

ARTICLE

THE NEW IRONY OF FREE SPEECH

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THE NEW IRONY OF FREE SPEECH

In his The Irony of Free Speech, published in 1996, Professor Owen Fiss argued that the traditional understanding of freedom of speech, as a shield from interference by the state, ended up fostering a system that benefited a small number of media corporations and other private actors, while silencing the many, who did not possess any comparable expressive capacity. Conventional wisdom is that by dramatically lowering the access barriers to speech, the Internet has provided a solution to the twentieth-century problem of expressive inequality identified by Fiss and others. As this article will demonstrate, however, the digital age presents a new irony of free speech, whereby the very system of free expression that provides more expressive capacity to individuals than ever before, also systematically diminishes their liberty to speak. The popular view of the Internet as the ultimate promoter of freedom of expression is, therefore, too simplistic. In reality, the Internet, in its current state, strengthens one aspect of freedom (the capacity aspect) while weakening another (the liberty aspect). It trades liberty for capacity. The article will explore the process through which expressive capacity has become a definitive element of freedom in the digital ecosystem, at the expense of liberty. The process of diminishing liberty in the digital ecosystem follows along six related dimensions explored in this article: interference from multiple sources; state-encouraged private interference; multiple modes of interference; new-media concentration; lack of anonymity; and lack of inviolability. The result of these liberty-diminishing dimensions of our current system of free expression, taken together, is that while we may be able to speak more than ever before, we are not able to speak freely.

INTRODUCTION

Technology mediates our perceptions of the surrounding reality, the way we experience the world and, therefore, our factual beliefs and reasons for action.¹ Specifically, networked information technologies alter our perceptions of spatial and temporal proximity and "define the processes by which bodily boundaries and flows of information across those boundaries are formed, re-formed, and naturalized."² Digital information and communication technologies

¹ See generally, e.g., DON IHDE, POSTPHENOMENOLOGY (1993).

² JULIE COHEN, CONFIGURING THE NETWORKED SELF: LAW, CODE, AND THE PLAY OF EVERYDAY PRACTICE 49 (2012).

(ICTs) allow us to store and easily retrieve unprecedented amounts of information, but have decreased our ability to store data in our own minds;³ they enable us to communicate with distant family and friends more easily than ever before, but they also alter the ways in which we begin, maintain (and even define) friendships;⁴ smartphones help us pass the time during our morning and evening commutes, but dramatically decrease the likelihood of spontaneous "small talk" between commuters;⁵ GPS technology allows us to go anywhere without getting lost, but also without the need to know where we are;⁶ digital technologies allow us to work from home, but blur the distinction between work and home.⁷ These are just a few examples, out of many possible others, of how ICTs mediate the way we see and experience the world.

Technology also mediates what we *can* or *cannot* do, by altering, restricting or increasing our options for action. "The promise to create new practical affordances underlies almost all technological expectations."⁸ Accordingly, the creation of new practical affordances for expression, communication, and choice is probably the trait most commonly and saliently attributed to ICTs.⁹ It is important to note, however, that digital technologies may also limit choice and decrease our range of options. For example, the social convention of using mobile devices, upholding several email accounts, being active in social networks and so on may itself

³ See, e.g., Betsy Sparrow, Jenny Liu & Daniel M. Wegner, *Google Effects on Memory: Cognitive Consequences of Having Information at Our Fingertips*, 333 SCIENCE 776 (2011); Daniel M. Wegner & Adrian F. Ward, *How Google is Changing Your Brain*, 309 SCI. AM. 58 (2013).

⁴ See, e.g., Dean Kocking & Steve Matthews, *Unreal Friends*, 2 ETHICS INFO. TECH. 223 (2000); Christine Rosen, *Virtual Friendship and the New Narcissism*, 17 THE NEW ATLANTIS 15 (2007); Adam Briggles, *Real Friends*, 10 ETHICS INFO. TECH. 71 (2008); Nicholas John Munn, *The Reality of Friendship within Immersive Virtual Worlds*, 14 ETHICS INFO. TECH. 1 (2012).

⁵ See Tsjalling Swierstra & Katinka Waelbers, *Designing a Good Life: A Matrix for the Technological Mediation of Morality*, 18 SCI. & ENGINEERING ETHICS 157, 163 (2012).

⁶ See COHEN, *supra* note 2, at 50.

⁷ See, e.g., Adrian N. Carr & Philip Hancock, *Space and Time in Organizational Change Management*, 19 J. ORG. CHANGE MGMT. 545 (2006); Robert Sprague, *Orwell Was an Optimist: The Evolution of Privacy in the United States and Its De-Evolution for American Employees*, J. MARSHALL L. REV. 83 (2008).

⁸ KATINKA WAELEBERS, DOING GOOD WITH TECHNOLOGIES: TAKING RESPONSIBILITY FOR THE SOCIAL ROLE OF EMERGING TECHNOLOGIES 81 (2011).

⁹ See generally, e.g., YOCHAI BENKLER, THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM (2006); MANUEL CASTELLS, THE RISE OF THE NETWORK SOCIETY (1996, 2000, 2010); Niva Elkin-Koren, *Affordances of Freedom: Users' Rights in the Digital Era*, 6 JERUSALEM REV. LEGAL STUD. 96 (2012).

be viewed as a type of technologically-originated coercion, whereby participation in society depends upon embracing such technologies.¹⁰ In addition, even when ICTs can be said to increase the range of options open to their users (compared to previous technologies), they nonetheless dictate the boundaries within which users are able to operate. Twitter enables users to send messages of up to 280 characters (which have by now formed a new category of expression called "tweets");¹¹ web-browsers allow users to delete their browsing history from their computers, but Google Chrome does not enable users to define, in advance, that the browser will not save such history; Facebook allows its users to "Like" with a click of a (social) button, but does not enable them to express dislike in a similar way;¹² WhatsApp does not allow users to operate their account on more than one mobile device.¹³ Again, these are just a few examples of how ICTs mediate our options for action.

A third aspect of technological mediation, which has received relatively less attention to date, concerns the correlation of technology with transformations in what we believe the world ought to be, i.e. our moral values, beliefs, and norms. Technology and morality have a co-shaping relationship of their own: our moral conceptions (through which we can judge our technological environment) are not static, but rather mediated by technology.¹⁴ The clock, for example, not

¹⁰ See, e.g., Swierstra & Waelbers, *supra* note 5, at 167.

¹¹ See, e.g., Sarah Perez, *Twitter Officially Expands Its Character Count to 280 Starting Today*, THE CRUNCH (Nov. 7, 2017), <https://techcrunch.com/2017/11/07/twitter-officially-expands-its-character-count-to-280-starting-today/> (last visited Jan. 6, 2018).

¹² See, e.g., Ruth Page, Richard Harper & Maximiliane Frobenius, *From Small Stories to Networked Narrative: The Evolution of Personal Narratives in Facebook Status Updates*, 23 NARRATIVE INQUIRY 192 (2013); Carolin Gerlitz & Anne Helmond, *The Like Economy: Social Buttons and the Data-Intensive Web*, 15 NEW MEDIA & SOC. 1348 (2013); Amy Binns, *Twitter City and Facebook Village: Teenage Girls' Personas and Experiences Influenced by Choice Architecture in Social Networking Sites*, 15 J. MEDIA PRAC. 71 (2014). In February 2016, Facebook launched Reactions, an extension to the "Like" button, which enables users to express some additional emotions, but not to dislike.

¹³ See WHATSAPP, FAQ, CHANGING PHONE NUMBERS AND/OR PHONES, <https://faq.whatsapp.com/en/general/28030001/?category=5245246> (last visited Jan. 6, 2018).

¹⁴ See, e.g., CARL MITCHAM, THINKING THROUGH TECHNOLOGY: THE PATH BETWEEN ENGINEERING AND PHILOSOPHY 107-08 (1994) ("the rise of modern technology... is correlated with certain transformations in the understanding of justice...so the investigation of these transformations itself becomes an aspect of the political philosophy of technology"); Swierstra & Waelbers, *supra* note 5; WAELBERS, *supra* note 8, at 82-88; Tsjalling

only transformed our conception of time but also created the value of punctuality as we know it;¹⁵ mobile technology not only enables us to be constantly available but also creates an expectation of availability and connectedness;¹⁶ the concept of workers' rights is correlated with the vast technological transformations of the industrial revolution,¹⁷ and these rights are themselves contested in the age of Internet;¹⁸ the idea of rights to certain types of medical care can be directly linked to scientific discoveries and technological developments in medicine;¹⁹ several authors have argued that women's rights and gender equality were co-shaped by developments in contraceptive technologies;²⁰ and so on.

Similarly, people's place in the digital ecosystem invokes a reevaluation of important aspects of our moral landscape and particularly our perception of certain fundamental rights. Increasing focus in this respect has been put on privacy,²¹ but I believe that "freedom of expression" has also changed and evolved in ways which are not yet fully appreciated. Jack Balkin once noted that the digital age would change the meaning of "freedom of speech;" the only question, he said, was how it would change.²² Balkin suggested that digital technologies have changed the *purpose* of freedom of speech, from a conception focused primarily on the

Swierstra & Arie Rip, *Nano-Ethics as NEST-ethics: Patterns of Moral Argumentation About New and Emerging Science and Technology*, 1 NANOETHICS 3 (2007).

¹⁵ See generally, e.g., DAVID S. LANDES, *REVOLUTION IN TIME: CLOCKS AND THE MAKING OF THE MODERN WORLD* (1983, 2000).

¹⁶ See, e.g., Jennie German Moltz, 'Watch Us Wander': *Mobile Surveillance and the Surveillance of Mobility*, 38 ENVTL. PLAN. 377 (2006); Steven D. Sheetz et al., *Expectation of Connectedness in Cell Phone Use in Crisis*, 7 INT'L J. EMERGENCY MGMT. 124 (2010).

¹⁷ See, e.g., MITCHAM, *supra* note 14, at 107.

¹⁸ See, e.g., Gary Chaison, *Information Technology: The Threat to Unions*, 23 J. LABOR RES. 249 (2002); Stephen Ward & Wainer Lusoli, *Dinosaurs in Cyberspace? British Trade Unions and the Internet*, 18 EUR. J. COMM. 147 (2003); Miguel Martínez Lucio & Steve Walker, *The Networked Union? The Internet as a Challenge to Trade Union Identity and Roles*, 1 CRITICAL PERSP. ON INT'L. BUS. 137 (2005).

¹⁹ See, e.g., Tsjalling Swierstra, Hester van de Bovenkamp & Margo Trappenburg, *Forging a Fit Between Technology and Morality: The Dutch Debate on Organ Transplants*, 32 TECH. SOC. 55 (2010).

²⁰ See, e.g., Claudia Goldin & Lawrence F. Katz, *The Power of the Pill: Oral Contraceptives and Women's Career and Marriage Decisions*, 110 J. POL. ECON. 730 (2002); Martha J. Bailey, *More Power to the Pill: The Impact of Contraceptive Freedom on Women's Life Cycle Labor Supply*, 121 Q. J. ECON. 289 (2006).

²¹ See generally, e.g., PEW RESEARCH CENTER, *DIGITAL LIFE IN 2025 - THE FUTURE OF PRIVACY* (2014), http://www.pewinternet.org/files/2014/12/PI_FutureofPrivacy_1218141.pdf (last visited Jan. 6, 2018).

²² Jack M. Balkin, *Commentaries: Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society*, 79 N.Y.U. L. REV. 1, 55 (2004).

promotion of collective self-government (a conception suited to the realities of the mass-media model of information production) to a conception focused on the protection of individual liberty.²³ Other scholars have analyzed how ICTs impact our understanding of what "speech" is.²⁴ Are search-engine results "speech"?²⁵ Are "Likes" on Facebook "speech"?²⁶ Are any (or all) algorithm-based outputs "speech"?²⁷

This article will focus on what I believe is a more fundamental question, and yet one that has received much less attention: How does technological change mediate our understanding of "freedom" in "freedom of expression"?²⁸ The importance of this question derives from the fact that the emerging structure of the digital ecosystem is pulling our system of free expression in two conflicting directions - it gives us the unprecedented capacity to speak, while simultaneously diminishing our liberty to do so; it strengthens one aspect of freedom while weakening another. And this, as I shall argue, has important normative implications.

Part I of the article will address the dramatic impact that ICTs' have had on people's ability to express themselves and communicate with others, by lowering the access barriers to speech. This is the source of what Yochai Benkler called the "new practical individual freedom"

²³ *Id.*, at 31-42.

²⁴ Of course, the question of what is considered "speech," particularly for the purpose of First Amendment protection is not itself new, and has occupied free speech theorists and jurists "to the point of scholasticism." Jeremy Waldron, *A Rights-Based Critique of Constitutional Rights*, 13 OX. J. LEGAL STUD. 18, 26 (1993).

²⁵ See generally, e.g., Oren Bracha & Frank Pasquale, *Federal Search Commission? Access, Fairness, and Accountability in the Law of Search*, 93 CORNELL L. REV. 1149 (2008) (arguing that the First Amendment does not encompass search engine results); Eugene Volokh & Donald M. Falk, *First Amendment Protection for Search Engine Search Results* (Google Commissioned White Paper, Apr. 20, 2012), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2055364### (last visited Jan. 6, 2018) (arguing the opposite).

²⁶ See e.g., *Bland v. Roberts*, 730 F.3d 368 (4th Cir. 2013) (concluding that "Liking" something on Facebook is a form of speech protected under the First Amendment); Clay Calvert, *Fringes of Free Expression: Testing the Meaning of "Speech" Amid Shifting Cultural Mores & Changing Technologies*, 22 S. CAL. INTERDISCIPLINARY L.J. 545, 571-80 (2013); Alicia D. Sklan, Note, *@Socialmedia: Speech with a Click of a Button? #socialsharingbuttons*, 32 CARDOZO ARTS & ENT. L.J. 377 (2013).

²⁷ See generally, e.g., Stuart Minor Benjamin, *Algorithms and Speech*, 161 U. PENN. L. REV. 1445 (2013) (arguing that algorithm-based outputs may be considered "speech"); Tim Wu, *Machine Speech*, 161 U. PENN. L. REV. 1495 (2013) (arguing the opposite).

²⁸ Cf. Abner J. Mikva, *Book Review: Lee C. Bollinger, The Tolerant Society: Freedom of Speech and Extremist Speech in America*, 17 U. BALT. L. REV. 204, 205 (1987) ("we may argue about what is 'speech,' but we seldom look at what is 'freedom' of speech").

of individuals;²⁹ the basis for Balkin's observation that "the digital revolution offers unprecedented opportunities for creating a vibrant system of free expression;"³⁰ and the main reason why scholars have found the Internet so special.³¹ In the formative years of the Internet, scholars tended to argue that ICTs would provide a technological solution to the twentieth-century's long standing problems of media access, and speech (in)equality more generally.³² These predictions have been at least partly correct, as one cannot overlook the fact that individuals enjoy a heightened level of expressive capacity as a result of technological change. Moreover, as shall be demonstrated, technological change has not only affected our sense of what we are able to do but also our normative views as to what we *ought* to be able to do. Notably, ICTs have blurred the distinction (which was dominant in the speech environment of the twentieth-century) between having a right to freedom of expression, in the abstract, and having means for expression, in reality, and it has done so to the point where a system of free expression, which maintains such a distinction, is no longer normatively tenable. For reasons which will be further explained as the article progresses, expressive capacity has become a definitive element of freedom in the digital ecosystem, which should invoke an understanding of freedom of expression as a right incorporating both a capacity and a liberty aspect.

²⁹ BENKLER, *supra* note 9, at 39.

³⁰ Balkin, *supra* note 22, at 3.

³¹ See, e.g., MANUEL CASTELLS, *THE INTERNET GALAXY: REFLECTIONS ON THE INTERNET, BUSINESS AND SOCIETY* 2 (2001) (arguing that the Internet allows, for the first time, time "the communication of many to many, in chosen time, on a global scale"); RICHARD HOLT, *DIALOGUE ON THE INTERNET: LANGUAGE, IDENTITY, AND COMPUTER-MEDIATED COMMUNICATION* 7 (2004) (the Internet offers "possibilities for sharing, connecting, and participating, involving a far greater number of individuals, from a significantly more diverse range of cultures and backgrounds, than any previous form of communication"); Howard Rheingold, as quoted in ANDREW L. SHAPIRO, *THE CONTROL REVOLUTION: HOW THE INTERNET IS PUTTING INDIVIDUALS IN CHARGE AND CHANGING THE WORLD WE KNOW* 41 (1999) (the Internet "puts the masses back in mass media"); Nicholas P. Dickerson, *Comment, What Makes the Internet So Special? And Why, Where, How, and by Whom Should Its Content Be Regulated?*, 46 HOUS. L. REV. 61, 64-67 (2009) (arguing that the Internet is a communication medium of "participatory nature").

