/2000/12/14/technology/cartoon-captures-spirit-of-the-internet.html>.

71. In one notorious example that tends to be particularly salient for law students, lawyers, and legal academics, a message board ostensibly devoted to discussion of law school admissions and other issues of professional interest to current and future law students devolved into a racist, misogynous "cesspool" where, among other reprehensible postings, two female law students were viciously attacked and threatened with sexual violence. See Leiter, *supra* note 4, at 157–61 (recounting the AutoAdmit controversy).

72. See Yuval Karniel, *Defamation on the Internet—A New Approach to Libel in Cyberspace*, 2 J. INT'L MEDIA & ENT. L. 215, 233 (2009).

73. See, e.g., Lyrissa Barnett Lidsky & Thomas F. Cotter, *Authorship, Audiences, and Anonymous Speech*, 82 NOTRE DAME L. REV. 1537, 1539 (2007); Robert D. Richards, *Sex, Lies, and the Internet: Balancing First Amendment Interests, Reputational Harm, and Privacy in the Age of Blogs and Social Networking Sites*, 8 FIRST AMEND. L. REV. 176, 201 (2009); Jason M. Shepard & Genelle Belmas, *Anonymity, Disclosure and First Amendment Balancing in the Internet Era: Developments in Libel, Copyright, and Election Speech*, 15 YALE J.L. & TECH. 92, 138 (2012–2013).

74. Lyrissa Barnett Lidsky, *Anonymity in Cyberspace: What Can We Learn from John Doe?*, 50 B.C. L. REV. 1373, 1390–91 (2009).

currently operate.⁷⁵ Because much of the cyberpsychology literature also focuses on anonymity, this is especially fertile ground for a First Amendment Internet jurisprudence informed by the science of human nature and psychology, as discussed in Part III below.

Finally,⁷⁶ the unprotected speech categories of incitement and true threats offer some notable examples of the apparent mismatch⁷⁷ between existing doctrine and the novel technological context of the Internet. The Internet hosts a range of genuinely alarming speech that seems to fall within the gap between these two unprotected categories—thus, in doctrinal terms, leaving it fully protected under the Free Speech Clause and regulable only where the government can satisfy the very demanding standard of strict scrutiny.⁷⁸ Consider the statements of Kenneth Wheeler, who posted several “status updates” on Facebook “urging his ‘religious followers’ to ‘kill cops, drown them in the blood of thier [sic] children, hunt them down and kill their entire bloodlines” and further told his “religious followers and religious operatives” that “if [his] dui charges [were] not dropped” they should “commit a massacre in the stepping stones preschool and day care, just walk in and kill everybody.”⁷⁹ Wheeler was prosecuted under a federal statute that criminalizes certain threats;⁸⁰ he argued that his statements could not properly be considered threats under the First Amendment because “exhortations to unspecified others to commit violence cannot amount to true threats.”⁸¹

The Tenth Circuit acknowledged that “[s]peech such as Mr. Wheeler’s may at first blush appear to be closer to incitement,”⁸² and that it would

75. See *id.* (“Though disheartening, the current state of the law may simply be a testament to the difficulty of balancing speech and reputation in the Internet age.”).

76. “Finally” only in the sense that this is the final point we will make here, though there are other areas that present interesting examples of the Internet-free speech intersection that could benefit from a cyberpsychology perspective and consideration of the core design principles discussed in Part III, *infra*. For example, restrictions on Internet access by convicted sex offenders raises questions about the First Amendment’s protection for information-gathering and the “right to listen.” See *United States v. Zinn*, 321 F.3d 1084, 1092 (11th Cir. 2003); Laura Tatelman, *Give Me Internet or Give Me Death: Analyzing the Constitutionality of Internet Restrictions as a Condition of Supervised Release for Child Pornography Offenders*, 20 CARDOZO J.L. & GENDER 431, 442–43 (2014). In addition, courts’ treatment of student speech that occurs online implicates the literature on “cyberbullying” as well as difficult questions about the meaning of “place” in virtual space. See Jocelyn Ho, *Bullied to Death: Cyberbullying and Student Online Speech Rights*, 64 FLA. L. REV. 789, 800–01 (2012). We hope to consider these and other issues in future work.

77. See *infra* notes 78–82 and accompanying text.

78. *E.g.*, *Pleasant Grove City v. Summum*, 555 U.S. 460, 469 (2009).

79. *United States v. Wheeler*, 776 F.3d 736, 738–39 (10th Cir. 2015).

80. *Id.* at 739–40.

81. *Id.* at 744.

82. *Id.* at 745.

probably fail the strict *Brandenburg* requirement of imminence.⁸³ The court also appeared to recognize that the speech did not look like a traditional threat, according to the conventional understanding of that term.⁸⁴ Nonetheless, the court found that the statements were “true threats” for purposes of the federal statute and the First Amendment, recognizing the fear that the targets would reasonably feel and the danger that the acts might be carried out by either the speaker or, perhaps, a member of his audience.⁸⁵

In contrast, a panel of the Ninth Circuit has held that a series of racially charged anonymous posts on an Internet message board to the effect that Barack Obama should be assassinated (and predicting that result should he be elected) did not satisfy the definition of “true threats” where the speaker “convey[ed] no explicit or implicit threat . . . that he himself will kill or injure Obama.”⁸⁶ The statements, though “alarming and dangerous,” were not prohibited by the applicable federal threats statute because that law “does not criminalize predictions or exhortations to others to injure or kill the President.”⁸⁷

It is plain that these and other courts recognize the distinct dangers posed by this type of inflammatory signal broadcast out into the ether where it can be picked up by the antennae of those (relatively few, one hopes) individuals receptive to acting upon it. As the *Bagdasarian* court said, “There are many unstable individuals in this nation to whom assault weapons and other firearms are readily available, some of whom might believe that they were doing the nation a service were they to follow Bagdasarian’s commandment [to ‘shoot the n[**]’].”⁸⁸ In response to the harms of such speech, many courts have interpreted the categories to encompass it, but the resulting case law is not a model of clarity or predictability. Because the behaviors that underlie aggressive, violent, and threatening speech are elucidated by the

83. To qualify as unprotected under the *Brandenburg* test, speech must be “directed to inciting or producing imminent lawless action” and must be “likely to incite or produce such action.” *Brandenburg v. Ohio*, 395 U.S. 444, 447 (1969) (emphasis added). Thus, the *Brandenburg* test is typically said to encompass the three elements of (1) intent; (2) imminence; and (3) likelihood.

84. The court thus agreed with the Second Circuit, which had similarly held that statements made over the Internet “[e]xhorting groups of followers to kill specific individuals,” though not a “traditional form[] of threats,” could amount to true threats under the First Amendment. See *Wheeler*, 776 F.3d at 745 (citing *United States v. Turner*, 720 F.3d 411 (2d Cir. 2013)).

85. *Id.*

86. *United States v. Bagdasarian*, 652 F.3d 1113, 1117, 1119 (9th Cir. 2011). For a critique of the court’s decision and an in-depth examination of the issues involved, see Caleb Mason, *Framing Context, Anonymous Internet Speech, and Intent: New Uncertainty About the Constitutional Test for True Threats*, 41 SW. L. REV. 43 (2011).

87. *Bagdasarian*, 652 F.3d at 1119–20.

88. *Id.* at 1115, 1120.

psychological and behavioral research, these cases represent yet another doctrinal puzzle that can be illuminated by a broader consideration of the behavioral literature.

III. THE CYBER- AND EVOLUTIONARY-PSYCHOLOGY OF GROUP BEHAVIOR—#SOCIALNORMS #BADBEHAVIOR #ANONYMOUS SPEECH

One way of approaching the varied findings of cyberpsychology research is to look at them through the lens of evolutionary theory, which has much to say about the features of groups that lead them to be either constructive or destructive. Multilevel Selection (MLS) theory specifies the social environment required for prosocial behaviors to outcompete antisocial behaviors; this dynamic applies to human cultural evolution in addition to genetic evolution.⁸⁹ The model predicts that if socially disruptive and self-serving behaviors are not suppressed, they will spread within a given group. In a nutshell, the idea is that groups are most successful (and, thus, able to accomplish their goals and outcompete other groups) when they are able to suppress self-serving behavior that harms the group and to encourage cooperative and altruistic behavior that serves the group. At the level of large-scale human social organization, law is certainly one very important method of doing this. Norms are another.⁹⁰ But the recognition of this function of law and social norms begs the question: which laws, and what norms, are best-suited to foster cooperative, prosocial, successful groups?⁹¹ Before turning to

89. See, e.g., David Sloan Wilson et al., *Multilevel Selection Theory and Major Evolutionary Transitions: Implications for Psychological Science*, 17 CURRENT DIRECTIONS PSYCHOL. SCI. 6, 6–7 (2008). MLS theory operates at the level of cells, organisms, groups of organisms, and groups of groups.

90. See Wilson, Ostrom & Cox, *supra* note 30, at S24 (discussing the factors that favor between-group selection over within-group selection, and noting that one “set of factors involves the evolution of rewards and punishments that alter the costs and benefits associated with a given social strategy.”). Both law and more informal social norms would fall within this category. There is a rich literature on law and social norms. See, e.g., Robert C. Ellickson, *Law and Economics Discovers Social Norms*, 27 J. LEGAL STUD. 537 (1998) (surveying the literature). In a recent lecture, Ellickson noted that one weakness of the law and norms literature is its lack of a theoretical model and consequent failure to address the genesis of particular social norms. An evolutionary account fills that hole. See Robert C. Ellickson, *When Civil Society Uses an Iron Fist: The Roles of Private Associations in Rulemaking and Adjudication*, 18 AM. L. & ECON. REV. 235 (2016); see also Katja Rost et al., *Digital Social Norm Enforcement: Online Firestorms in Social Media*, PLOS (June 17, 2016), <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0155923>.