³² See generally, e.g., Eugene Volokh, *Cheap Speech and What It Will Do*, 104 YALE L. J. 1805 (1995); Allan S. Hammond, IV, *Regulating Broadband Communication Networks*, 9 YALE J. ON REG. 181, 193 (1992) ("rights of speech, assembly, access and diversity naturally flow from the use of broadband technology"); Martin H. Redish & Kirk J. Kaludis, *The Right of Expressive Access in First Amendment Theory: Redistributive Values and the Democratic Dilemma*, 93 NW. U.L. REV. 1083, n.85 (1998); Christopher S. Yoo, *The Rise and Demise of the Technology-Specific Approach to the First Amendment*, 91 GEO. L.J. 245, 344 (2003).

However, the fact that ICTs provide greater expressive *capacity* to individuals does not necessarily mean that they enhance individual *freedom*. In his influential book, *The Irony of Free Speech*, which was published just as the Internet was making its first introduction into private and commercial use, Owen Fiss explained how the traditional understanding of freedom of expression, as a shield from interference by the state, ended up fostering a system that benefited a small number of media corporations and other private actors, while silencing the many, who did not possess any comparable expressive capacity.³³ As shall be argued in Part II, the digital age has turned the problem described by Fiss on its head, as it presents us with *a new irony of free speech*, whereby the very system of free expression that provides more expressive *capacity* to individuals than ever before, also systematically diminishes their *liberty* to speak. Accordingly, the popular view of the Internet as the ultimate promoter of freedom of speech is wrong, or at least too simplistic. In reality, the Internet, in its current state, strengthens one aspect of freedom (the capacity aspect) while weakening another (the liberty aspect). It trades liberty for capacity.

As shall be described in Chapters II(A) through II(F), the process of diminishing liberty in the digital ecosystem follows along six related dimensions: First, interference with users' speech from multiple sources - not only the state but also, and mainly, private entities that are not understood to be bound by the constraints imposed on the state; second, state-encouraged private interference, through formal and informal means, which supposedly places government regulation beyond the reach of constitutional scrutiny; third, multiple modes of interference - not only classic censorship, but also seduction and manipulation; fourth, new-media concentration in practically all markets for speech-facilitating platforms; fifth, lack of anonymity due to the unprecedented ability for surveillance that digital technologies provide; and sixth, lack of inviolability, i.e. the absence of the notion that things cannot be done to prevent us from

³³ See generally OWEN M. FISS, THE IRONY OF FREE SPEECH (1996).

speaking. The result of these liberty-diminishing dimensions of our current system of free expression, taken together, is that while we may be able to speak more than ever before, we are not able to speak freely.

Part III will conclude the article.

I. HEIGHTENED EXPRESSIVE CAPACITY AND ITS MORAL IMPLICATIONS

(A) Expressive Capacity as Internal to Freedom

Freedom of expression is an essential liberty, worthy of special protection.³⁴ It is, as Justice Cardozo famously put it, "the matrix, the indispensable condition, of nearly every other form of freedom."³⁵ In the digital ecosystem, freedom of expression has even amplified importance, being the central normative manifestation of the single most significant contribution attributed to the Internet - the lowering of access barriers to speech and communication. Freedom of expression, as Benedek and Kettemann have put it, is "the key human right of the information society,"³⁶ and is treated, accordingly, as the primary concern in the promotion and protection of human rights on the Internet.³⁷ This viewpoint is also shared by Internet users across countries and cultures.³⁸

³⁴ See, e.g., JOHN RAWLS, A THEORY OF JUSTICE 53 (1971, 1999); RONALD DWORKIN, SOVEREIGN VIRTUE: THE THEORY AND PRACTICE OF EQUALITY 127 (2000); AMARTYA SEN, THE IDEA OF JUSTICE 63-64 (2009); JAMES GRIFFIN, ON HUMAN RIGHTS 193 (2011); F.A. HAYEK, THE CONSTITUTION OF LIBERTY 326 (1960); MARTHA C. NUSSBAUM, CREATING CAPABILITIES: THE HUMAN DEVELOPMENT APPROACH 73 (2011). The right to freedom of expression is enshrined, *inter alia*, in Article 19 of the Universal Declaration of Human Rights; Article 19 of the International Covenant on Civil and Political Rights; the First Amendment to the US Constitution; and Article 10 of the European Convention on Human Rights.

³⁵ *Palko v. Connecticut*, 302 U.S. 319, 327 (1937).

³⁶ WOLFGANG BENEDEK & MATTHIAS C. KETTEMANN, FREEDOM OF EXPRESSION AND THE INTERNET 23 (2013).

³⁷ See, e.g., HUMAN RIGHTS COUNCIL, RESOLUTION A/HRC/RES/20/8 ON THE PROMOTION, PROTECTION AND ENJOYMENT OF HUMAN RIGHTS ON THE INTERNET (Jul. 5, 2012), <http://daccess-dds-ny.un.org/doc/RESOLUTION/GEN/G12/153/25/PDF/G1215325.pdf?OpenElement> (hereinafter: "UN Resolution on the Promotion of Human Rights on the Internet"). The Freedom of the Net Index published yearly by Freedom House, for example, is, in fact, primarily an index of the level of freedom of expression on the Internet (and other digital media) in different states. See, e.g., FREEDOM HOUSE, FREEDOM ON THE NET 2014 (2015),

The centrality of freedom of expression to the protection and promotion of individual rights in the digital ecosystem is not merely a matter of applying traditional conceptions to a similar system on a larger scale. It is not, as policymakers have often stated, a process of simply assuring that people have online the same rights they had offline.³⁹ Not because the digital world is separate from the physical world, but because technological change may require us to re-examine traditional conceptions and view them in a new, perhaps more sophisticated light.⁴⁰

The dominant approach in twentieth-century liberal political theory conceives of freedom as immunity from interference by others,⁴¹ and particularly as immunity from coercive governmental powers.⁴² This approach maintains a conceptual distinction between freedom so construed and the means (or capabilities) required for exercising freedom, which are treated as a concern of social justice, but not as constraints definitive of freedom itself. One of the most influential expressions of this distinction can be found in Rawlsian theory, which distinguishes between "liberty" understood as immunity from interference and what Rawls denominates "the worth of liberty," i.e. inequalities in the distribution of means to exercise freedom, which are to

https://freedomhouse.org/sites/default/files/FOTN_2014_Full_Report_compressedv2_0.pdf (last visited Jan. 6, 2018).

³⁸A survey of 5,400 adult Internet users from 13 different countries conducted by the Oxford Internet Institute (OII) and INSEAD in 2011 shows that the most basic value underpinning the Internet, according to users' own attitudes, is freedom of expression. See Soumitra Dutta, William H. Dutton & Ginette Law, *The New Internet World: A Global Perspective on Freedom of Expression, Privacy, Trust and Security Online* (INSEAD Working Paper No. 2011/89/TOM, 2011), https://flora.insead.edu/fichiersti_wp/inseadwp2011/2011-89.pdf (last visited Jan. 6, 2018)..

³⁹ See, e.g., UN Resolution on the Promotion of Human Rights on the Internet, *supra* note 37; EUROPEAN COMMISSION, JOINT COMMUNICATION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS, CYBERSECURITY STRATEGY OF THE EUROPEAN UNION: AN OPEN, SAFE AND SECURE CYBERSPACE 3 (Feb. 7, 2013), <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52013JC0001> (last visited Jan. 6, 2018).

⁴⁰ Cf. Burt Neuborne, *Speech, Technology, and the Emergence of a Tricameral Media: You Can't Tell the Players Without a Scorecard*, 17 HASTINGS COMM. & ENT. L.J. 17, 19 (1994) ("free speech theory must develop more sophisticated ways to describe the intersection of speech, law, and amplifying technology").

⁴¹ See generally, e.g., KATRIN FLIKSCHUH, FREEDOM: CONTEMPORARY LIBERAL PERSPECTIVES (2007) (analyzing the perspectives on freedom of seven prominent liberal thinkers: Isaiah Berlin, Gerald MacCallum, Robert Nozick, Hillel Steiner, Ronald Dworkin and Joseph Raz).

⁴² See, e.g., RONALD DWORKIN, TAKING RIGHTS SERIOUSLY 267 (1978) (the "traditional definition" of liberty is "the absence of constraints placed by a government upon what a man might do if he wants to").

be addressed within the Rawlsian domain of equality (the Difference Principle).⁴³ Traditional twentieth-century free speech theory has similarly distinguished freedom of expression, understood as immunity from government interference,⁴⁴ from questions regarding the (unequal) distribution of expressive opportunities in society, which have been treated as a separate case of inequality or distributive injustice.⁴⁵ On this account, my freedom of expression, as formally specified, is understood to be equal to Rockefeller's,⁴⁶ although our respective capacities to exercise that freedom may be extremely unequal.⁴⁷

⁴³ RAWLS, *supra* note 34, at 179. This distinction fits into Rawls' two principles of justice: freedom as equal liberty is specified the same way under the First Principle while the issue of compensating for the lesser "worth of liberty" is to be addressed, according to Rawls, by the Difference Principle, where it is commensurable with all primary goods, *other than* basic liberties. RAWLS, *id.*, at 53; JOHN RAWLS, JUSTICE AS FAIRNESS: A RESTATEMENT 42-43 (2001) (hereinafter: RAWLS, RESTATEMENT); JOHN RAWLS, POLITICAL LIBERALISM 325-26 (1993, 1996) (hereinafter: RAWLS, POLITICAL LIBERALISM).

⁴⁴ See, e.g., Owen M. Fiss, *Free Speech and Social Structure*, 71 IOWA L. REV. 1405, 1414 (1986); DAVID M. RABAN, FREE SPEECH IN ITS FORGOTTEN YEARS 383 (1997); David Abraham, *Liberty Without Equality: The Property-Rights Connection in a "Negative Citizenship" Regime*, 21 L. & SOC. INQUIRY 1, 4 (1996) ("throughout American history we have borne a conception of liberty that is *formal, negative*, expressed in *contract*, and dependent on possession of *property*"); Gregory P. Magarian, *The Pragmatic Populism of Justice Stevens's Free Speech Jurisprudence*, 74 FORDHAM L. REV. 2201, 2203 (2006) (arguing that the Supreme Court treats freedom of speech mostly as a "negative right that shields individual autonomy against government interference").

⁴⁵ See, e.g., C. Edwin Baker, *Harm, Liberty, and Free Speech*, 70 S. CAL. L. REV. 979, 990 (1997) (arguing that equality of individual opportunities for communication relies on plausible assumptions but improperly subordinates liberty); Redish & Kaludis, *supra* note 32. **Error! Bookmark not defined.** (arguing that the rationale underlying expressive power distribution is equality and that such distribution undermines liberty). See also, e.g., Thomas Scanlon, *A Theory of Freedom of Expression*, 1 PHIL. & PUB. AFF. 204, 223 (1972) ("Access to means of expression...is a good which can be fairly or unfairly distributed among the members of a society, and many cases which strike us as violations of freedom of expression are in fact instances of distributive injustice").

⁴⁶ See Norman Daniels, *Equal Liberty and Unequal Worth of Liberty*, in READING RAWLS: CRITICAL STUDIES ON RAWLS' A THEORY OF JUSTICE 253, 259 (Norman Daniels ed., 1975, 1989).

⁴⁷ Notably, even the harshest critics of the grossly unequal distribution of expressive capacities in the mass-media environment of the twentieth-century did not base their critique on an alternative conception of freedom. The most influential free speech theory of the time, democratic theory, identified the concentration of expressive capacity in the hands of a wealthy few as a threat to democracy. However, democratic theory's main concern has been to secure expressive opportunities for more viewpoints in the name of democracy, and not expressive capacity for every person in the name of freedom. Accordingly, democratic theory has actually concentrated on developing justifications for limiting the freedom of the strong (e.g. through state regulation of the mass-media market or expansive interpretations "state action"), in order to promote deliberative democracy, but not on re-defining or challenging the accepted understanding of individual freedom as non-interference. For an explication of democratic theory of speech see, e.g., ALEXANDER MEIKLEJOHN, FREE SPEECH AND ITS RELATION TO SELF-GOVERNMENT (1948); Jerome A. Barron, *Access to the Press - A New First Amendment Right*, 80 HARV. L. REV. 1641 (1967); CASS R. SUNSTEIN, DEMOCRACY AND THE PROBLEM OF FREE SPEECH (1993); Cass R. Sunstein, *A New Deal for Speech*, 17 HASTINGS COMM. & ENT. L.J. 137 (1994); Cass R. Sunstein, *Free Speech Now*, U. CHI. L. REV. 255 (1992); FISS, *supra* note 33; Owen M. Fiss, *Why the State?*, 100 HARV. L. REV. 781 (1987); Burt Neuborne, *Toward a Democracy-Centered Reading of the First Amendment*, 93 NW. U.L. REV. 1055 (1999); Gregory P. Magarian, *Regulating Political Parties Under a "Public Rights" First Amendment*, WM & MARY L. REV. 1939 (2003); David A. Strauss, *State Action after the Civil Rights Era*, 10 CONST. COMMENT. 409 (1993).

This way of thinking not only conceptually separates one's right to freedom of expression from her actual capacity to express herself, but also treats the liberty to speak and the capacity to do so as independent, potentially conflicting, values.⁴⁸ While freedom of expression as immunity from interference is treated as an entitlement of every person *qua* person, the claim for expressive capacity is treated as external to freedom and rests on the comparative observation that some persons have less (or more) of it than others. In this seemingly inevitable tension between liberty and equality, the primacy of the former over the latter is viewed as essential to human freedom.⁴⁹ Put in Rawls' terminology, basic liberties may be regulated "only for the sake of one or more other basic liberties,"⁵⁰ which means that "liberty" is given priority over the "worth of liberty."⁵¹ A similar underlying principle guides established constitutional analysis, where freedom as non-interference enjoys at least a presumption of priority over concerns of expressive capacity

⁴⁸ Cf. Dorothy E. Roberts, *The Priority Paradigm: Private Choices and the Limits of Equality*, 57 U. PITT. L. REV. 363, 370 (1996).

⁴⁹ As noted above, the view of liberty and equality as antagonistic concepts is typical of traditional liberal thought. See, e.g., *An Enquiry Concerning the Principles of Morals*, in DAVID HUME, ENQUIRIES (3rd ed. 1975); HAYEK, *supra* note 34 **Error! Bookmark not defined.**, at 87. But see, e.g., Richard Norman, *Does Equality Destroy Liberty in Contemporary Political Philosophy*, in CONTEMPORARY POLITICAL PHILOSOPHY 83 (K. Graham ed., 1982) (arguing that no genuine liberty can exist in the absence of equality).

⁵⁰ RAWLS, RESTATEMENT, *supra* note 43 **Error! Bookmark not defined.**, at 111.

⁵¹ The First Principle is given precedence over the Difference Principle in what is known as the priority of liberty rule. RAWLS, *supra* note 34, at 53, 220. This structure, according to Rawls, allows a reconciliation of liberty and equality, which defines the end of social justice. *Id.*, at 179. Notably, Rawls states that the priority of liberty is not required under all conditions, but only under "reasonably favorable conditions." This concession is intended, however, to allow societies to secure basic needs of subsistence before establishing the priority of basic liberties. On Rawls' account, reasonably favorable conditions do obtain in practically all liberal democracies. See, e.g., RAWLS, POLITICAL LIBERALISM, *supra* note 43, at 297. In his later work, Rawls partly acknowledged this as a problem and modified his first principle by including in it a "proviso that the equal political liberties, and *only* these liberties, are to be guaranteed their fair value." RAWLS, RESTATEMENT, *supra* note 43 **Error! Bookmark not defined.**, at 149. "Practicable institutional ways" of realizing the fair value of equal political liberties may include, according to Rawls, media regulation. *Id.* However, by "political liberties," Rawls refers only to the right to vote and to hold public office and not to freedom of expression in general. See RAWLS, *supra* note 34 **Error! Bookmark not defined.**, at 53. Accordingly, the regulation of liberty in this context is not designed to directly ensure a fair value of expressive capacity, but a fair value of political participation (an approach similar to that of democratic theory of speech, albeit with greater emphasis on individual entitlements). In fact, Rawls sees his suggested "adjustments" as potential infringements upon freedom of expression, although acceptable ones as part of the need to reconcile equally significant basic liberties in situations of conflict. See RAWLS, RESTATEMENT, *supra* note 43 **Error! Bookmark not defined.**, at 149-50.

distribution, which are perceived as external to the value of freedom (and hence, external to the right to freedom of expression).⁵²

From the perspectives of traditional liberal political theory and classic free speech theory, then, the Internet works as a kind of technological reconciler of liberty and equality in the area of expression. It brings down the seemingly inevitable tension between individual freedom and social justice. In reality, however, the Internet has done more than that; it has blurred the distinction between "liberty" and the "worth of liberty" to the point where a system of free expression that maintains such a distinction is no longer normatively tenable. In order to understand this transformation it is helpful to think about the relationship between freedom and equality as not necessarily a relationship between competing ideals that require balancing or reconciliation,⁵³ but rather as a relationship between something which we are concerned to distribute (i.e. freedom) and the rule which specifies how that something should be distributed (i.e. equality).⁵⁴ Practically every modern theory of justice seeks to apply an egalitarian formula in some space; what changes from theory to theory is the space in which equality is considered to be a cause for concern.⁵⁵ The informational basis for judgments of justice in the Rawlsian approach, for example, includes the space of basic liberties and the space of primary goods, with

⁵² See, e.g., *Buckley v. Valeo*, 424 U.S. 1, 48-49 (1976) ("the concept that government may restrict the speech of some elements of our society in order to enhance the relative voice of others is wholly foreign to the First Amendment"); *Miami Herald Publishing Co. v. Tornillo*, 418 U.S. 241 (1974); Moran Yemini, *Mandated Network Neutrality and the First Amendment: Lessons from Turner and a New Approach*, 13 VA. J. L. & TECH. ¶48 (2008).

⁵³ Ronald Dworkin, for example, has argued that in an ideal world distributional equality does not undermine liberty, but actually protects it. See DWORKIN, *supra* note 34 **Error! Bookmark not defined.**, at 120-83. However, he argues that in the real world of American politics, the conflict between equality and liberty is unavoidable, and it is a conflict in which liberty must lose. *Id.*, at 180

⁵⁴ See, e.g., AMARTYA SEN, *INEQUALITY REEXAMINED* 12-30 (1992) (hereinafter: SEN, *INEQUALITY*); SEN, *THE IDEA* *supra* note 34 **Error! Bookmark not defined.**, at 293-95; Waldron, Jeremy Waldron, *Theoretical Foundations of Liberalism*, 37 PHIL. Q. 127, fn.6 (1987); Elizabeth S. Anderson, *What is the Point of Equality?*, 109 ETHICS 287, 315 (1999); Elizabeth Anderson, *Justifying the Capabilities Approach to Justice*, in MEASURING JUSTICE: PRIMARY GOODS AND CAPABILITIES 81 (Harry Brighouse & Ingrid Robeyns eds., 2010) (noting that theories of distributive justice must specify two things: a metric that characterizes the type of good subject to demands of distributive justice and a rule that specifies how that good should be distributed).

⁵⁵ See generally, e.g., SEN, *THE IDEA*, *id.*, at 291-317. Utilitarians seek equality in the treatment of human beings by attaching equal importance to the utilities of every person; Nozick seeks equality in the space of liberties or rights; Dworkin in the space of resources and so on. See SEN, *INEQUALITY*, *id.*, at 74.

each space subjected to different patterns of distribution, but with egalitarian considerations playing a role in both.⁵⁶ A commitment to *equal freedom* is, therefore, not a compromise between freedom and equality, but a formula, which pins down the form of our commitment to freedom, with the latter still requiring specification.⁵⁷ In the digital ecosystem, what we count as being within the space of freedom is broader than before, and the relegation of expressive capacity to the space of economic and social goods becomes harder to justify.⁵⁸

Of course, the idea that freedom can be defined both in terms of what an individual is not kept from doing by other people and in terms of what the individual can actually do, is not new in itself. These aspects have been most often depicted, respectively, as "negative" and "positive" accounts of freedom,⁵⁹ or using other terms, which roughly mean the same thing.⁶⁰ Several

⁵⁶ Rawls' First Principle is a "distributive pattern rule," which fixes "distributions of actual goods independently of what anyone does;" his Difference Principle is a "constrained procedural rule," which only fixes "opportunities for access to goods," while actual distributions are determined by individual decisions to take advantage of those opportunities. See Anderson, *Justifying the Capabilities Approach*, *supra* note 54 **Error! Bookmark not defined.**, at 82.

⁵⁷ See Waldron, *supra* note 54 **Error! Bookmark not defined.**, at fn.6. For clarity, my analysis is not meant to imply that freedom and concerns of equality can never be in conflict, but rather that they are not always alternatives (as they are often portrayed). Perhaps something that comes closest to a genuine conflict between freedom and equality in the area of expression can be found in the long and ongoing debate over whether certain types of expressions, such as pornography and hate speech deserve First Amendment protection. See, e.g., CATHARINE MACKINNON, *ONLY WORDS* 71 (1993) ("the law of equality and the law of freedom of speech are on a collision course in this country"); Richard Delgado, *Campus Antiracism Rules: Constitutional Narratives in Collision*, NW. U. L. REV. 343 (1991). However, even this controversy is rarely presented in a way that requires a direct and explicit choice between liberty and equality; instead, it focuses on the proper definition of "speech."

⁵⁸ It is worth noting that treating expressive capacity as an aspect of freedom does not necessarily imply that it should be subject to the same rules of distribution which apply to the liberty (non-interference) aspect of freedom. There are multiple dimensions, including different dimensions of freedom, in which equality matters and more than one morally permissible way to take egalitarian concerns into consideration.

⁵⁹ The *locus classicus* of the distinction between "negative" and "positive" freedom is Isaiah Berlin's 1958 lecture titled *Two Concepts of Liberty*, later included in ISAIAH BERLIN, *FOUR ESSAYS ON LIBERTY* 118 (1969) (for an earlier depiction resembling this distinction see, e.g., BENJAMIN CONSTANT, *The Liberty of the Ancients Compared with the Liberty of the Moderns*, in *THE POLITICAL WRITINGS OF BENJAMIN CONSTANT* (1819, 1988)). Berlin wrote against the background of World War II and the Cold War, which led him to identify positive freedom with the idea of conforming to a supreme, often communal value, and therefore with fascism and communism, and negative freedom, on the other hand, with pluralism. However, as several commentators have noted, this linkage between positive freedom and ideological monism is possible but not necessary. See, e.g., Gray, *supra* note 36 (arguing that Berlin is right in rejecting positive conceptions of freedom, as he describes them, but that his description does not exhaust all positive conceptions of freedom); Adrian Blau, *Against Positive and Negative Freedom*, 32 POL. THEORY 547, 548 (2004) arguing that "the debate over positive and negative freedom has created more heat than light". Steven J. Heyman, *Positive and Negative Liberty*, 68 CHI.-KENT L. REV. 81 (1992); Simon Barnbeck, *Freedom and Capacity: Implications of Sen's Capability Approach for Berlin's Negative Freedom*, 1 RERUM CAUSAE 10, 11-12 (2006).

commentators have also specifically criticized the Rawlsian distinction between "liberty" and the "worth of liberty."⁶¹ However, technological changes have increased the normative appeal of this type of approaches, at least as they relate to the area of expression and communication. The main reason for this, I would argue, is that notwithstanding the fact that liberty carries value distinguishable from the capacity to act on it,⁶² ICTs light an intensifying beam on the notion that an adequate understanding of freedom cannot be detached from the outcomes that emerge from it, that is, from what really happens to people.⁶³

This observation seems to be in line with Internet users' own reported attitudes towards the value of freedom of expression. Several global surveys conducted by the BBC, the Oxford Internet Institute, INSEAD, and the World Economic Forum,⁶⁴ have found that Internet users see

⁶⁰ See, e.g., C. Edwin Baker, *Property and Its Relation to Constitutionally Protected Liberty*, 134 U. PA. L. REV. 741, 775-82 (1986); Baker, *supra* note 45 (both differing "formal" freedom from "substantive" freedom); STEPHEN BREYER, *ACTIVE LIBERTY* (2005) (distinguishing between "modern liberty" and "active liberty"); See SEN, *THE IDEA*, *supra* note 34 **Error! Bookmark not defined.**, at 228; Amartya Sen, *Elements of a Theory of Human Rights*, 32 PHIL. & PUB. AFF. 315, 330-38 (2004); Amartya Sen, *Human Rights and Capabilities*, 6 J. HUM. DEV. 151 (2005) (all distinguishing between the "process aspect" and the "opportunity aspect" of freedom).

⁶¹ See, e.g., Daniels, *supra* note 46 (showing that refusing to accept socioeconomic factors as constraints on liberty is arbitrary and that the parties in the Rawlsian original position would choose a principle of equal (or approximately equal) worth of liberty for reasons precisely analogous to those used in choosing a principle of equal liberty); R. G. PEPPER, *MARXISM, MORALITY, AND SOCIAL JUSTICE* 404 (1990) (arguing that in order to be judged adequate, a theory of justice must demand "at least approximate equality in the worth of liberty, as well as strict equality of liberty per se"); THOMAS W. POGGE, *REALIZING RAWLS* 122-34 (1989) (arguing that Rawls' first principle of justice should be modified so as to include a reference to the means to the equal worth of liberty, which are ordinarily relegated to the difference principle); AMARTYA SEN, *DEVELOPMENT AS FREEDOM* 60-67 (1999) (hereinafter: SEN, *DEVELOPMENT*) (heralding Rawls for separating out the importance of liberty and establishing the principle that it deserves special treatment, but arguing that giving liberty absolute preeminence over other concerns is too extreme, since immunity from interference by others is not the only concern in a person's freedom).

⁶² See, e.g., Avishai Margalit, *Decent Equality and Freedom: A Postscript*, 64 SOC. RES. 147 (1997). Margalit posits that freedom from interference is more fundamental than freedom to achieve a good life, since the former means that we do not have to bend our will to the illegitimate will of someone else, and this is freedom from humiliation. According to Margalit, freedom from humiliation is required for a decent society, though it may not be enough for achieving a just society. *Id.*, at 149.

⁶³ Cf. SEN, *THE IDEA*, *supra* note 34 **Error! Bookmark not defined.**, at 68, 316; SEN, *DEVELOPMENT*, *id.*, at 66.

⁶⁴ See BBC World Service, *Four in Five Regard Internet Access as a Fundamental Right: Global Poll*, http://news.bbc.co.uk/2/shared/bsp/hi/pdfs/08_03_10_BBC_internet_poll.pdf (last visited Jan. 6, 2018); BBC World Service, *One-in-Two Say Internet Unsafe Place for Expressing Views: Global Poll* (2014), <http://downloads.bbc.co.uk/mediacentre/bbc-freedom-poll-2014.pdf> (last visited Jan. 6, 2018); Soumitra Dutta, William H. Dutton & Ginette Law, *The New Internet World: A Global Perspective on Freedom of Expression, Privacy, Trust and Security Online* (INSEAD Working Paper No. 2011/89/TOM, 2011), https://flora.insead.edu/fichiersti_wp/inseadwp2011/2011-89.pdf (last visited Jan. 6, 2018); William H. Dutton, Ginette Law, Gillian Bolsover & Soumitra Dutta, World Economic Forum, *The Internet Trust Bubble: Global Values, Beliefs and Practices* (2013), http://www.sbs.ox.ac.uk/cybersecurity-capacity/system/files/WEF_InternetTrustBubble_Report2_2014_0.pdf (last visited Jan. 6, 2018).

freedom of expression both in terms of what they can actually do and in terms of how others can interfere with what they do. This is, arguably, why users are able to consistently hold two seemingly contradictory statements - that the Internet has brought them greater freedom *and* that it is not a safe place for them to voice their opinions.⁶⁵

A similar idea also echoes, for example, in an illuminating article published by Benkler in 2011, where he offers a methodological framework for describing human behavior in information systems, in ways that can be observed and considered empirically.⁶⁶ In order to describe the flow of power and freedom in the evolution of information production systems, Benkler embraces a definition of "freedom," which follows expansive conceptions of freedom found, for example, in the so-called Capabilities Approach and related approaches.⁶⁷ "Freedom" in a network, according to Benkler, is "the extent to which individuals or other entities in a given network can influence their own behaviors, configurations or outcomes (exercise freedom) and be immune to the efforts of others in the network to constrain them (be subject to their power)."⁶⁸ Although Benkler's analysis is descriptive in nature (i.e. designed to measure the actual level of freedom in a network, as opposed to establishing a moral claim as to how freedom should be distributed), his choice of definition is telling. It suggests that the traditional conception of freedom as immunity from interference is not suitable for describing how freedom is actually experienced in the digital ecosystem. In the remainder of this Part, I will try to further explain why that is.

⁶⁵ Dutton et al., *id.*, at 10.

⁶⁶ Yochai Benkler, *Networks of Power, Degrees of Freedom*, 5 INTL. J. COMM. 721 (2011).

⁶⁷ See generally, e.g., Norman Daniels, *Equal Liberty and Unequal Worth of Liberty*, in READING RAWLS: CRITICAL STUDIES ON RAWLS' A THEORY OF JUSTICE 253, 256-57 (Norman Daniels ed., 1975, 1989); Amartya Sen, *Markets and Freedoms: Achievements and Limitations of the Market Mechanism in Promoting Individual Freedoms*, 45 OXF. ECON. PAP. 519 (1993) (arguing that freedom has at least two valuable aspects: the "opportunity aspect" and the "process aspect"); SEN, note 34, at 228, 371; Leslie Green, *What is Freedom For?* (Oxford Legal Studies Research Paper No. 77/2012, 2012), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2193674 (last visited Jan.6, 2018).

⁶⁸ *Id.* Benkler relies on these definitions to describe the flow of power and freedom in the evolution of information production systems during a 40 years period (from 1970 to 2010). Using fan video production as a test case, he finds that the Internet has been an enabler of greater freedom. *Id.*, at 738-50. As shall be explained below, this article takes a much more ambivalent view about this proposition.

(B) Can Implies Ought

One of the foundations of modern morality is the dictum of "Ought implies Can" - the idea that inability to do something implies that one does not have an obligation to do it, or in terms of political theory, the idea that a system of rules must not impose duties to do what cannot be done. Many philosophers have seen this dictum (often attributed to Kant) as a necessary bridge between norm and fact.⁶⁹ In some circumstances, however, the reverse - "Can implies Ought" - may also be true. The idea that being in a position or having the capability to do something entails a duty to act (or liability for not acting) underlies various economic, moral and legal rules. Good Samaritan laws; criteria for risk distribution in tort law;⁷⁰ the principle of Common but Differentiated Responsibilities in international environmental law;⁷¹ and the principle of Corporate Social Responsibility (CSR) in business ethics,⁷² are just a few examples in which the precept "Can implies Ought" plays a role, either explicitly or implicitly.

The notion of correlating obligations - and corresponding entitlements - with capabilities is particularly relevant in the context of technological change, which alters (or has the potential to alter) our capability set.⁷³ Morality is entwined with technology in the sense that when technology enables us to do certain things or achieve certain goals, morality may require us to do

⁶⁹ See, e.g., RAWLS, *supra* note 34, at 208; William K. Frankena, *Obligation and Ability*, in PHILOSOPHICAL ANALYSIS 148, 157 (Max Black ed., 1950); H.L.A. HART, *Punishment and the Elimination of Responsibility*, in PUNISHMENT AND RESPONSIBILITY 168, 177 (1968). For a thorough discussion of different interpretations of this dictum see generally, e.g., Robert Stern, *Does 'Ought' Imply 'Can'? And Did Kant Think It Does?*, 16 UTILITAS 42 (2004).

⁷⁰ See generally, e.g., GUIDO CALABRESI, THE COSTS OF ACCIDENTS 135-73 (1970).

⁷¹ See generally, e.g., CENTRE FOR INTERNATIONAL SUSTAINABLE DEVELOPMENT LAW (CISDL), THE PRINCIPLE OF COMMON BUT DIFFERENTIATED RESPONSIBILITIES: ORIGINS AND SCOPE (2002), http://cisdl.org/public/docs/news/brief_common.pdf (last visited Jan. 6, 2018).

⁷² See generally, e.g., Stepan Wood, *The Case for Leverage-Based Corporate Human Rights Responsibility*, 22 BUS. ETHICS Q. 63 (2012).

⁷³ The term "capability set" is borrowed from Amartya Sen. In Sen's capabilities approach, the term is used to describe the set of real opportunities and freedoms people have to perform any of the activities associated with well-being. In selecting one or more capabilities from the set people have, they exercise their choice to enjoy different conceptions of well-being. See, e.g., Amartya Sen, *Capability and Well-Being*, in THE QUALITY OF LIFE 30 (Martha C. Nussbaum & Amartya Sen eds., 1993).

those things or strive towards such goals.⁷⁴ Gabriella Blum, for example, has shown how technological developments (among other things) may put into question international humanitarian law's long-established principle of the equal application of the law.⁷⁵ As Blum demonstrates, the greater intelligence and precision capabilities a military possesses, the greater the moral expectations that it will use them to avoid civilian harm; such expectations may, in turn, impose substantially higher degrees of responsibility on technologically advanced countries and subject such countries to a stricter test of proportionality than that imposed on less-advanced countries (or non-state actors).⁷⁶ In this example, technological feasibility not only encourages the active pursuit of pre-existing values (e.g. minimizing civilian harm), but may also influence our very understanding of norms themselves (e.g., "equality" in warfare; "proportionality").