91. Ellickson and others in the “New Chicago School” of law and economics, who followed his lead in delving into the issue of law and social norms, draw explicitly on rational choice theory

some of the specific findings in the emerging field of cyberpsychology, this Part sets out a framework, based on evolutionary principles, that we hope may provide a set of guideposts to help steer a clearer path through this rocky landscape.

As noted above, political scientist Elinor Ostrom was awarded the Nobel Prize in economics for her groundbreaking theoretical and empirical work elucidating the circumstances under which certain kinds of groups—those attempting the task of managing common pool resources—could be expected to succeed.⁹² Whereas classical economics predicts that public goods will be exploited by selfish individuals in a “tragedy of the commons,”⁹³ such that the only viable solutions are privatization or top-down regulation, Ostrom’s work demonstrated that many groups in fact are able to successfully manage common resources without having to resort to either of those mechanisms. Based on a database of diverse groups around the globe attempting to manage common pool resources of various types,⁹⁴ she ultimately identified a set of eight core design principles that were evident in groups that had been successful at stewarding common pool resources.⁹⁵ A more recent review of additional empirical data comprising ninety-one subsequent studies found further support for the significance of the eight core design principles.⁹⁶

and assume that particular social norms evolve because they are utility maximizing for the members of the group. *See, e.g.*, ROBERT C. ELLICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES 267 (1991).

92. OSTROM, GOVERNING THE COMMONS, *supra* note 30; Ostrom, *Beyond Markets*, *supra* note 29. Ostrom is the only woman to have been awarded the Nobel Prize in economics. *See Nobel Prize Awarded Women*, NOBELPRIZE.ORG, http://www.nobelprize.org/nobel_prizes/lists/women.html (last visited Jan. 15, 2017). The Society for Evolutionary Analysis in Law (SEAL) was honored to count her as a member and sometime attendee of their annual scholarship conferences. She was a Research Professor and founding Director of the Center for the Study of Institutional Diversity at Arizona State University. Her article with Wilson and Cox was one of her final works, published after her untimely death in 2012.

93. *See* Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243 (1968).

94. These included, for example, forests, fisheries, and irrigation systems. *See* Ostrom, *Beyond Markets*, *supra* note 30.

95. OSTROM, GOVERNING THE COMMONS, *supra* note 30; *see also* Ostrom, *Beyond Markets*, *supra* note 30.

96. *See* Michael Cox et al., *A Review of Design Principles for Community-based Natural Resources*, 15 ECOLOGY & SOC’Y 38 (2010), <http://www.ecologyandsociety.org/vol15/iss4/art38/>.

In elaborating the features of successful, prosocial groups,⁹⁷ one of us (Wilson) collaborated with Ostrom and her associate Michael Cox⁹⁸ to generalize these eight design principles and posit that they are relevant not only to groups managing common pool resources but to all human groups, “across all social scales, from neighborhoods to the global village.”⁹⁹ As the authors explained:

First, [the eight principles] follow from the evolutionary dynamics of cooperation in all species and the evolutionary history of our own species. Second, because of their theoretical generality . . . the principles have a wider range of application than [common pool resource] groups and are relevant to nearly any situation where people must cooperate and coordinate to achieve shared goals.¹⁰⁰

The eight core design principles, as generalized by Wilson, Ostrom, and Cox, are:

- (1) Clearly defined boundaries. Though individuals can be members of multiple groups, and while group membership can be fluid and changeable, “the important criterion is for the identity of the group and the parameters of the shared endeavor to be clearly delineated within each context.”¹⁰¹
- (2) Proportional equivalence between costs and benefits. It is more likely that between-group selection will outweigh within-group selection, and thus that the cooperation and altruism crucial to group success will evolve, where this design feature is present.¹⁰² If some individuals disproportionately bear the costs of a

97. Of course, it is possible for a destructive, anti-normative group to be very successful in accomplishing its aims. Groups such as ISIS and Al Qaeda, criminal organizations, and gangs are just a few examples that come to mind. We would describe such groups as prosocial and cooperative within the particular group, but antisocial and destructive at a larger scale with respect to other social groups. Because the design principles are scale-independent, we would expect that one or more of the principles—for example monitoring or graduated sanctions—is lacking at the level of the larger society and thus the particular group is acting as a self-interested, anti-social individual with respect to the larger group.

98. Wilson, Ostrom & Cox, *supra* note 30.

99. *Id.* at S31.

100. *Id.* at S22. Section III draws heavily on Wilson, Ostrom, and Cox’s 2013 article in describing and discussing the eight design principles, as generalized.

101. *Id.* at S25 (emphasis omitted).

102. *Id.*

behavior, while others disproportionately reap the benefits, then the latter will succeed at the expense of the former and cooperation and group success will be diminished.