Similarly, a technology that enables a wide distribution of expressive opportunities creates moral expectations that it will be utilized towards that end, which may, in turn, impose moral obligations on whoever is in a position to do something effective in this respect. The basis for such moral expectations lies, at least partly, in the duty of societies to remove injustices and bring about the conditions for lifting restrictions on human freedoms, as far as circumstances permit.⁷⁷ Technological developments can be a change of circumstances in that sense, thereby invoking the duty to take steps towards the removal of restrictions, which can no longer be justified. The initial way to fulfill this duty is, of course, through laws and policies aimed at

⁷⁴ See, e.g., Swierstra, van de Bovenkamp & Trappenburg, *supra* note 19, at 56; Swierstra & Waelbers, *supra* note 5, at 165; Anton Vedder, *Responsibilities for Information on the Internet*, in THE HANDBOOK OF INFORMATION AND COMPUTER ETHICS 339, 345 (Kenner Einar Himma & Herman T. Tavani eds., 2008). This view should not be confused with the idea that whatever is technologically feasible is also normatively desirable. See, e.g., Hasan Ozbekhan, *The Triumph of Technology: "Can Implies Ought,"* in PLANNING FOR DIVERSITY AND CHOICE: POSSIBLE FUTURES AND THEIR RELATIONSHIP TO THE MAN-CONTROLLED ENVIRONMENT 210 (Stanford Anderson ed., 1968). For example, as convincingly argued by Allen Buchanan, the principle of equal opportunity may justify public support for genetic intervention in order to prevent genetically based deprivations (e.g. blindness), but may at the same time justify placing constraints on the uses of genetic enhancement technology. Allen Buchanan, *Equal Opportunity and Genetic Intervention*, 12 SOC. PHIL. & POLY 105 (1995).

⁷⁵ Gabriella Blum, *On a Differential Law of War*, 52 HARV. INT'L L.J. 164 (2011).

⁷⁶ *Id.*, at 194.

⁷⁷ See RAWLS, *supra* note 34, at 216-18.

providing access to enabling technology - in our case, the Internet (or ICTs more generally).⁷⁸ I shall not elaborate on the issue of physical access to the Internet, since it is not the focus of this article; for our purposes it suffices to note that the precept "Can implies Ought" indeed resonates in moral and legal discourse over the just distribution of access to ICTs, and the question of whether such access should be considered a human or civil right.⁷⁹ In fact, this precept has accompanied public and political discourse over government's role in the just distribution of information technologies much before the advent of digital technologies and can be traced back to early debates on universal service.⁸⁰

However, the moral obligation which is packed into "Can implies Ought" extends beyond the promotion of technological diffusion *per se*, as it also requires actions to ensure that technology fulfills the potential for which its diffusion is considered morally desirable, to begin with. Access to the Internet for each and every individual deserves to be treated as a moral

⁷⁸ The extent and specific contents of the obligation to make technology available may depend on different variables, such as the state's own economic capacity, and does not necessarily imply that governments must provide Internet access free to all citizens. *See, e.g.,* Toks Oyedemi, *Internet Access as Citizen's Right? Citizenship in the Digital Age*, 19 CITIZENSHIP STUD. 450 (2015). Regulatory oversight of the telecommunications market; state investments in Internet infrastructure; subsidies to poor households; provision of free access in public spaces and so on, are all among the potential actions, which can be taken in order to actualize the moral obligation to provide (and corresponding entitlement to receive) access to enabling technology.

⁷⁹ A report submitted to the United Nations' General Assembly in 2011 by the U.N. Special Rapporteur on Freedom of Expression, Frank La Rue, holds that Internet access should be recognized as a human right. *See* Human Rights Council, *Report of the Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression*, Frank La Rue, UN Doc. No. A/HRC/17/27 (May 16, 2011), http://www2.ohchr.org/english/bodies/hrcouncil/docs/17session/A.HRC.17.27_en.pdf (last visited Jan. 6, 2018). Prior to this Report, several states (e.g. Estonia, Finland, France) have given institutional recognition to the idea of a "right" to Internet access. *See, e.g.,* Colin Woodard, *Estonia, Where Being Wired is a Human Right*, CHRIST SCI. MONIT. (Jul. 1, 2003), <http://www.csmonitor.com/2003/0701/p07s01-woeu.html> (last visited Jan. 6, 2018); Don Reisinger, *Finland Makes 1 Mb Broadband Access a Legal Right*, CNET (Oct. 14, 2009, 11:29AM), http://news.cnet.com/8301-17939_109-10374831-2.html (last visited Jan. 6, 2018); Conseil Constitutionnel [Constitutional Court] Decision No. 2009-580DC, June 10, 2009, J.O. 9675 (Fr.), *translated in Act Furthering the Diffusion and Protection of Creation on the Internet*, Décision n° 2009-580, 4 (June 10, 2009), http://www.conseil-constitutionnel.fr/conseil-constitutionnel/root/bank_mm/anglais/2009_580dc.pdf (last visited Jan. 6, 2018). *See generally also, e.g.* Robin Mansell, *From Digital Divides to Digital Entitlements in Knowledge Societies*, 50 CURR. SOCIOLOG. 407 (2002); Michael L. Best, *Can the Internet be a Human Right?* 4 HUM. RIGHTS & HUM. WELFARE 23 (2004); Nicola Lucchi, *Access to Network Services and Protection of Constitutional Rights: Recognizing the Essential Role of Internet Access for the Freedom of Expression*, 19 CARDOZO J. INT'L & COMP. L. 645 (2011); Jonathon W. Penney, *Internet Access Rights: A Brief History and Intellectual Origins*, 38 WM. MITCHELL L. REV. 10 (2011); Stephen B. Wicker & Stephanie M. Santoso, *Viewpoint: Internet Access is a Human Right – Connecting Internet Access with Freedom of Expression and Creativity* 56 COMM. ACM 43 (2013).

⁸⁰ *See generally, e.g.,* Milton Mueller, *Myth Made Law (Telecommunications Act of 1996)*, 40 COMM. ACM 39 (1997); Harmeet Sawhney & Krishna P. Jayakar, *Universal Access*, 41 ANN. REV. INFO. SCI. TECH. 159 (2007).

entitlement not because access to technology is a good in itself, but because of our assumptions about the Internet's potential to expand human capabilities in areas of life, which are central to the development and regulation of the self, and of one's relation to others.⁸¹ These assumptions rest on a view of Internet technology as a fundamental departure from the mass media model of information production, but these assumptions can be extremely fragile. Recent empirical studies of Internet traffic show, for example, that the developing model of content distribution over the Internet is increasingly organized around serving video from a small number of providers to a large number of consumers (primarily due to the development of content distribution networks (CDNs), like Akamai).⁸² As one commentator put it: "the Internet is now television, or it will be soon."⁸³ When speaking of "Internet access," policymakers should, therefore, be equally concerned with both words forming this phrase. If the Internet becomes just another form of multi-multichannel television, then not much will be achieved by ensuring that everyone has access to it.

This is a crucial point on which classic liberal political theory provides little normative guidance. The basic reason for this is that liberal political theory rarely deals with technology at all, and even when it does, it treats it as a "black box," i.e. as a constant given, which may facilitate social change, but not as a social creation in itself, which should be subject to the

⁸¹ This idea is inspired by Seana Shiffrin's work on a thinker-based approach to freedom of speech. *See, e.g.*, Seana Valentine Shiffrin, *A Thinker-Based Approach to Freedom of Speech*, 27 CONST. COMMENT. 283 (2011). In Rawlsian terms, access to ICTs, being a facilitator of opportunities for expression and communication, could be considered a primary good, i.e. something that everyone is presumed to want, and which "persons need in their status as free and equal citizens, and as normal and fully cooperating members of society over a complete life." RAWLS, *supra* note 34, at xiii.

⁸² Video streaming via Netflix accounts for nearly 35% of peak downstream traffic in the United States, while real-time entertainment accounts for more than 67% of all consumer Internet traffic over fixed lines and nearly 40% of all mobile traffic. *See, e.g.*, SANDVINE, GLOBAL INTERNET PHENOMENA REPORT 2H 2014 5-7 (2015), <https://www.sandvine.com/downloads/general/global-internet-phenomena/2014/2h-2014-global-internet-phenomena-report.pdf> (last visited Jan. 6, 2018).

⁸³ Christian Sandvig, *The Internet as the Anti-Television: Distribution Infrastructure as Culture and Power*, in SIGNAL TRAFFIC: CRITICAL STUDIES OF MEDIA INFRASTRUCTURES 287, 304 (Lisa Parks & Nicole Starosielski eds., 2015). It is estimated that video demands across the Internet (not including P2P) will grow to 79% of Internet traffic by 2018. *See* CISCO, CISCO VISUAL NETWORKING INDEX: FORECAST AND METHODOLOGY, 2013-2108 2 (2014), http://www.cisco.com/c/en/us/solutions/collateral/service-provider/ip-ngn-ip-next-generation-network/white_paper_c11-481360.html (last visited Jan. 6, 2018).

principles applied to other spheres of life. Political philosophy tends to distinguish between the social and political spheres, on the one hand, and the technological sphere, on the other hand, treating the former as areas to which the principles of a political theory should be applied, and the latter merely as a neutral background against which individuals and groups pursue their personal, political and social goals. Consequently, political philosophy may, perhaps, identify problems of resource distribution, such as inequalities in Internet access and digital literacy, as cases of injustice, but "the Internet" itself, its nature and architecture, would not generally be regarded by liberal political theory as a subject of justice.⁸⁴

Another, related problem lies in the fact that the dominant theories of the twentieth-century focus on resource distribution. For resource egalitarianism (Rawlsian, Dworkinian or other), the embodiment of personal advantage is the holding of resources, and the basis of political evaluation is the distribution of resources.⁸⁵ In other words, resourcism is interested in what people have and not with what they can actually do with what they have. Without getting into a thorough discussion about the strengths and weaknesses of resourcism (a discussion which falls beyond the scope of this article),⁸⁶ it is important to point out that this approach is too simplistic for evaluating justice in the context of technological change.⁸⁷ While the relative possession of, say, income and wealth may be a good approximation for evaluating justice in

⁸⁴ This point cannot be fully elaborated within the scope of this article. For a more thorough discussion see Moran Yemini, *Free Speech for All: A Justice-Infused Theory of Speech for the Digital Ecosystem* 61-77 (2017) (unpublished doctoral these, the University of Haifa) (on file with author).

⁸⁵ See, e.g., Amartya Sen, *Equality of What?*, in *THE TANNER LECTURES ON HUMAN VALUES* 195, 216 (Sterling McMurrin ed., 1980).

⁸⁶ For a theoretical analysis of different ways to measure justice see generally, e.g., Jude Browne & Marc Stears, *Capabilities, Resources, and Systemic Injustice: A Case of Gender Inequality*, 4 *POL. PHIL. & ECON.* 355 (2005); Sandrine Berges, *Why the Capability Approach is Justified*, 24 *J. APPL. PHIL.* 16 (2007); *MEASURING JUSTICE: PRIMARY GOODS AND CAPABILITIES* (Harry Brighouse & Ingrid Robeyns eds., 2010).

⁸⁷ See generally, e.g., Anna Lauren Hoffmann, *Google Books as Infrastructure of In/Justice: Towards a Sociotechnical Account of Rawlsian Justice, Information, and Technology* (2014) (unpublished doctoral thesis, The University of Wisconsin-Milwaukee), <http://dc.uwm.edu/cgi/viewcontent.cgi?article=1535&context=etd> (last visited Jan. 6, 2018).

some areas of life, this metric for measuring justice is not equally suitable for an evaluation of our technological environment.

This brings us back to the statement made earlier about the moral significance of Internet access being inherently bound with our assumptions about what people can do with access to the Internet. The focus here, from an ethical standpoint, is not on holding a technological resource as such, but on the ability of the holder to convert the resource into actual achievements (e.g. speaking, communicating, retrieving information and so on), and that ability depends on the resource at least as much as it depends on the person. The Capabilities Approach, which I mentioned earlier, grew out of a critique of the Rawlsian focus on the holding of resources as such, arguing that attention should be shifted, instead, to the *relationship* between persons and resources.⁸⁸ Amartya Sen's critique dealt solely with the side of persons in that relationship, emphasizing the inter-individual variance in persons' ability to convert resources into achievements, or freedoms to achieve (due to differing physical, social and environmental "conversion factors").⁸⁹ But the same logic can be applied to an evaluation of technology itself. If we accept that technology is not a fixed, pre-determined thing and that the relationship between persons and technology is reciprocal, then the moral focus should shift from the mere question of whether people have Internet to the question of what people can actually do with the Internet they have. This insight calls for a more complex conception of freedom than the traditional freedom-as-immunity conception.

⁸⁸ *Id.*, at 216-19. *See also, e.g.*, SEN, *supra* note 34, at 33-37.

⁸⁹ The authoritative example used by Sen concerns a comparison between a disabled and a non-disabled person. Even if both persons have the same ends, an interpersonal comparison based on their holdings of resources does not necessarily reflect their respective real ability to pursue their ends. *See, e.g.*, Amartya Sen, *Development as Capability Expansion*, 19 J. DEV. PLAN. 41, 47-48 (1989). *See also* Amartya Sen, *Justice: Means versus Freedoms*, 19 PHIL. & PUB. AFF. 111 (1990).

(C) A Technologically-Induced Endowment Effect

From an ethical perspective, the case for a speech-enabling Internet is particularly strong precisely because we have seen how its potential can be realized. As discussed above, technological feasibility may itself carry ethical implications, based on a technology's perceived potential. Moreover, as shall be discussed in this chapter, the actual fulfillment of a technology's potential may provide an additional, separate basis for moral entitlements. Put simply, taking away something requires a stronger justification than that needed in order not to give that same thing in the first place, and this is true also with regard to the heightened expressive capacity brought about by the Internet.

The much studied "endowment effect" stands for the principle that people tend to place greater value on things when they possess them than when they do not.⁹⁰ The endowment effect has been shown to be present in a variety of contexts and to be strongest with regard to non-tangible assets, which have no close market substitutes.⁹¹ Though initially referring to a psychological phenomenon, the endowment effect invokes ethical consequences as well. For example, the longer one possesses an object or an entitlement, the more one's expectations will be that she will continue to possess that entitlement.⁹² Oliver Wendel Holmes perceived this idea as early as 1897, arguing that "a thing which you have enjoyed and used as your own for a long time, whether property *or an opinion*, takes root in your being and cannot be torn away without you resenting the act and trying to defend yourself, however, you came by it."⁹³ When a status or

⁹⁰ The term was coined by Richard Thaler, *Toward a Positive Theory of Consumer Choice*, 1 J. ECON. BEHAV. & ORG. 39, 44 (1980).

⁹¹ For a detailed review of empirical research substantiating the existence of the endowment effect in various contexts *see, e.g.*, Russel Korobkin, *The Endowment Effect and Legal Analysis*, 97 NW. U. L. REV. 1227 (2003).

⁹² *See, e.g.*, Bailey H. Kuklin, *The Justification for Protecting Reasonable Expectations*, 29 HOFSTRA L. REV. 863, 888 (2001).

⁹³ Oliver W. Holmes, *The Path of the Law*, 10 HARV L. REV. 457, 477 (1897) (emphasis added).

a practice persists for some time, as Scott Gordon argues, people are led to expect that it will continue and that they have "acquired a *right* to its continuance."⁹⁴

Moreover, even regardless of the element of time, the endowment effect suggests that individuals are burdened more by an entitlement that is taken away from them than they would if they were not given that entitlement in the first place.⁹⁵ A legal expression of this principle may be found in the idea that the taking away of rights already granted must satisfy a more demanding level of constitutional scrutiny than not providing the same right. This was one of the main arguments on which U.S. Federal courts relied in their decision to overturn the California ballot initiative Proposition 8, which had banned same-sex marriage. Referring to the fact that Proposition 8, in fact, took away from same-sex couples a right - the right to marry - which they had already possessed, the U.S. Court of Appeals for the Ninth Circuit stated, *inter alia*, the following: "[w]ithdrawing from a disfavored group the right to obtain a designation with significant societal consequences is different from declining to extend that designation in the first place, regardless of whether the right was withdrawn after a week, a year, or a decade."⁹⁶

Craig Konnoth has persuasively linked the endowment effect, and the constitutional principle of heightened scrutiny for rights reversal, with Margaret Jane Radin's philosophical approach towards the relationship between property and personhood.⁹⁷ Radin has argued that part of our personhood is constructed through the objects we possess, which are (to varying degrees)

⁹⁴ SCOTT GORDON, WELFARE, JUSTICE, AND FREEDOM 92 (1980). *See also, e.g.*, Robert C. Ellickson, *Bringing Culture and Human Frailty to Rational Actors: A Critique of Classical Law and Economics*, 65 CHI-KENT L. REV. 23, 39 (1989) (arguing that the possession of an entitlement creates expectations, which lead people to see that entitlement as a vested right).

⁹⁵ *See, e.g.*, Craig Konnoth, *Revoking Rights*, 66 HASTINGS L.J. 1365 (2015).