- (3) Collective choice arrangements for decision-making. Well-functioning groups generally feature some type of collective, consensus-based decision-making process that includes participation and input from all members.¹⁰³
- (4) Monitoring. There must be some mechanism or set of mechanisms that will allow members of the group to know when individuals behave in a self-serving manner that harms the group.¹⁰⁴
- (5) Graduated sanctions. Closely related to the fourth principle of monitoring, the fifth principle requires that there be available to the group a range of graduated sanctions for antisocial behavior. “One reason that we are a highly group-selected species is because group members can impose extreme costs on miscreants at low cost to themselves. . . . Given such power of the group over each member, gentle reminders can be extremely effective, although more potent sanctions must be waiting in the wings.”¹⁰⁵ Commonly—and throughout all human societies—the first line of sanction against bad behavior tends to be gossip.¹⁰⁶ Humans generally care quite a lot about their reputational and social standing within a given group, and thus gossip used to enforce group norms is usually

103. *Id.* at S25–26.

104. *Id.* at S26. In a previous review in 2010, Cox et al. further subdivided this principle into (a) the presence of monitors and (b) the condition that these monitors be members of the community or otherwise accountable to it. While their statistical review of the literature between 1990 and 2010 found moderate support for sub-principle 4(a), it found very strong support for sub-principle 4(b). *See* Cox et al., *supra* note 96.

105. Wilson et al., *Core Design Principles*, *supra* note 30 at S26.

106. *See* David Sloan Wilson et al., *Gossip and Other Aspects of Language as Group-Level Adaptations*, in *THE EVOLUTION OF COGNITION* 347 (Cecilia Heyes & Ludwig Huber eds. 2000); *see also* ELLICKSON, *supra* note 91; Kevin M. Kniffin & David Sloan Wilson, *Utilities of Gossip Across Organizational Levels: Multilevel Selection, Free-Riders, and Teams*, 16 *HUM. NATURE* 278 (2005).

effective in deterring bad behavior in the first place and in punishing minor breaches such that they don't spread or become worse.¹⁰⁷

- (6) Conflict resolution mechanisms. Also related to the prior two design principles of monitoring and graduated sanctions, the sixth core principle is that there must be access to fair and low-cost conflict resolution mechanisms so as to guard against exploitation within groups by individual members.¹⁰⁸
- (7&8) Right to organize and coordination among relevant groups. Finally, the seventh and eighth design principles are mainly relevant to larger-scale societies composed of multiple of sub-groups.¹⁰⁹ Within such larger social organizations, there must be at least some minimal recognition of the right of smaller groups to organize, and there must be some manner by which relevant groups can coordinate with one another—both vertically and horizontally—within the larger society.¹¹⁰

Many of these principles seem intuitive, and one might reasonably wonder whether groups would not naturally adopt them even without any kind of theoretical or empirical blueprint. As a matter of fact, many groups do “instinctively” settle on these arrangements, which is not very surprising since “after all, our species evolved by genetic and cultural evolution to function well as groups.”¹¹¹ As summarized by Wilson, “[t]here is a striking correspondence between the principles derived by Ostrom for [common pool resource] groups and the conditions that caused us to evolve into such a cooperative species in the first place.”¹¹²

And yet, many groups are dysfunctional. Some of these fail and disappear; others limp along for some period of time without accomplishing what they

107. See Kniffin & Wilson, *supra* note 106; Wilson et al., *supra* note 106.

108. Wilson et al., *supra* note 30, at S26.

109. *Id.*

110. *Id.*

111. *Id.* at S31.

112. *Id.* at S26.

might if they operated according to the core design principles.¹¹³ Some do significant harm by their failure to control the spread of self-regarding, antisocial behavior. Furthermore, and as relevant to this essay, it seems likely that the contextual mismatch¹¹⁴ wrought by the Internet's technological, communication, and social revolution¹¹⁵ would give rise to more than its fair share of ineffective or downright dangerous (anti)social¹¹⁶ behavior.

There has by now been a substantial amount of (mostly preliminary) research that describes, investigates, analyzes, and theorizes about online behavior. Though we do not claim in this essay to even begin to provide an exhaustive review of the varied theoretical and experimental cyberpsychology literature, here we describe some of the research that seems especially pertinent to either First Amendment law, the core design principles for effective groups, or both.

A large and growing component of the cyberpsychology literature looks at online anonymity, broadly construed, and its role in various manifestations of online "disinhibition." As recently described by cyberpsychologist John Suler, the "online disinhibition effect" refers to the observation that "people tend to say and do things in cyberspace that they would not ordinarily say or do in the face-to-face world. They loosen up, feel more uninhibited, and express themselves more openly."¹¹⁷ In his seminal 2004 article on the topic,

113. *Id.* at S27 ("The failure of some groups to employ the design principles allowed Ostrom to demonstrate their efficacy. In addition to variation among existing groups, some groups fail so badly that they cease to exist altogether and aren't available to be studied.").