⁹⁶ *Perry v. Brown*, 671 F. 3d 1052, 1079-80 (9th Cir. 2012) (relying on *Romer v. Evans*, 517 U.S. 620 (1996)). For the sake of completeness, it should be noted that on June 26, 2013, the U.S. Supreme Court rendered a decision declining to review the Ninth Circuit's decision on the basis that the appellants lacked standing at the Supreme Court. The Supreme Court further ruled that proponents of Proposition 8 also lacked standing at the Appeals Court, and that the Ninth Circuit's ruling too should have been dismissed for lack of standing. The case was returned to the Ninth Circuit with instructions to vacate its former ruling (affirming the district court's overturn of Proposition 8), leaving the original district court ruling (overturning Proposition 8) as the final ruling in the case. *Hollingsworth v. Perry*, 570 U.S. ____ (2013). These procedural issues do not affect the general, theoretical analysis set herein.

⁹⁷ Konnoth, *supra* note 95, relying on Margaret Jane Radin, *Property as Personhood*, 34 STAN. L. REV. 957 (1982).

entangled with our sense of identity and social role, as well as with our expectations and plans for our own continuity.⁹⁸ Building on Radin's notion of property as constitutive of personhood and personal autonomy, Konnoth has argued that the endowment effect, specifically in the case of rights and moral entitlements, is caused (at least in part) by injury we feel occurs to personhood when an entitlement is taken away.⁹⁹ It is almost trivial to say that the rights we have or believe we should have, help construct who we are and develop our personalities in desirable ways. Taking a right, which is connected to our selves and identities, away, therefore places a much greater burden on our ability to define our own identity.¹⁰⁰ Moreover, at a very basic level, when certain property is needed in order to exercise a right, the loss of property may effectively extinguish the right, in which case the feeling of loss can be attributed not to the loss of property *per se*, but to the loss of what the property enables one to do.¹⁰¹

The same principles and logic can be applied to the context of technology, and the digital ecosystem.¹⁰² The idea of having expressive opportunities at the tip of our fingers has taken root in our being to the point in which we have an expectation that this state of affairs will persist, as well as a notion that we have acquired a right to its continuance. Moreover, so-called “digital natives”¹⁰³ have not even acquired such notion - they were born into it. In this regard, the language of “technological change,” which is often used as a framework for analyzing the relative improvements brought about by the Internet, is helpful as an analytical tool for putting the development of the Internet in historical perspective, but it is not accurate as an instrument for

⁹⁸ Radin, *id.*, at 968. This idea has substantial empirical support and theoretical support in consumer research (*see, e.g.*, Russel W. Belk, *Possessions and the Extended Self*, 15 J. CONSUMER RES. 139 (1988); Banwari Mittal, *I, Me, and Mine – How Products Become Consumers' Extended Selves*, 5 J. CONSUMER BEHAV. 550 (2006) and, of course, in the philosophy of technology.

⁹⁹ Konnoth, *supra* note 95, at 1378-81.

¹⁰⁰ *Id.*, at 1381-82.

¹⁰¹ *Id.*

¹⁰² In this regard, it is worth noting that “studies suggest that the endowment effect exists when no legal entitlement *per se* is at issue at all.” Korobkin, *supra* note 91, at 1235.

¹⁰³ *See* JOHN PALFREY & URS GASSER, *BORN DIGITAL 1* (2008) (defining “digital natives” as people who were born after 1980, have access to networked digital technologies, and have the skills to use those technologies).

describing the personal experience of many, and quite soon most, Internet users. For those of us who have experienced the transition to the digital age, a distinction between having the freedom to speak and the (technological) means to exercise that freedom may still be conceptually understandable (though dated), and so for us there is a sense of talking about the "new" practical individual freedom made feasible by the digital ecosystem.¹⁰⁴ For those users who have grown up with the Internet, however, there is nothing "new" about the practical individual freedom that the Internet is said to provide; it is not something which now complements a separate, previously-existing liberty, but simply what such users know and understand as a constitutive, inseparable part of their freedom of expression.¹⁰⁵

(D) A Rich Conception of Autonomy

The way we perceive personal autonomy in the digital ecosystem constitutes another, in my mind crucial, reason for putting into question the continuing relevance of traditional model-conceptions worked out by twentieth-century liberal political theory, for societies "dominated by sophisticated networks and technologies designed to support flows of information."¹⁰⁶

As described by Benkler, the digital ecosystem supports a substantive and rich conception of autonomy as a practical lived experience. The sense of enhanced individual autonomy brought about by the emergence of the digital ecosystem lies in the practical capacities that this system provides to individuals, and this enhanced autonomy is at the core of all improvements associated

¹⁰⁴ This is a central theme in Benkler's work, for example. *See, e.g.*, BENKLER, *supra* note 9, at 139.

¹⁰⁵ *Cf. e.g.*, DON TAPSCOTT, *GROWN UP DIGITAL: HOW THE NET GENERATION IS CHANGING YOUR WORLD* 76 (2009) ("young people insist on freedom of choice. It's a basic feature of their media-diet. Instead of listening to the top 10 hits on the radio, the Net Geners compose iPod playlist of thousands of songs chosen from millions of tunes available"); Samuel Blanchard, *Teaching and Learning for the Net Generation: A Robotic-Based Learning Approach*, in *INTERDISCIPLINARITY, CREATIVITY, AND LEARNING: MATHEMATICS WITH LITERATURE, PARADOXES, HISTORY, TECHNOLOGY, AND MODELING* 217, 222 (Bharath Sriraman, Viktor Freiman & Nicole Lirette-Pitre eds., 2009) (arguing that an important aspect in the learning experience of the "net generation" is an insistence on active choice and expression).

¹⁰⁶ Hoffmann, *supra* note 87, at 118.

with the digital ecosystem.¹⁰⁷ This perception of individual autonomy is quite different from most accounts of autonomy found in traditional free speech theory. In traditional free speech theory, personal autonomy is considered one of the three most important justifications for freedom of expression, alongside the attainment of truth and securing democratic participation (collective self-governance).¹⁰⁸ Although proponents of the autonomy defense of freedom of expression have not elaborated much on what they mean by "autonomy,"¹⁰⁹ three main aspects of the mainstream understanding of autonomy can still be drawn from the different accounts found in the literature: First, all commentators agree that "autonomy" refers in some way to self-government;¹¹⁰ secondly, autonomy-based defenses of freedom of expression tend to focus on either the perspective of the speaker or the perspective of the listener, but not on both. Other approaches, which do not necessarily privilege one perspective over the other, nevertheless treat

¹⁰⁷ BENKLER, *supra* note 9, at 133-75.

¹⁰⁸ See generally, e.g., the seminal essay by Thomas I. Emerson, *Toward a General Theory of the First Amendment*, 72 YALE L.J. (1963); Kent Greenawalt, *Free Speech Justifications*, 89 COLUM. L. REV. 119 (1989). Emerson specifies a fourth rationale for the right to freedom of expression - maintaining the balance between stability and change in society- but this rationale has not gained the same weight as the other three. Other, less influential defenses of freedom of expression, which have been given by scholars, include the argument from distrust (see, e.g., Vincent Blasi, *The Checking Value in the First Amendment Theory*, 2 L. & SOC. INQUIRY 521 (1977); Richard. A. Epstein, *Property, Speech, and the Politics of Distrust*, 59 U. CHI. L. REV. 41 (1992)); and the argument from tolerance (see, e.g., LEE C. BOLLINGER, *THE TOLERANT SOCIETY: FREEDOM OF SPEECH AND EXTREMIST SPEECH IN AMERICA* (1986); DAVID A.J. RICHARDS, *TOLERATION AND THE CONSTITUTION* 217-18 (1986); Steven D. Smith, *The Restoration of Tolerance*, 78 CAL. L. REV. 304 (1990)).

¹⁰⁹ For autonomy-based defenses of freedom of expression see generally, e.g., C. EDWIN BAKER, *HUMAN LIBERTY AND FREEDOM OF SPEECH* (1989); Martin H. Redish, *The Value of Free Speech*, 130 U. PA. L. REV. 591 (1982); David A. J. Richards, *Free Speech and Obscenity Law: Toward a Moral Theory of the First Amendment* 123 U. PA. L. REV. 45 (1974); Richard H. Fallon, Jr., *Two Senses of Autonomy*, 46 STAN. L. REV. 875 (1994); Ronald Dworkin, *Liberty and Pornography*, 38 N.Y. REV. BOOKS 12 (1991); Ronald Dworkin, *The Coming Battles Over Free Speech*, 39 N.Y. REV. BOOKS 55 (1992); Ronald Dworkin, *Women and Pornography*, 40 N.Y. REV. BOOKS 36 (1993); Joseph Raz, *Free Expression and Personal Identification*, 11 OX. J. LEGAL STUD. 303 (1991); Scanlon, *supra* note 45 **Error! Bookmark not defined.**; Thomas Scanlon, *Freedom of Expression and Categories of Expression*, 40 U. PITT. L. REV. 519 (1979); Charles Fried, *The New First Amendment Jurisprudence: A Threat to Liberty*, 59 U. CHI. L. REV. 225 (1992); David A. Strauss, *Persuasion, Autonomy, and Freedom of Expression*, 91 COLUM. L. REV. 334 (1991); Thomas Nagel, *Personal Rights and Public Space*, 24 PHIL. & PUB. AFF. 83 (1995); Dana Remus Irwin, *Freedom of Thought: The First Amendment and the Scientific Method*, 2005 WIS. L. REV. 1479 (2005); Christina E. Wells, *Reinvigorating Autonomy: Freedom and Responsibility in the Supreme Court's First Amendment Jurisprudence*, 32 HARV. C.R.-C.L. L. REV. 159 (1997).

¹¹⁰ See, e.g., Susan J. Brison, *The Autonomy Defense of Free Speech*, 108 ETHICS 312, 323 (1998). For an overview of the philosophical literature on the subject see generally, e.g., *AUTONOMY AND THE CHALLENGES TO LIBERALISM* (John Christman & Joel Anderson eds., 2009).

the interests of speakers and the interests of listeners as separate entities;¹¹¹ thirdly, most accounts of autonomy equate autonomy with the ability to make rational choices or with having what Dworkin labeled "moral independence,"¹¹² but do not count the ability to act on one's choices as definitive of a person's autonomy.¹¹³

Interestingly, in recent years, with the development of digital technologies, the argument from individual autonomy has gained popularity as a primary justification for freedom of expression¹¹⁴ (compared to the second half of the twentieth-century, in which the argument from democracy was most dominant¹¹⁵), but the conception of autonomy on which that argument has traditionally relied has not been seriously reassessed by free speech theorists. This is despite the fact that the mainstream conception of autonomy obviously does not reflect autonomy as a practical lived experience, i.e. as it is experienced by people in the digital ecosystem. In this regard, the distinction between the perspective of the speaker and the perspective of the listener, which may have been helpful in the context of the mass-media model of information production, is much less relevant in the context of the digital ecosystem, where each user is constantly both a (potential) speaker and a (potential) listener.¹¹⁶ Similarly, an exclusion of one's ability to act on her choices from the conception of individual autonomy practically ignores the realities of the

¹¹¹ For example, Baker's and Redish's accounts of autonomy focus on the interests of the speaker, while Scanlon's account focuses on those of the audience. For a more detailed analysis of this observation see Shiffrin, *supra* note 81.

¹¹² See RONALD DWORKIN, A MATTER OF PRINCIPLE 353-72 (1985).

¹¹³ Brison, *supra* note 110, at 324-38 (analyzing six accounts of autonomy in free speech literature).

¹¹⁴ See generally Balkin, *supra* note 22**Error! Bookmark not defined.**; Jack M. Balkin, *The Future of Free Expression in a Digital Age*, 36 PEPP.L. REV. 427 (2009).

¹¹⁵ See, e.g., ERIC BARENDT, FREEDOM OF SPEECH 23 (1985) (democratic theory of free speech has been "the most influential...in the development of the twentieth-century free speech law"); Fiss, *supra* note 44**Error! Bookmark not defined.**, at 1409 (the theory "now dominates the field"); Balkin, *supra* note 22**Error! Bookmark not defined.**, at 28 ("probably the most important theoretical approach to freedom of speech in the twentieth century has argued that freedom of speech is valuable because it preserves and promotes democracy and democratic self-government"). Interestingly, the spread of ICTs has led scholars in the democratic theory tradition to turn their argument on its head, replacing concerns of concentration for concerns of fragmentation. See generally, e.g., CASS R. SUNSTEIN, REPUBLIC.COM (2001).

¹¹⁶ For a successful attempt, in my mind, to merge the perspectives of the speaker and the listener into a thinker-based approach to freedom of expression (without tying that approach to technological transformations) see generally Shiffrin, *supra* note 81.

digital ecosystem as well as its main contribution to individuals – the sense of having a tangible capacity to act inseparably from the mental capacity to choose.¹¹⁷

II. DIMINISHING LIBERTY AND ITS MORAL IMPLICATIONS

As I have argued in Part I, the Internet has brought with it the potential for expressive capacity for all and with it an understanding of freedom of expression as a right incorporating both a liberty and capacity aspect. Part II will shift the focus to the darker side of the digital age, in which the very system of free expression that provides more expressive capacity to individuals than ever before also systematically infringes upon their liberty of expression, arguably more than ever before. As I shall demonstrate in this Part, the process of diminishing liberty follows along at least six related dimensions, which will be discussed in turn:

- (A) Interference from multiple sources;
- (B) State-encouraged private interference;
- (C) Multiple modes of interference;
- (D) New-media concentration;
- (E) Lack of anonymity; and
- (F) Lack of inviolability.

¹¹⁷ This observation is closely related to the idea of adaptive preferences – the idea that people's preferences adapt to social conditions so that when society puts something out of reach for them they learn not to want those things. For a discussion of the idea of adaptive preferences *see, e.g.*, JON ELSTER, *SOUR GRAPES: STUDIES IN THE SUBVERSION OF RATIONALITY* 109-40 (1983); Martha Nussbaum, *Adaptive Preferences and Women's Options*, 17 *ECON. PHIL.* 67 (2001). If information technology puts expressive capacity out of reach for most people, as in the case of the twentieth-century information environment, then people learn not to treat it as being within the range of their options and, eventually, the prevailing norm becomes such that does not count expressive capacity as a personal entitlement. The shape of the right to freedom of expression is determined, so to speak, by the perceived practicalities of the technological environment. *Cf.* GRIFFIN, *supra* note 34, at 192. But if the practicalities of the technological environment change, then the range of options open to individuals, and with them their accepted norms and preferences, may change with them.

(A) Interference from Multiple Sources

The major factor in the process of diminishing liberty lies in the fact that individual speech is now subject to actual and potential interference from multiple sources, most of them private entities that are not understood to be bound by the constraints imposed on the state. Speech on the Internet requires a series of intermediaries – web host providers, upstream providers, DNS providers, ISPs, search engines, third-party platforms (e.g. social networks) *et cetera* - in order to reach its audience.¹¹⁸ These intermediaries are potential chokeholds in a system that enables speech online, but at the same time provides multi-dimensional possibilities for silencing speech. Whether it is Google, Facebook, Twitter, Apple, Amazon or some other Internet giant - most speech regulation today is private regulation,¹¹⁹ performed by so-called "Super-Intermediaries."¹²⁰ Such Super-Intermediaries "effectively engage in private speech rulemaking, adjudication, and enforcement," through the contractual language of their "Terms of Use,"¹²¹ and, as noted by Jeffrey Rosen, "exercise far more power over speech than does the Supreme Court."¹²² The lawyers leading top technology companies "are shaping the future of free expression."¹²³ Marvin Ammori has even argued that "some decades from now, we will likely

¹¹⁸ For a helpful illustration of this observation *see* FREE SPEECH – ONLY AS STRONG AS THE WEAKEST LINK, <https://www.eff.org/free-speech-weak-link#home> (last visited Jan. 6, 2018).

¹¹⁹ *See, e.g.,* Balkin, *The Future of Free Expression*, *supra* note 114; Dawn C. Nunziato, *The Death of the Public Forum in Cyberspace*, 20 BERKELEY TECH. L.J. 1115 (2005); Nancy S. Kim & D.A. Jeremy Telman, *Internet Giants as Quasi-Governmental Actors and the Limits of Contractual Consent*, 80 MO. L. REV. 723, 755-56 (2015).

¹²⁰ Internet intermediaries include "any service provider that enables online interaction through either paid subscription or general availability to the public." Jacqueline D. Lipton, *Law of the Intermediated Information Exchange*, 64 FLA. L. REV. 1337, 1343-44 (2012). "Super Intermediaries" are particularly powerful Internet intermediaries. *See* Ira Steven Nathenson, *Super-Intermediaries, Code, Human Rights*, 8 INTERCULTURAL HUM. RTS. L. REV. 19, 34-71 (2013) (identifying 9 main features, which make an intermediary a "Super-Intermediary" – interactivity, networking, personalization, governmental legal scrutiny, private legal scrutiny, internal legal scrutiny, political activity, ubiquity, hero/villain ambiguity – and classifying them under three categories: user experience, sources and types of legal scrutiny, and reputation).