114. In evolutionary thinking, mismatch occurs when the environment shifts such that evolved traits are no longer adaptive. The classic example is our taste for sweets and fat, which was highly adaptive throughout most of our evolutionary history, but which now—in societies with ready access to cheap sugar and fat-heavy foods—leads to obesity and myriad health problems. *See, e.g.*, John R. Krebs, *The Gourmet Ape: Evolution and Human Food Preferences*, 90 AM. J. CLINICAL NUTRITION 707(S), 707(S) (2009) ("Our evolutionary heritage of food preferences and eating habits leaves us mismatched with the food environments we have created, which leads to problems such as obesity and type 2 diabetes.").

115. There is also the related problem of mismatch between the legal rules that evolved in a face-to-face, old media world and the behavior that must be regulated in an Internet world. *See* Lidsky, *supra* note 14, at 147 ("Today, incidents illustrating the incendiary capacity of social media have rekindled concerns about the 'mismatch' between existing doctrinal categories and new types of dangerous speech.").

116. We define a group as "the set of individuals influenced by the expression of a trait." *See supra* note 31 and accompanying text. Thus, for example, when a person makes a threat, this set includes: the person making the threat; the person being threatened; any audience to the threat; and any relevant regulatory entities that exist. *See* David Sloan Wilson, *A Theory of Group Selection*, 72 PROC. NAT'L ACAD. SCI. 143, 143 (1975).

117. SULER, *supra* note 22, at 96; *see also* Adam N. Joinson, *Disinhibition and the Internet, in* PSYCHOLOGY AND THE INTERNET: INTRAPERSONAL, INTERPERSONAL, AND TRANSPERSONAL IMPLICATIONS 75 (Jayne Gackenback ed., 2nd ed., 2007); Suler, *supra* note 24, at 321.

Suler differentiated between the positive, salutary effects of online disinhibition¹¹⁸ and the more negative, antisocial, harmful effects, which he termed “toxic disinhibition.”¹¹⁹ Though the proliferation of inconsistent definitions has muddied the waters somewhat,¹²⁰ toxic online disinhibition generally refers to such things as “flaming,” “trolling,”¹²¹ and other hostile, aggressive behaviors, visiting or engaging with hate websites, accessing violent pornographic and pedophilic websites, and cyberbullying.¹²²

There are a number of features of online communication that, in Suler’s view, contribute to the online disinhibition effect (in both its benign and toxic manifestations).¹²³ Two of these relate to anonymity of one kind or another.¹²⁴ The first, what Suler terms “Dissociative Anonymity,” describes the ability to selectively hide part or all of one’s identity online, thus allowing the person to “dissociate” the disinhibited behavior from what they regard as their “true selves.”¹²⁵ This aspect of anonymity—more specifically,

118. Suler, *supra* note 24, at 321. For example, people may “share very personal things about themselves” online; they might “reveal secret emotions, fears, wishes” or “show unusual acts of kindness and generosity, sometimes going out of their way to help others.” These therapeutic and pro-social effects are labeled “benign disinhibition” by Suler. *Id.*

119. *Id.* Describing toxic inhibition, Suler elaborated: “We witness rude language, harsh criticisms, anger, hatred, even threats. Or people visit the dark underworld of the Internet—places of pornography, crime, and violence—territory they would never explore in the real world.” *Id.*

120. See Gosling & Mason, *supra* note 3, at 880–81; Rost et al., *supra* note 90. This issue is particularly notable in the literature on cyberbullying, where “many different scientific definitions of cyberbullying can be found in the literature.” Fabio Sticca & Sonja Perren, *Is Cyberbullying Worse than Traditional Bullying? Examining the Differential Roles of Medium, Publicity, and Anonymity for the Perceived Severity of Bullying*, 42 J. YOUTH ADOLESCENCE 739, 739–40 (2013); see, e.g., Peter K. Smith et al., *Definitions of Bullying and Cyberbullying: How Useful are the Terms?*, in PRINCIPLES OF CYBERBULLYING RESEARCH: DEFINITIONS, MEASURES, AND METHODOLOGY 26–28 (Sheri Bauman et al. eds., 2013).

121. For a fascinating look into the mind of an online, misogynist troll, see *If You Don't Have Anything Nice to Say, SAY IT IN ALL CAPS*, THIS AM. LIFE (Jan 23, 2015), <http://www.thisamericanlife.org/radio-archives/episode/545/if-you-dont-have-anything-nice-to-say-say-it-in-all-caps>.

122. See Noam Lapidot-Lefler & Azy Barak, *Effects of Anonymity, Invisibility, and Lack of Eye-Contact on Toxic Online Disinhibition*, 28 COMPUTERS HUM. BEHAV. 434, 434–35 (2012) (see also the sources cited therein).

123. Suler, *supra* note 24, at 321–22.

124. See *infra* notes 125–40 and accompanying text. As discussed below, recent experimental research has begun to isolate various aspects of online anonymity—such as lack of eye contact or lack of typical social cues—so as to decipher more concretely the specific causes and effects of online behaviors.

125. See SULER, *supra* note 21, at 98–100, 109. As Suler and others who study online anonymity note, many Internet users recognize that they are not truly anonymous online, since Internet Service Providers, governments, or hackers can potentially discover their identities. However, they argue that this relative anonymity is significant from a psychological perspective.

“unidentifiability”—entails “being unknown to online partners in terms of identifying personal details, such as gender, weight, age, occupation, ethnic origin, residential location, and so on.”¹²⁶

Suler describes the effect of such dissociative anonymity thus: “[i]n the case of expressed hostilities or other deviant actions, the person can disown responsibility for those behaviors, almost as if morality and conscience have been temporarily suspended from the online psyche.”¹²⁷ Compounding this effect is the related fact that others are more likely to exhibit antisocial behavior toward an anonymous target.¹²⁸ “As social psychology has long recognized, the nameless, faceless stranger easily turns into a target for aggression and acting out.”¹²⁹ Thus, unidentifiability may influence the behavior of the actor from two directions at once.

Experimental work has suggested that unidentifiability can result in a reduced willingness to cooperate with others in accomplishing a group task.¹³⁰ In one of a series of studies employing an information-sharing social dilemma,¹³¹ experimenters varied the degree to which an individual’s contributions to the group’s information store were “identifiable” in the sense that each individual was given information about the specific contribution

On the other hand, where there exists genuine anonymity in the so-called dark or deep web, “disinhibited behavior can skyrocket, leading to all sorts of antisocial behaviors and crime.” *Id.* at 99.

126. Lapidot-Lefler & Barak, *supra* note 122, at 435. Their point is that whether the individual’s name is known can be much less important than these other identifying characteristics.

127. SULER, *supra* note 22, at 99. If we were to express this idea in the dialect of social norms scholarship, we might say that this type of online anonymity interferes with the usual internal policing of social norms through such mechanisms as guilt and shame. See Herbert Gintis, *The Hitchhiker’s Guide to Altruism: Gene-Culture Coevolution, and the Internalization of Norms*, 220 J. THEORETICAL BIOLOGY 407, 407 (2003) (“An internal norm is a pattern of behavior enforced in part by internal sanctions, such as shame, guilt and loss of self-esteem, as opposed to purely external sanctions, such as material rewards and punishment.”) (emphasis omitted).

128. See Ulrike Cress & Joachim Kimmerle, *Endowment Heterogeneity and Identifiability in the Information-Exchange Dilemma*, 24 COMPUTERS HUM. BEHAV. 862, 865–66 (2008).

129. SULER, *supra* note 22, at 99–100; see also Philip G. Zimbardo, *The Story: An Overview of the Experiment*, STAN. PRISON EXPERIMENT, <http://www.prisonexp.org/the-story> (last visited Jan. 15, 2017).

130. See Cress & Kimmerle, *supra* note 128.

131. In this case, subjects were paid based on how many calculations of a certain type they were able to make within a limited time frame. They could choose whether to share their individual calculations with others in their group in a common database. This set-up—a group version of the classic prisoner’s dilemma—presents an incentive for self-serving behavior (free-riding) because there is a cost (in time) to sharing information, so purely rational individuals would choose not to contribute. However, all individuals do better if everyone contributes to the group database. See *id.* at 866–69.

behavior of every other member of the group.¹³² The results showed that subjects were “more cooperative if all group members [could] observe how much each group member contributed.”¹³³

As distinct from unidentifiability, Suler’s taxonomy of the causes of toxic online disinhibition includes a feature that he labels “invisibility.”¹³⁴ This feature, in turn, includes discrete elements. For one, a person can feel invisible online through “lurking,” or visiting online spaces without making oneself known to others who are there.¹³⁵ Suler likens the psychology of this “under the radar” anonymity to being part of a large crowd.¹³⁶ In addition, visual and aural invisibility online—literally, the inability to be seen or heard or to see and hear others—entails a drastic reduction in the normal social cues that are present during face-to-face communication:

Witnessing a frown, a shaking head, a sigh, a gasp, a bored expression, and many other subtle and not so subtle signs of disapproval or indifference can either slam the breaks on what people are willing to say or very subtly influence them. Moment-by-moment feedback in the form of facial expressions, body language, eye contact, and verbal utterances—often that we detect subconsciously—modulate what we are willing to say and do.¹³⁷

There has been some preliminary effort to tease apart these various aspects of online anonymity and invisibility and to test their specific effects experimentally. For example, one study tested three distinct variables— anonymity, invisibility, and eye contact¹³⁸—and found that lack of eye contact “caused more impact than either anonymity or invisibility in producing the toxic behaviors implied by online disinhibition.”¹³⁹ An

132. *Id.* at 869.