¹²¹ Marvin Ammori, *The "New" New York Times: Free Speech Lawyering in the Age of Google and Twitter*, 127 HARV. L. REV. 2259, 2273 (2014).

¹²² Jeffrey Rosen, Lecture, *The Deciders: The Future of Privacy and Free Speech in the Age of Facebook and Google*, 80 FORDHAM L. REV. 1525, 1529 (2012).

¹²³ Ammori, *supra* note 121, at 2261.

celebrate these lawyers just as fervently as we celebrate those who defended the *New York Times* in *New York Times v. Sullivan*.¹²⁴

However, before we celebrate the lawyers of online intermediaries for their indispensable contribution to freedom of expression, it would be advisable to take a pause at the implications for a system of free expression of regulators who write, apply and enforce their own rules; of lawyers who do not argue a case before judges (as the lawyers in *Sullivan* did), but rather act themselves as judges; and of automated systems that actually "make" most of the day-to-day decisions, which remain largely invisible to users.¹²⁵ The reality of our digital ecosystem is that a small number of powerful private corporations, like Google and Facebook, are in a position to exert unprecedented power and control over others' speech – arguably more power and control than a state (or at least a democratic state) may exert over the speech of its citizens, considering that these private corporations are not subject to a system of checks and balances and do not perceive themselves as having any formal duty to respect their users' right to freedom of expression (other than the contractual obligations, if any, that such companies voluntarily impose on themselves).¹²⁶ This state of affairs is no less than troubling for the liberty aspect of freedom of expression.

¹²⁴ *Id.*, at 2295.

¹²⁵ See, e.g., Nanna Bonde Thylstrup, *The Invisibilities of Internet Censorship*, in *INVISIBILITY STUDIES: SURVEILLANCE, TRANSPARENCY AND THE HIDDEN IN CONTEMPORARY CULTURE* 301, 309-11 (Henriette Steiner & Kristin Veel, eds., 2015).

¹²⁶ See, e.g., Tim Wu, *Is Filtering Censorship? The Second Free Speech Tradition*, in *CONSTITUTION 3.0: FREEDOM AND TECHNOLOGICAL CHANGE* 83, 96 (Jeffrey Rosen & Benjamin Wittes eds., 2011); James Grimmelman, *Virtual World Feudalism*, 118 *YALE L.J. POCKET PART* 126, 128 (2009), <http://james.grimmelman.net/files/articles/virtual-world-feudalism.pdf>; Ben Wagner, *Governing Internet Expression: How Public and Private Regulation Shape Expression Governance*, 10 *J. INFO. TECH. & POL'Y.* 389, 396-99 (2013); Jillian C. York, *Policing Content in the Quasi-Public Sphere*, *OPENNET INITIATIVE BULLETIN* (2010), <https://opennet.net/sites/opennet.net/files/PolicingContent.pdf> (last visited Jan. 6, 2018); Frank Pasquale, *Platform Neutrality: Enhancing Freedom of Expression in Spheres of Private Power*, 17 *THEORETICAL INQUIRIES L.* 487 (2016).

(1) Broadband Service Providers

Until recent years concerns regarding online intermediaries' potential threat to freedom of expression focused mainly on operators of the Internet's physical layer, i.e. broadband service providers (BSPs).¹²⁷ Generally speaking, the Internet has four major participants: end users, BSPs, backbone networks and edge (i.e. content and application) providers.¹²⁸ End users connect to the Internet and interconnect with edge providers and other end-users through BSPs, which themselves interconnect through backbone providers.¹²⁹ The remarkable success of the Internet is often attributed to its "open" architecture, namely its "end-to-end" design and its design as a "dumb" network, i.e. a network that delivers packets of data equally over the physical infrastructure, in a "best effort," regardless of their content, using a set of standard, non-proprietary, protocols (TCP/IP) that facilitate targeted data diffusion.¹³⁰ However, quite early on in the development of the Internet, BSPs obtained the technological ability to control the flow of information online,¹³¹ leading to concerns that they would "leverage their control over the

¹²⁷ As a matter of fact, the focus has been on BSPs' business practices' threats to innovation and economic efficiency, with concerns of freedom of expression occupying a relatively marginal (albeit gradually increasing) part in the overall debate. *See generally, e.g.,* An-Shou Cheng et al., *The Role of Innovation and Wealth in the Net Neutrality Debate: A Content Analysis of Human Values in Congressional and FCC Hearings*, 63 J. AM. SOC. INFO. SCI. TECH. 1360 (2012) (conducting content analysis of public hearings on the issue of network neutrality and showing that the network neutrality debate revolved, at least until a late stage, primarily around differences in the frequency of expression of the values of "innovation" and "wealth").

¹²⁸ USTA, Docket No. 15-1063, at 9. As shall be discussed below, however, this description is over-simplified.

¹²⁹ *Id.*, at 9-10. In recent years, some edge providers, such as Netflix and Google, have begun connecting directly to broadband providers' networks, thus avoiding the need to interconnect with the backbone and some broadband providers, such as Comcast and AT&T, have begun developing their own backbone networks.

¹³⁰ *See, e.g.,* Tim Wu, *Network Neutrality, Broadband Discrimination*, 2 J. ON TELECOMM. & HIGH TECH. L. 141 (2003); Yemini, *supra* note 52 **Error! Bookmark not defined.**, at ¶ 1; *Hearing on "Network Neutrality" Before the S. Comm. on Commerce, Science and Transportation*, 109th Cong. 2 (2006) (statement of Vinton G. Cerf, Vice President and Chief Internet Evangelist, Google Inc.), <http://commerce.senate.gov/pdf/cerf-020706> (last visited Jan. 6, 2018); Edward W. Felten, *Nuts and Bolts of Network Neutrality* 1-2 (2006), <http://itpolicy.princeton.edu/pub/neutrality.pdf> (last visited Jan. 6, 2018); Mark A. Lemley & Lawrence Lessig, *The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 UCLA L. REV. 925 (2001). Andrew Patrick & Eric Scharphorn, *Network Neutrality and the First Amendment*, 22 MICH. TELECOMM. TECH. L. REV. 93, 99-100 (2015). For an overview of the history and the political nature of TCP/IP *see, e.g.,* Rebekah Larsen, *The Political Nature of TCP/IP* 1 MOMENTUM, <http://repository.upenn.edu/cgi/viewcontent.cgi?article=1004&context=momentum> (last visited Jan. 6, 2018).

¹³¹ Primarily through the use of deep packet inspection (DPI) technologies. *See, e.g.,* Ralph Bendorath & Milton Mueller, *The End of the Net as We Know It? Deep Packet Inspection and Internet Governance*, 13 NEW MEDIA & SOC. 1142 (2011).

Internet's physical layer in order to restrict users' access to applications and content."¹³² These concerns have not been merely theoretical, as over the years several cases have been recorded of BSPs applying discriminatory practices against certain Internet uses, such as P2P file sharing, file transfer using File Transfer Protocol (FTP) and VoIP,¹³³ and even against specific content.¹³⁴

Academic, political and public resistance to such potential and actual discriminatory practices developed under the general concept of "network neutrality," the common-carrier-like principle that broadband networks should not discriminate between favored and disfavored Internet content, services, and applications.¹³⁵ In June 2016, after long years of public debate, contradicting regulatory policies and several rounds of litigation, the U.S. Court of Appeals for the D.C. Circuit decided, by a majority opinion, to uphold the Federal Communication Commission's (FCC) 2015 Open Internet Rules,¹³⁶ which, generally speaking, prohibited BSPs from blocking, degrading or impairing access to "lawful content, applications, services, or non-

¹³² Patrick & Scharphorn, *supra* note 130, at 101. *See generally also, e.g.,* Yemini, *supra* note 52 **Error! Bookmark not defined.**

¹³³ *See, e.g.,* Verizon v. FCC, 740 F.3d 623, 648 (D.C. Cir. 2014); Bill D. Herman, *Opening Bottlenecks: On Behalf of Mandated Network Neutrality*, 59 FED. COMM. L.J., 103, 119-21 (2006); Peter Svensson, *Comcast blocks some Internet traffic*, WASH. POST (Oct. 19, 2007, 6:32PM), <http://www.washingtonpost.com/wp-dyn/content/article/2007/10/19/AR2007101900842.html> (last visited Jan. 6, 2018); Nate Anderson, *Deep packet inspection meets 'Net neutrality, CALEA, ARSTECHNICA* (Jul. 25, 2007, 7:10AM), <http://arstechnica.com/gadgets/2007/07/deep-packet-inspection-meets-net-neutrality/> (last visited Jan. 6, 2018).

¹³⁴ A well-known example in this regard is Canada's second largest telecommunications company, Telus, blocking of access to Voices for Change, a website supporting the Telecommunications Workers Union, together with 766 other websites that were hosted by the same server, but were otherwise unrelated. *See, e.g.,* Tom Barret, *To Censor Pro-Union Website Telus Blocked 766 Others*, THE TYEE (Aug. 4, 2005), <http://thetyee.ca/News/2005/08/04/TelusCensor/> (last visited Jan. 6, 2018).

¹³⁵ *See* Yemini, *supra* note 52, at ¶ 2. The term "common carrier" was defined in the Communications Act of 1934 as "any person engaged as a common carrier for hire, in interstate or foreign communication by wire or radio or in interstate or foreign radio transmission of energy, except where reference is made to common carriers not subject to this Act." *See* Communications Act of 1934, 47 U.S.C. § 153(10) (2000). Given the circularity of the definition, FCC pronouncements and court decisions have tried to clarify the term. *See, e.g.,* FCC v. Midwest Video Corp., 440 U.S. 689, 701 (1979); Nat'l Ass'n of Regulatory Util. Comm'rs v. FCC., 173 U.S. App. D.C. 413, 424 (1976) (common carrier does not "make individualized decisions in particular cases, whether and on what terms to deal"); Report and Order, Industrial Radiolocation Service, Docket No. 16106, 5 F.C.C. 2d 197, 202 (1966) (Common carrier in the communications context is one that "makes a public offering to provide [communications facilities] whereby all members of the public who choose to employ such facilities may communicate or transmit intelligence of their own design and choosing"); Report and Order, Multipoint Distribution Service, Docket No. 19493, 45 F.C.C. 2d 616, 618 (1974).

¹³⁶ *See* United States Telecom Association (USTA) et al. v. FCC, Docket No. 15-1063 (D.C. Cir., June. 14, 2016) (upholding *In re* Protecting and Promoting the Open Internet, 30 F.C.C. Rcd. 5601 (2015) (hereinafter: the "2015 Open Internet Rules")). The FCC's 2015 Open Internet Rules were adopted after the D.C. Circuit had vacated key portions of previous rules adopted by the FCC in 2010. *See* Verizon v. FCC, 740 F.3d 623 (D.C. Cir. 2014).

harmful devices;¹³⁷ and barred BSPs from "favor[ing] some traffic over other traffic."¹³⁸ In May 2017, the D.C. Circuit Court of Appeals dismissed a motion filed by wireless carriers and cable companies for a rehearing *en banc* of the three-judge panel decision of June 2016.¹³⁹ However, in December 2017, the now Republican-led FCC voted to repeal the Rules,¹⁴⁰ leading to the filing of lawsuits by public interest groups and 21 state attorneys general, among others, to block the FCC's action,¹⁴¹ as well as attempts by legislators to overturn the FCC's order.¹⁴² The last word on this matter has, therefore, not yet been said.

(2) Content Distribution Networks and Cloud Providers

Notwithstanding the importance of network neutrality, this principle, even if applied, only captures BSPs at the packet level, while other important actors, which control our speech environment, are not required to conform to any universal policy. This includes both actors other than BSPs, which are involved in the online content delivery chain and, most importantly, major edge providers, which enjoy regulatory protection under the concept of network neutrality but are themselves in a unique position to control end-users' speech.

The model of Internet content delivery usually considered for the purpose of network neutrality treats BSPs as the ultimate connector between end users and edge providers, but in reality, the chain of content delivery is more complicated and is not restricted only to BSPs and edge providers. In particular, cloud-based services and Content Distribution Networks (CDNs) have become key components in the delivery chain, while remaining largely absent from the

¹³⁷ 2015 Open Internet Rules, *id.*, at 5648 ¶ 112, 5651 ¶ 119.

¹³⁸ *Id.*, at 5653 ¶ 125.

¹³⁹ See United States Telecom Association (USTA) et al. v. FCC, 855 F.3d 381 (2017). The decision to dismiss the motion was itself rendered by the Appeals Court sitting *en banc*.

¹⁴⁰ In the Matter of Restoring Internet Freedom, Declaratory Ruling, Report and Order, and Order, WC Docket No. 17-108 (Dec. 14, 2017).

¹⁴¹ See, e.g., Cecilia Kang, Flurry of Lawsuits Filed to Fight Repeal of Net Neutrality, N.Y. TIMES, Jan. 17, 2018, at B2.

¹⁴² See, e.g., Senate Democrats Push for a Net Neutrality Vote. Do They Have a Chance?, N.Y. TIMES (Jan. 16, 2018), <https://www.nytimes.com/2018/01/16/technology/senate-net-neutrality.html?rref=collection%2Ftimestopic%2FNet%20Neutrality> (last visited Jan. 20, 2018).

debate.¹⁴³ CDNs play a major role by storing content closer to users (thereby reducing transit costs and improving the quality of service (QoE)). However, as shown by Maillé, Simon and Tuffin, among others, profit-driven CDNs may favor one edge provider over another as well as discriminate between BSPs themselves, which, from the end-users' perspective, results in enhanced or degraded performance of edge providers and/or BSPs, depending on their Service Level Agreements (SLAs) with CDNs.¹⁴⁴ This clearly undermines neutrality principles, yet without violating established rules of network neutrality.

Many CDNs today are operated as on-demand software, made available over the so-called "Cloud."¹⁴⁵ Cloud services provide computing capacity, network services, and large-scale data storage space, using the pooled resources of non-local, centralized computers; these services can generally be divided into three types, which cut across the Internet's physical, logical and content layers: Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS).¹⁴⁶ Google Cloud Platform, for example, offers 27 different services of all three types.¹⁴⁷

¹⁴³ See, e.g., David Lametti, *The Cloud: Boundless Digital Potential of Enclosure 3.0?*, 17 VA. J.L. TECH. 190 (2012); Patrick Maillé, Gwendal Simon & Bruno Tuffin, *Toward a Net Neutrality Debate that Conforms to the 2010s*, 54 IEEE COMM. MAG. 94 (2016).

¹⁴⁴ See Maillé, Simon & Tuffin, *id.*; Patrick Maillé et al., *How Neutral is a CDN: An Economic Approach*, in PROC. OF THE 10TH IEEE INT'L CONF. ON NETWORK AND SERV. MGMT. 336 (2014), <https://files.ifi.uzh.ch/stiller/CNSM%202014/pdf/54.pdf>; Patrick Maillé, Gwendal Simon & Bruno Tuffin, *Impact of Revenue-Driven CDN on the Competition among Network Operators*, PROC. OF THE 11TH IEEE INT'L CONF. ON NETWORK AND SERV. MGMT. 336 (2015), <http://dl.ifip.org/db/conf/cnsm/cnsm2015/1570158711.pdf>. In fact, conceptually, the mere operation of CDNs may be seen as undermining neutrality principles, since they offer improved delivery for a fee. This is not very different from paid prioritization, which is prohibited for BSPs under the 2015 Open Internet Rules.

¹⁴⁵ For example, Microsoft Azure CDN, Google Cloud CDN and Amazon CloudFront.

¹⁴⁶ SaaS offers finished applications that end-users can access through a "thin client" device, such as a mobile phone or tablet, using only a Web browser, without having control over any major aspect of the application (e.g. web-based email services, Google Docs); PaaS offers end-users an operating system, programming software and software development tools, which they use to develop their own applications, without having control over the physical infrastructure; (e.g. Google App Engine); IaaS offers end users access to processing, storage and other computer resources and allows the configuration of those resources (e.g. Amazon Elastic Compute Cloud). For a technical description of Cloud computing see generally PETER MELL & TIMOTHY GRANCE, NAT'L INST. OF STANDARDS & TECH., SPECIAL PUB. 800-1145, THE NIST DEFINITION OF CLOUD COMPUTING (2011). See generally also, e.g., Christopher S. Yoo, *Cloud Computing: Architectural and Policy Implications*, 36 REV. INDUS. ORG. 405 (2011); Daniel J. Gervais & Daniel J. Hyndman, *Cloud Control: Copyright, Global Memes and Privacy*, 10 J. TELECOMM. & HIGH TECH. L. 53 (2012); Jasper P. Sluijs et al., *Cloud Computing in the EU Policy Sphere: Interoperability, Vertical Integration and the Internet Market*, 1 JIPITEC 12 (2012).