133. *See id.* at 872. Note that this effect was not found when group members were shown the average contributions of the other members, without individual identification. *Id.*

134. SULER, *supra* note 22, at 100.

135. *Id.* at 100–01.

136. *Id.* at 99. As long understood by social psychologists, the sense of anonymity that comes from blending into a large crowd (or mob, as the case may be) leads to deindividuation, whereby “individuals in groups feel more anonymous than when they are alone.” Julie Seaman, *Hate Speech and Identity Politics: A Situationalist Proposal*, 36 FLA. ST. U. L. REV. 99, 112 (2008).

137. SULER, *supra* note 22, at 100–01.

138. For the anonymity manipulation, subjects were either given random aliases (the anonymous condition) or were associated with a list of personal identifiers including name, age, gender, etc. (the non-anonymous condition). For the visibility manipulation, some participants were able to see the online partner’s upper body. For the eye contact manipulation, an additional web-cam was mounted at eye level above some participants’ computer screens. Lapidot-Lefler & Barak, *supra* note 122, at 437.

139. *Id.* at 440.

exception was for threat behaviors, which were significantly associated with anonymity.¹⁴⁰

A recent study that examined the phenomenon of online firestorms¹⁴¹ highlights the complexity of this inquiry and also the importance of considering Internet behaviors in their social context. The researchers analyzed a data set consisting of all comments made over a period of three years on a German social media platform that hosts online petitions about public issues.¹⁴² During that time frame, there were 532,197 comments on 1,612 different petitions.¹⁴³ The dataset was coded based on whether the original signer or commenter had originally elected to have his or her name publicly associated with the signature or comment.¹⁴⁴ In this natural experiment, non-anonymous posters were more aggressive than anonymous posters.¹⁴⁵

The authors rely on social norm theory¹⁴⁶ to explain this unexpected result.¹⁴⁷ They emphasize that “in online firestorms, aggression happens in public, and not in private, social networks.”¹⁴⁸ Under this view, online firestorms represent an example of social norm enforcement, “expressing public disapproval with the aim of securing public goods, for example, honesty of politicians, companies or academics.”¹⁴⁹ In situations involving controversial public issues, scandals, or strong fairness concerns, non-

140. *See id.* at 439–40.

141. An online firestorm consists of “[c]ollective online aggression directed towards actors of public interest,” featuring “large amounts of critique, insulting comments, and swearwords against a person, organization, or group,” which can involve piling on by “thousands or millions of people within hours.” Rost et al., *supra* note 90.

142. *Id.*

143. *Id.*

144. Here, anonymity refers only to whether the individual was identified by his or her actual name. Notably, the majority of posters (about 70%) chose to include their names. *Id.*

145. *See id.*

146. They contrast a social norm theoretical framework with what they describe as the prevailing view in bullying (and, more recently, cyberbullying) research, in which “online aggression is understood as an irrational and illegitimate behavior that is caused by underlying personality characteristics, such as a lack of empathy and social skills, narcissism, impulsivity, sensation seeking, emotional regulation problems or psychological symptoms such as loneliness, depression, and anxiety.” *Id.*

147. The result is unexpected because of the widespread assumption, both in the cyberpsychology literature and among people generally, that anonymity on the Internet encourages aggressive, antisocial behavior. As they point out, however, “the empirical evidence for such a link is scarce and no definitive cause-effect relationship” has been demonstrated. *Id.*

148. *Id.*

149. *Id.*

anonymous aggression was most pronounced.¹⁵⁰ “In the case of highly controversial topics, individuals clearly prefer to aggress non-anonymously,” and “intrinsically motivated individuals¹⁵¹ clearly prefer to aggress non-anonymously.”¹⁵²

Tying this finding back to our earlier discussion of the core design principles, notice that the unexpected finding of non-anonymous aggression is more pronounced where there are clearly defined boundaries (the subject of the petition is important and salient).¹⁵³ Where the speakers are non-anonymous, the boundaries of the group are even more clearly defined.¹⁵⁴ It may be that group members in this situation desire that their membership in the group be socially visible, and self-identification is the only way in this context that others would become aware that the individual is a part of the group. Further, non-anonymous aggression is more prevalent when there is proportional equivalence between costs and benefits (the speakers are intrinsically motivated, thus increasing the relative benefit to the individual of “altruistic” punishment).¹⁵⁵ The petition mechanism itself is an example of a collective choice arrangement for decision-making, and monitoring occurs via the public nature of the discussion. The sanctions occur via the online comment process, and the “firestorm” happens when many people pile on with aggressive comments. Where any individual comment might constitute a mild rebuke, the collective result is a very harsh punishment, almost akin to expulsion from a community.