Cloud services, and particularly SaaS, enable end users to store vast personal data, as well as access services and facilities that require strong computing capacities from "thin client" interfaces, such as a mobile phone or tablet, using only a Web browser.¹⁴⁷ Cloud computing may also facilitate user collaboration, since content stored on the Cloud can be accessed simultaneously by many users, rather than being "trapped" in any personal device.¹⁴⁸ However, as noted by David Lametti, the Cloud may also "reduce the range of user possibilities for robust interaction with the Internet/Cloud in a manner which then prevents users from participating in the Internet as creators, collaborators, and sharers."¹⁴⁹ The Cloud moves computing and storage from the "edge" of the network to the computing "core" of the Cloud,¹⁵⁰ thereby pushing towards a closed and centralized structure, which enables Cloud providers to shape and control when, where, and how users interact with their or others' content, as well as with the Internet in general.¹⁵¹ Conceptually, this situation is very similar to that which network neutrality is designed to prevent at the level of BSPs, yet it too does not violate any established regulatory restrictions.¹⁵²

Cloud providers' control over users' content may be exerted by way of contractual terms that grant Cloud providers the right to review stored content and remove such content for any or no reason,¹⁵³ as well as through the technical specifications that allow users to interact with stored content.¹⁵⁴ As more and more services immigrate to the Cloud and users become more

¹⁴⁷ See GOOGLE CLOUD PLATFORM SERVICES SUMMARY, <https://cloud.google.com/terms/services> (last visited Jan. 6, 2018).

¹⁴⁸ See, e.g., Primavera De Filippi & Miguel Said Vieira, *The Commodification of the Information Commons: The Case of Cloud Computing*, 16 COLUM. SCI. & TECH. L. REV. 102, 118 (2014).

¹⁴⁹ *Id.*, at 119-20.

¹⁵⁰ Lametti, *supra* note 143, at 197.

¹⁵¹ *Id.*, at 208-12.

¹⁵² *Id.*, at 214-17.

¹⁵³ See, e.g., MICROSOFT, LIVE SDK - TERMS OF USE §5, <https://msdn.microsoft.com/en-us/onedrive/dn735994.aspx> (last visited Jan. 6, 2018); DROPBOX, TERMS OF SERVICE, <https://www.dropbox.com/privacy> (last visited Jan. 6, 2018); APPLE, iCloud TERMS AND CONDITIONS §V(c), <http://www.apple.com/legal/internet-services/icloud/en/terms.html> (last visited Jan. 6, 2018).

¹⁵⁴ See, e.g., De Filippi & Vieira, *supra* note 148, at 133.

dependent on Cloud providers, the standards of user interaction that govern closed Cloud systems marginalize the standards of interaction of the open Internet and eventually dictate the standards of the digital ecosystem as a whole. In this regard, Cloud systems lead to the commodification of peer-production,¹⁵⁵ while undermining users' ability to "work around illegitimate blockages,"¹⁵⁶ an ability which only a few years ago had been hailed by Benkler, Balkin, and others as one of the Internet's main contributions to innovation and freedom of expression.¹⁵⁷ The shift to Cloud services is also a change in ethos from an open-code Internet to more controlled environments that discourage what Balkin has called "routing around,"¹⁵⁸ and "glomming on."¹⁵⁹

(3) Search Engines

Search engines hold a particularly powerful gatekeeping position in the digital ecosystem. Their basic function is to assist users in locating and accessing information relevant to their preferences and needs and their principal value, as information intermediaries, lies in their ability to connect users seeking information with information providers.¹⁶⁰ Search engines typically perform this task through a three-step process: First, search engines "crawl" sources of information, particularly web pages, to learn what information they contain, including meta information about the relations between the sources.¹⁶¹ Second, search engines index the sources of information they cover using an algorithm that analyzes the information sources and their relationship according to a complex array of parameters. The result of this stage is a search index that determines the relevance and importance of the indexed information with regard to specific

¹⁵⁵ *Id.*, particularly at 133-36.

¹⁵⁶ Lametti, *supra* note 143, at 223.

¹⁵⁷ See, e.g., BENKLER, *supra* note 9 **Error! Bookmark not defined.**, at 273-300; Balkin, *supra* note 22, at 7-8.

¹⁵⁸ Balkin, *id.*, at 9-12 (defining "routing around" as "reaching audiences directly, without going through a gatekeeper of an intermediary").

¹⁵⁹ *Id.* (defining "glomming on" as the ability to "appropriate and use something as a platform for innovation").

¹⁶⁰ For a short description of the basic functions of search engines and how they operate see, e.g., James Grimmelmann, *The Structure of Search Engine Law*, 93 IOWA L. REV. 1, 6-14 (2007); James Grimmelmann, *Speech Engines*, 98 MINN. L. REV. 868, 876-79 (2014); Oren Bracha, *The Folklore of Informationalism: The Case of Search Engine Speech*, 82 FORDHAM L. REV. 1629, 1636-38 (2014).

¹⁶¹ See, e.g., Grimmelmann, *Speech Engines, id.*, at 877; Bracha, *id.*, at 1636.

search terms.¹⁶² The indexing stage is the most important element that provides a search engine its value and differentiates it from other search engines.¹⁶³ Third, search engines enable users to "run" searches, usually using a textual search query, which the search engine analyzes by reference to its search index. The results of this analysis are typically presented as a list of links ranked in a descending order of relevance to the asked keywords.¹⁶⁴ Importantly, the process described above is supposed to provide a list of so-called *organic links*, i.e. a list of results that the algorithmic indexing process "objectively" ranks in order of relevance, in association with the search terms.¹⁶⁵ However, alongside these organic links, a search engine's results page may also include *sponsored links*, a list of advertisements related to the search, from which the search engines make money when the links are clicked.¹⁶⁶ Although sponsored links are typically displayed separately from organic links,¹⁶⁷ studies have shown that most search-engine users cannot differentiate between the two types of links.¹⁶⁸

"Search engines," as James Grimmelman noted, "are attention lenses; they bring the online world into focus."¹⁶⁹ As early as the year 2000, ancient times by Internet standards, Lucas Introna and Helen Nissenbaum observed that on the Internet, "to exist is to be indexed by a

¹⁶² See, e.g., Grimmelman, *id.*; Bracha, *id.*

¹⁶³ See, e.g., Grimmelman, *id.*, at 878; Bracha, *id.*; DAVID A. VISE & MARK MALSEED, THE GOOGLE STORY 45-57 (2005); Steven Levy, *How Google's Algorithm Rules the Web*, WIRED (Feb. 22, 2010, 12:00PM), http://www.wired.com/2010/02/ff_google_algorithm/ (last visited Jan. 6, 2018).

¹⁶⁴ See, e.g., Grimmelman, *id.*; Bracha, *id.* Notably, the trend in determining "relevance" is toward personalization of search results, so that the results are tailored to the specific interests and characteristics of the user. For this purpose, the search engine profiles the user based on information about the user gathered by the search engine and analysis of the user's past search and Internet usage patterns. The result is that identical search terms may produce different results for different users, based on the search engine's profiling of each user. See, e.g., James Pitkow et al., *Personalized Search*, 45 COMM. ACM 50 (2002); Zhongming Ma, Gautam Pant & Olivia R. Liu Sheng, *Interest-Based Personalized Search*, 25 ACM TRANSACTIONS ON INFO. SYS. 1 (2007).

¹⁶⁵ See, e.g., JOHN BATTELLE, THE SEARCH: HOW GOOGLE AND ITS RIVALS REWROTE THE RULES OF BUSINESS AND TRANSFORMED OUR CULTURE 20 (2005); Maillé, Simon & Tuffin, *supra* note 143, at 97.

¹⁶⁶ See, e.g., Maillé, Simon and Tuffin, *id.*; Geoffrey A. Manne & Joshua D. Wright, *If Search Neutrality is the Answer, What's the Question?* 8 (Lewis & Clark Law School Legal Research Paper Series, Paper No. 2011-14, 2011), http://www.realclearmarkets.com/blog/Manne-Search_Neutrality%5B1%5D.pdf (last visited Jan. 6, 2018).

¹⁶⁷ See, e.g., Grimmelman, *Speech Engines*, *supra* note 160, at 876-77.

¹⁶⁸ See, e.g., Greg Lastowka, *Google's Law*, BROOK. L. REV. 1327, 1345 (2008) and the references therein to relevant empirical research.

¹⁶⁹ James Grimmelman, *Some Skepticism About Search Neutrality*, in THE NEXT DIGITAL DECADE: ESSAYS ON THE FUTURE OF THE INTERNET 435, 435 (Berin Szoka & Adam Marcus eds., 2010).

search engine."¹⁷⁰ This was even before "search engine" and "Google" practically became synonyms and before "Google" had been officially declared a verb.¹⁷¹ Although users can technically reach Internet content in other ways, search engines provide an essential tool for managing and organizing the massive volumes of information existing online,¹⁷² which is key to Web communication.¹⁷³ According to a survey conducted by Pew Research Center in 2012, 91% of American Internet users use search engines to find information on the Web, with search only being rivaled by email in the overall percent of Internet users who engage in the activity.¹⁷⁴ Google processes approximately 1.2 trillion searches a year worldwide,¹⁷⁵ with a declared mission "to organize the world's information and make it universally accessible and useful."¹⁷⁶ This position makes search engines the window through which most Internet users see the Web,¹⁷⁷ thereby providing them with control over the visibility, and effective accessibility of online content. Studies using eye-tracking technology, for example, have shown that users fixate on the results that rank highest, even when lower-ranked results are more relevant to their search.¹⁷⁸ An analysis of 300 million clicks on Google search results found that 91.5% of those

¹⁷⁰ Lucas D. Inrona & Helen Nissenbaum, *Shaping the Web: Why the Politics of Search Engines Matters*, 16 INFO. SOC'Y 169, 171 (2000). See also, e.g., Niva Elkin-Koren, *Let the Crawlers Crawl: On Virtual Gatekeepers and the Right to Exclude Indexing*, 26 U. DAYTON L. REV. 179 (2001).

¹⁷¹ See, e.g., Nate Anderson, "Google" Declared a Verb, ARSTECHNICA (Jul. 6, 2016, 6:09PM), <http://arstechnica.com/uncategorized/2006/07/7198-2/> (last visited Jan. 6, 2018).

¹⁷² As of November 2016, there are over 1.1 billion websites on the Web (a milestone first reached in September 2014), with this number increasing by the second. See INTERNET LIVE STATS, TOTAL NUMBER OF WEBSITES, <http://www.internetlivestats.com/total-number-of-websites/#trend> (last visited Jan. 6, 2018).

¹⁷³ See, e.g., Lastowka, *supra* note 168, at 1332; Andrew Carroll, *Don't Be Evil... Unless It Increases Revenue: What the Operation of Credit Rating Agencies Can Teach Us about Google*, 31 TEMP. J. SCI. TECH. & ENVTL. L. 93, 97 (2012); Tansy Woan, *Searching for an Answer: Can Google Legally Manipulate Search Engine Results?*, U. PENN. J. BUS. L. 294, 302 (2013).

¹⁷⁴ Kristen Purcell, Joana Brenner & Lee Rainee, Pew Research Center, *Search Engine Use 2012* (2012), <http://www.pewinternet.org/2012/03/09/search-engine-use-2012/> (last visited Jan. 6, 2018).

¹⁷⁵ INTERNET LIVE STATS, GOOGLE SEARCH STATISTICS, <http://www.internetlivestats.com/google-search-statistics/> (last visited Jan. 6, 2018).

¹⁷⁶ GOOGLE, ABOUT GOOGLE, <https://www.google.com/intl/en/about/> (last visited Jan. 6, 2018).

¹⁷⁷ Cf. Bracha & Pasquale, *supra* note 25, at 1177.

¹⁷⁸ See, e.g., Thorsten Joachims et al., *Evaluating the Accuracy of Implicit Feedback from Clicks and Query Reformulations in Web Search*, 25 ACM INFO. SYS., Art. 7 (2007); Bing Pan et al., *In Google We Trust: Users' Decisions on Rank, Position and Relevancy*, 12 J. COMPUTER-MEDIATED COMM. 801 (2007); Zhiwei Gian & Edward Cutrell, *An Eye Tracking Study of the effect of Target Rank on Web Search*, CHI PROC. 417 (2007); Lori Lorigo, *Eye Tracking and Online Search: Lessons Learned and Challenges Ahead*, 59 J. AM. SOC. INFO. SCI. TECH. 1041 (2008).

clicks were on the first page of results, with 32.5% on the first result and 17.6% on the second.¹⁷⁹ The bottom item on the first results page drew 140% more clicks than the first item on the second page.¹⁸⁰ This pattern of use occurs because users assume that the search engine assigns higher ranks to the results most relevant to their needs (although they generally have no knowledge of how search technology works).¹⁸¹ Thus, in the digital age, search engines are "vital speech-facilitating tools for both information providers and users."¹⁸²

Search engines' extraordinary control over the Internet's data flow generates several problems. First, in order to perform their task, search engines must apply some generally applicable set of criteria. These criteria inescapably give priority to some information providers over others.¹⁸³ The current system, it has been argued, has a strong bias toward majority preferences, well-financed speakers and consumerist content (much like under the mass-media model of information production).¹⁸⁴ Secondly, search engines' power is susceptible to abuse both due to intrinsic interests and external influences.¹⁸⁵ Search engines are frequently used by governments as a censorial tool.¹⁸⁶ The most conspicuous example is China,¹⁸⁷ but many other

¹⁷⁹CHITIKA, THE VALUE OF GOOGLE RESULT POSITIONING 6 (2013), <http://info.chitika.com/uploads/4/9/2/1/49215843/chitikainsights-valueofgoogleresultspositioning.pdf> (last visited Oct. 1, 2017). See also, e.g., Bracha & Pasquale, *supra* note 25, at 1164, n.95-96.

¹⁸⁰ CHITIKA, *id.*, at 5.

¹⁸¹ See, e.g., Susan L. Gerhart, *Do Web Search Engines Suppress Controversy*, 9 FIRST MONDAY (2004).

¹⁸² Bracha, *supra* note 160, at 1641. See also, e.g., Elkin-Koren, *supra* note 170, at 185; Bracha & Pasquale, *supra* note 25, at 1164-65; Jennifer A. Chandler, *A Right to Reach an Audience: An Approach to Intermediary Bias on the Internet*, 35 HOFSTRA L. REV. 1095, 1107-08 (2007). Of course, as characteristic of the digital ecosystem, every user of a search engine is also a potential speaker in relation to information reached through online search.

¹⁸³ See, e.g., Eric Goldman, *Search Engine Bias and the Demise of Search Engine Utopianism*, 9 YALE J.L. & TECH. 188, 189-97 (2006); Bracha & Pasquale, *id.*, at 1165-66.

¹⁸⁴ See, e.g., Goldman, *id.*, at 193; Bracha & Pasquale, *id.*, at 1165; Elizabeth Van Couvering, *Is Relevance Relevant? Market, Science, and War: Discourses of Search Engine Quality*, 12 J. COMPUTER-MEDIATED COMM. 866, 884 (2007).

¹⁸⁵ See, e.g., Bracha, *supra* note 160, at 1641; Bracha & Pasquale, *id.*, at 1150-51.

¹⁸⁶ See, e.g., Derek E. Bambauer, *Cybersieves*, 59 DUKE L.J. 377, 381-86 (2009); Seth F. Kreimer, *Censorship by Proxy: The First Amendment, Internet Intermediaries, and the Problem of the Weakest Link*, 155 U. PENN. L. REV. 11, 16-27 (2006).

¹⁸⁷ See generally, e.g., Jonathan Zittrain & Benjamin Edelman, *Internet Filtering in China*, IEEE INTERNET COMPUT. 70 (2003); OPENNET INITIATIVE, INTERNET FILTERING COUNTRY PROFILE FOR CHINA (2012), <http://access.opennet.net/wp-content/uploads/2011/12/accesscontested-china.pdf> (last visited Jan. 6, 2018); Dakuo Wang & Gloria Mark, *Internet Censorship in China: Examining User Awareness and Attitudes*, 22 ACM TOCHI 31 (2015); Fai Shen & Zhi'an Zhang, *Do Circumvention Tools Promote Democratic Values? Exploring the Correlates*

countries also require search engines to filter content for various reasons.¹⁸⁸ Search engines may also manipulate their results for their own reasons.¹⁸⁹ They may decrease the visibility or even entirely exclude particular sites from their rankings (or, conversely, increase the visibility of specific sites), in order to serve their self-interest, as a result of public pressures, in response to demands from other private players and so on.¹⁹⁰

Economic analysis has shown, for example, that search engines have a clear incentive to include in their organic results some results that are not necessarily among the most relevant, but can generate short-term revenues, the typical case being that of a content provider vertically integrated with the search engine.¹⁹¹ Until a few years ago, the response to this type of arguments has often been that there is little, if any, evidence that search engines *de facto* manipulate their search results.¹⁹² Recently, however, there is mounting evidence that search engine manipulation may be widespread. In June 2017, the European Antitrust Commission announced that it had

of Anti-Censorship Technology Adoption in China, Working Paper (2015), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2733659 (last visited Jan. 6, 2018).