The findings regarding the effects of anonymity and lowered visibility online are varied and somewhat inconsistent; looking at them through the organizing framework of the core design principles for group effectiveness can help to make sense of the contradictory results and help suggest avenues for future research. Some types of anonymity compromise effective monitoring; other aspects of anonymous speech comprise social sanctions for speech or behavior that contravenes social norms. Looking at particular contexts and setting the speech within the framework of social group

150. *Id.*

151. *Id.* Intrinsically motivated actors here refer to people who “desire to ‘make the world a better place’” and thus are willing to engage in “altruistic punishment.” *Id.*

152. *Id.*

153. Wilson, Ostrom & Cox, *supra* note 30, at S25.

154. *Id.*

155. *Id.* at S24.

behavior offers a way to think about the benefits and costs of such speech for the individual, the group, and the larger society.¹⁵⁶

In this vein, we can wonder whether some of the negative, anti-social behavior that proliferates on the Internet represents the design principles unleashed and running out of control. After all, as noted above, we are a highly social species and it would be surprising if we had not evolved behavioral tendencies toward the core design features of successful group behavior. Consider, for example, the suite of core design principles that encompass monitoring and graduated sanctions.¹⁵⁷ In the physical world, the trick is to lower the cost of these features so that selection for group-beneficial behavior can outweigh selection for self-serving behavior. If the group-beneficial features are too costly, it will be difficult for the group to implement the core design features and the group is unlikely to be successful. However, in the online world, these elements have become much easier and less costly to implement. On the Internet, monitoring can be a click away and as simple as typing a few strokes into Google.

Likewise, in the physical world mild social sanctions—gossip, dirty looks, gentle rebukes—are relatively low-cost, whereas more potent sanctions are typically rather costly. But in the virtual world, what might feel like the online version of a mild social sanction can randomly and rapidly snowball into a “firestorm” with severe consequences.¹⁵⁸ And more generally, our predilection toward adopting the first core design feature of clearly defined group boundaries—our inherent “groupiness” or tribalism—could also be

156. At the level of First Amendment (and other Constitutional) doctrine(s), it is common to balance the government’s interest in a particular speech regulation against the individual’s liberty interest. Thus, for restrictions on fully protected speech courts apply strict scrutiny, which requires a compelling government interest and narrow tailoring before the individual’s freedom of speech can be constrained. In effect, what this and other balancing tests do is place a thumb on the scale in favor of the individual’s self-interest over the interest of the group, which has implications under multilevel selection theory. This observation is consistent with the common understanding of the United States as an individualist (rather than communalist) culture and society. One would predict that groups would tend to be less successful, and individual self-serving conduct more common, than in societies that weighted the balance differently.

157. Wilson, Ostrom & Cox, *supra* note 30, at S26.

158. There are multiple examples of people committing suicide after being the subject of such firestorms. See David D. Luxton, Jennifer D. June & Jonathan M. Fairall, *Social Media and Suicide: A Public Health Perspective*, 102 AM. J. PUB. HEALTH S195, S195 (2012). Short of death, individuals have suffered other extreme consequences such as being fired from their jobs. A well-known example concerns a woman who made an ambiguous comment on Twitter, boarded a long flight, and landed to learn that the Twitterverse had exploded and she had lost her job. See Jon Ronson, *How One Stupid Tweet Blew Up Justine Sacco’s Life*, N.Y. TIMES (Feb. 12, 2015), <http://www.nytimes.com/2015/02/15/magazine/how-one-stupid-tweet-ruined-justine-saccos-life.html>.

overdetermined when placed into the context of an Internet environment where one can choose among countless well-defined groups with a multiplicity of diverse agendas.¹⁵⁹

IV. CONCLUSION AND DIRECTIONS—#WHEREDOWEGOFROMHERE

This essay represents a first foray into Internet behavior as understood in relation to freedom of speech and group selection. We have attempted to lay out some of the most pressing issues and to chart a path forward for future research and analysis. There has by now been a good deal of academic attention to the causes and effects of harmful online speech, to the places where the Internet complicates application of First Amendment doctrine, and to the larger theoretical considerations that are relevant to resolving some of these questions. Yet the contours of this discussion are still fluid and its contents unstable. Speech on the Internet is a moving target in many ways: the technology, norms, and incidents are—like topics trending on Twitter—rapidly evolving. Today's #trendingtopic is tomorrow's #oldnews.

One possible anchor in this sea of change is the evolutionary understanding of social group behavior and, in particular, the set of eight core design principles that describe the common features of effective groups. We propose in future work to look more closely at some of the most confounding questions—for example how to treat anonymous Internet speech under the First Amendment—through this lens of social group dynamics. We suggest, too, that such a perspective presents a wellspring of potential avenues for experimental research into online group identity, anonymity, monitoring, sanctioning, and collective decision-making, among other fruitful topics.

159. Though the accuracy of this figure is unclear, in February 2010 *SocialTimes* reported that there were 620 million Facebook groups according to a Google index. Nick O'Neill, *Google Now Indexes 620 Million Facebook Groups*, ADWEEK (Feb. 1, 2010, 5:41 PM), <http://www.adweek.com/socialtimes/google-now-indexes-620-million-facebook-groups/313744?red=af>.