¹⁸⁸ See, e.g., Bambauer, *supra* note 186, at 381-82 (mentioning India, France, United States, Iran, Indonesia, Japan, Australia, New Zealand, and Brazil as countries practicing Internet filtering for different reasons); JACK GOLDSMITH & TIM WU, WHO CONTROLS THE INTERNET? ILLUSIONS OF A BORDERLESS WORLD 70-75 (2006) (noting that the United States, France, and Germany all try to control the public's access to content through Google).

¹⁸⁹ See generally, e.g., Introna & Nissenbaum, *supra* note 170; Bracha & Pasquale, *supra* note 25; Bracha, *supra* note 160; Carroll, *supra* note 173; Lastowka, *supra* note 168, particularly at 1351-59; Nico van Eijk, *Search Engines: The New Bottleneck for Content Access*, in TELECOMMUNICATION MARKETS: DRIVERS AND IMPEDIMENTS 141 (Brigitte Preissl, Justus Haucap & Peter Curwen, eds., 2009).

¹⁹⁰ See generally *id.*

¹⁹¹ See, e.g., Maillé, Simon & Tuffin, *supra* note 143, at 98.

¹⁹² See, e.g., Mark R. Patterson, *Non-Network Barriers to Network Neutrality*, 78 FORDHAM L. REV. 2843, 2863 (2010) (arguing that "for the most part there seems to be little if any evidence of search-engine non-neutrality"). Nevertheless, at least anecdotal examples of search engine manipulation have been detected. One case concerns Google's ploy to increase the visibility of Zagat's restaurant ratings, at the expense of Yelp's. following the acquisition of Zagat by Google. See, e.g., Tim Carmody, *Google Buys Zagat to Reinvent Mobile Search Engine*, WIRED (Sept. 8, 2011, 3:39PM), <http://www.wired.com/2011/09/google-buys-zagat/> (last visited Jan. 6, 2018); Woan, *supra* note 173, at 295; Carroll, *supra* note 173, at 110. In another case, Google imposed a "penalty" on Foundem, a technology company that helps users compare prices for electronics and other goods (and therefore a Google competitor), causing all of its webpages to drop dramatically in Google's rankings. See, e.g., Adam Raff, *Search, but You May Not Find*, N.Y. TIMES, Dec. 28, 2009, at A27.

fined Google EUR 2.42 billion for abusing its dominance as search engine by giving illegal advantage to its own comparison shopping service in its general search results.¹⁹³

Of course, search engine manipulation may have far greater implications than its economic effects on the advertising market. As Bracha and Pasquale have argued, search engines' ability to shape the information and options visible to users can threaten the "democratic aspiration of a free, open, and diverse expressive sphere,"¹⁹⁴ undercut our sense of fairness and undermine individual autonomy.¹⁹⁵ A recent study based on a series of controlled experiments conducted in the United States and India (including one held with eligible voters during the 2014 elections to the Indian Parliament) provides empirical support for these observations. The study by Epstein and Robertson demonstrates that biased search rankings can shift the voting preferences of undecided voters (arguably by 20% or more); that the shift can be significantly higher in some demographic groups; and that search bias can be masked so that people show no awareness of the manipulation.¹⁹⁶

In response to these findings, head of Google search, Amit Singhal, published an article on Politico.com arguing that Google had a "great track record of providing open access to election information," and that "just as any electoral system must be trusted to be considered valid, so too must [Google's] search results."¹⁹⁷ Interestingly, in its response, Google does not deny that its search results *can* be manipulated to influence elections; it only asks us to trust it that it does not do so in practice. Yet, the attempt to draw parallels between "any electoral

¹⁹³ See European Commission, Press Release, *Commission Fines Google €2.42 Billion for Abusing Dominance as Search Engine by Giving Illegal Advantage to Own Comparison Shopping Service*, June 27, 2017. http://europa.eu/rapid/press-release_IP-17-1784_en.htm (last visited Jan. 6, 2018).

¹⁹⁴ Bracha & Pasquale, *supra* note 25, at 1173.

¹⁹⁵ *Id.*, at 1776-79. Bracha & Pasquale also note that search engine manipulation reduces economic efficiency and undermines fairness. *Id.*, at 1173-76.

¹⁹⁶ Robert Epstein & Ronald E. Robertson, *The Search Engine Manipulation Effect (SEME) and Its Possible Impact on the Outcomes of Elections*, 112 P. NAT'L. ACAD. SCI. USA E4512 (2015).

¹⁹⁷ Amit Singhal, *A Flawed Elections Conspiracy Theory*, POLITICO MAG. (Aug. 26, 2015), <http://www.politico.com/magazine/story/2015/08/google-2016-election-121766> (last visited Jan. 6, 2018).

system" and Google's search results is flawed and even misleading, as electoral systems are generally transparent and subject to scrutiny, while Google's search algorithm is not.¹⁹⁸

In light of the foregoing, several commentators have called for regulation of search engine bias, with the idea of "search neutrality" (akin to net neutrality) serving as a governing principle.¹⁹⁹ To date, however, this important territory of our information environment remains at the absolute discretion of search engines. As noted above, some developments are taking place in Europe, albeit with a focus on specific suspected violations by Google of European antitrust law.²⁰⁰ A similar investigation conducted by the U.S. Federal Trade Commission (FTC) ended without the FTC imposing any restrictions on Google relating to search manipulation.²⁰¹ The implications of search engine manipulation on users' freedom of expression have not yet made their way into serious policy discussions. In fact, it seems that much more attention is directed at efforts to establish that search engines' rankings are themselves protected speech and therefore immune to government regulation.²⁰² As noted by Bracha, the argument that search engines'

¹⁹⁸ See, e.g., Urs Gasser, *Regulating Search Engines: Taking Stock and Looking Ahead*, 8 YALE J.L. & TECH. 201, 203 (2006); Woan, *supra* note 173, at 299; Carroll, *supra* note 173, at 99 (all arguing that search algorithms are protected trade secrets); Patterson, *supra* note 192, at 2855 (noting that "if search results are skewed, it is not clear that users would even detect it").

¹⁹⁹ See, e.g., Bracha & Pasquale, *supra* note 25; Bracha, *supra* note 160; Chandler, *supra* note 182; Andrew Odlyzko, *Network Neutrality, Search Neutrality, and the Neverending Conflict between Efficiency and Fairness in Markets*, 8 REV. NETWORK ECON. 40 (2009); Frank Pasquale, *Rankings, Reductionism, and Responsibility*, 54 CLEV. ST. L. REV. 115 (2006); Frank Pasquale, *Internet Nondiscrimination Principles: Commercial Ethics for Carriers and Search Engines*, 2008 U. CHI. LEGAL F. 263. *But see, e.g.*, Goldman, *supra* note 183; Woan, *supra* note 173; Eugene Volokh & Donald M. Falk, *First Amendment Protection for Search Engine Search Results* (Google Commissioned White Paper, Apr. 20, 2012), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2055364### (last visited Jan. 6, 2018) (arguing against regulation of search engines).

²⁰⁰ See, e.g., Ines Georgieva, *Search Neutrality as a Regulation Principle for Internet Search Engines: A Multidisciplinary Approach* (2014) (unpublished Master Thesis, Hogeschool Universiteit Brussel), http://www.vlaamseregulatormedia.be/sites/default/files/masterproef_ines_georgieva.pdf (last visited Jan. 6, 2018) (arguing that under the current law of the EU there is no legal framework able to ensure neutrality of search engines, but that adopting such a framework is both possible and desirable).

²⁰¹ Federal Trade Commission, Press Release, *Google Agrees to Change Its Business Practices to Resolve FTC Competition Concerns in the Markets for Devices Like Smart Phones, Games and Tablets, and in Online Search*, Jan. 3, 2013, <https://www.ftc.gov/news-events/press-releases/2013/01/google-agrees-change-its-business-practices-resolve-ftc> (last visited Jan. 6, 2018) (stating, *inter alia*, that "the introduction of Universal Search, as well as additional changes made to Google's search algorithms – even those that may have had the effect of harming individual competitors – could be plausibly justified as innovations that improved Google's product and the experience of its users").

²⁰² In several lower court cases, Google has successfully argued that its search results are protected speech under the First Amendment. See *Langdon v. Google, Inc.*, 474 F. Supp. 2d 622, 630 (D. Del. 2007); *Kinderstart.com v. Google, Inc.*, No. C 06-2057 JF (RS), 2007 WL 831806, at *13 (N.D. Cal. Mar. 16, 2007); *Datner v. Yahoo*, No. BC

rankings are protected speech under the First Amendment has become search engines' (or, more accurately - Google's) first line of defense against regulation, at the expense of users' speech interests.²⁰³

(4) Social Media Platforms

Social media platforms, and especially social networking sites and apps, such as Facebook and Twitter, have an enormous direct impact - perhaps more than any other type of online intermediaries - on the liberty aspect of users' freedom of expression. Social media platforms have a "symbiotic relationship with their users;"²⁰⁴ they depend on users' content and at the same time set the rules and architecture under which such content can be generated. The popular image of these platforms is often that of facilitators of human rights and social change,²⁰⁵ an image which is nurtured and encouraged by such platforms' self-proclaimed missions and objectives. Twitter's stated mission, for example, is "to give everyone the power to create and share ideas and information instantly, without barriers."²⁰⁶ YouTube "provides a forum for people to connect, inform, and inspire others across the globe."²⁰⁷ Facebook's goal is "to give people the power to share and make the world more open and connected."²⁰⁸ Facebook also "strives to create an online environment that facilitates communication, social connection, and the sharing of ideas,

355217, slip op. at 2 (Cal. Supr. Ct. Dec. 12, 2006); *Search King, Inc. v. Google Tech., Inc.*, No. CIV-02-1457-M, 2003 U.S. Dist. LEXIS 27193, at *12 (W.D. Okla. May 27, 2003). A number of commentators have expressed support for this conclusion. *See, e.g.*, Volokh & Falk, *supra* note 199; Woan, *supra* note 173; Stuart Minor Benjamin, *Algorithms and Speech*, 161 U. PENN. L. REV. 1445, 1467-72 (2013) (2013). Others, however, believe that legal regulation of manipulation practices is not barred by the First Amendment. *See, e.g.*, Bracha & Pasquale, *supra* note 25; Bracha, *supra* note 160.

²⁰³ *See* Bracha, *supra* note 160, at 1631-32.

²⁰⁴ Amy Binns, *Twitter City and Facebook Village: Teenage Girls' Personas and Experiences Influenced by Choice Architecture in Social Networking Sites*, 15 J. MEDIA PRAC. 71, 71 (2014).

²⁰⁵ As, for example, with regard to the ostensible key role that social media played in the so-called Arab Spring. *See, e.g.*, Habibul Haque Khondker, *Role of the New Media in the Arab Spring*, 8 GLOBALIZATIONS 675 (2011); Gilad Lotan et al., *The Revolutions Were Twitted: Information Flows During the 2011 Tunisian and Egyptian Revolutions*, 5 INT'L J. COMM. 1375 (2011); Ilhem Allagui & Johanne Kuebler, *The Arab Spring and the Role of ICTs: Editorial Introduction*, 5 INT'L J. COMM. 1435 (2011); Carol Huang, *Facebook and Twitter Key to Arab Spring Uprisings: Report*, THE NATIONAL (June 6, 2011), <http://www.thenational.ae/news/uae-news/facebook-and-twitter-key-to-arab-spring-uprisings-report> (last visited Jan. 6, 2018).

²⁰⁶ TWITTER, OUR MISSION, <https://about.twitter.com/company> (last visited Jan. 6, 2018).

²⁰⁷ YOUTUBE, ABOUT YOUTUBE, <https://www.youtube.com/yt/about/> (last visited Jan. 6, 2018).

²⁰⁸ FACEBOOK, ABOUT, https://www.facebook.com/facebook/info?tab=page_info (last visited Jan. 6, 2018).

and in which users can engage in debate and advocate for the political ideas, parties, and candidates of their choice."²⁰⁹ It even has, according to its own account, "a vital interest in ensuring that speech on Facebook and in other online communities is afforded the same constitutional protection as speech in newspapers, on television and in the town square."²¹⁰

In reality, however, there is a significant gap between this bald rhetoric (highlighting the capacity aspect of freedom of expression) and the actual role that social media platforms play in our system of free expression. Online social networks determine the speech rules for most content generated and most information exchanged today,²¹¹ rules which users must accept in order to be allowed to use the platform. As such, online social networks are "the most obvious examples of private ICT companies fulfilling a public regulatory role."²¹² Ironically, however, the standards applied by these private regulators of speech to their own relationships with their users do not remotely reflect the level of respect for users' freedom of expression that Facebook, for example, expects the government to show toward speech "on Facebook and in other online communities."²¹³ Examples are many and diverse: Apple's ban on any Apps that include "defamatory or mean-spirited content" unless it is generated by "professional political satirists and humorists;"²¹⁴ Microsoft's policy of suspending anyone adopting, in her Xbox Live Gamertag, a nickname related to sexual orientation;²¹⁵ Reddit's censoring of stories submitted on

²⁰⁹ Br. of Facebook, Inc. as Amicus Curiae in Supp. of Pl.-Appellant Daniel Ray Carter, Jr. and in Supp. of Vacatur at 1, *Bland v. Roberts*, 857 F. Supp. 2d 599 (4th Cir. 2012) (No. 12-1671), https://www.aclu.org/files/assets/bland_v._roberts_appeal_-_facebook_amicus_brief.pdf (last visited Jan. 6, 2018) (hereinafter; "Facebook's Brief").

²¹⁰ *Id.*

²¹¹ See, e.g., Ammori, *supra* note 121, at 2272-73.

²¹² Thorsten Busch, *Fair Information Technologies: The Corporate Responsibility of Online Social Networks as Public Regulators* 71 (2013) (unpublished doctoral thesis, University of St. Gallen), <https://www.alexandria.unisg.ch/228863/>. See also, e.g., Tarleton Gillespie, *The Politics of 'Platforms'*, 12 *NEW MEDIA SOC.* 347 (2010) (arguing that digital platforms act as "curators of public discourse").

²¹³ See Facebook's Brief, *supra* note 209.

²¹⁴ APPLE, APP STORE REVIEW GUIDELINES, § 1.1.1, <https://developer.apple.com/app-store/review/guidelines/#objectionable-content> (last visited Jan. 6, 2018).

²¹⁵ See, e.g., Ben Kuchera, *Microsoft Admits to, Defends Banning Lesbian Xbox Live User*, ARSTECHNICA (Feb. 26, 2009, 10:10PM), <http://arstechnica.com/gaming/2009/02/microsoft-admits-to-defends-banning-lesbian-xbox-live-user/> (last visited Jan. 6, 2018).

controversial topics;²¹⁶ LinkedIn's blanking out of posts related to the Tiananmen anniversary (going beyond the restrictions imposed even by the Chinese government);²¹⁷ Instagram's suspension of the profile of conservative comedy group, Toughen Up America, without providing any reason;²¹⁸ Tumblr's censoring of tags related to "Torrent;"²¹⁹ WhatsApp's blocking of links to rival app, Telegram;²²⁰ and the list can go on and on.

Facebook is an especially important case in light of its exceptionally-dominant position in the social networking landscape.²²¹ As is typical of online intermediaries, Facebook's Terms of Service (ToS) are formulated in extremely broad and general terms, so as to provide Facebook with almost unlimited discretion to regulate content on its platform.²²² This control over users' speech comes on top of the fact that a speech environment based on contract puts users, from the outset, in a disadvantaged position. A user attempting to vindicate her right not to have her content removed would have to make her case through the filter of the ToS. This means not only that the user's claim would be analyzed from the perspective of contract law (rather than the standpoint of constitutional law), but also that the burden would be on her to prove that the

²¹⁶ See, e.g., Chris Taylor, *Reddit in Turmoil Over Censored Posts*, MASHABLE (Apr. 22, 2014), <http://mashable.com/2014/04/21/reddit-censored-posts/#WBACk41OjSqa> (last visited Jan. 6, 2018).

²¹⁷ See, e.g., Tania Branigan, *LinkedIn under Fire for Censoring Tiananmen Square Posts*, THE GUARDIAN (June 4, 2014, 17:32BST), <https://www.theguardian.com/technology/2014/jun/04/linkedin-tiananmen-posts-china-censorship> (last visited Jan. 6, 2018).

²¹⁸ See, e.g., Tom Ciccotta, *Instagram Censors Conservative Comedy Group, Provides No Reason*, BREITBART.COM (June 20, 2016), <http://www.breitbart.com/tech/2016/06/20/instagram-censors-conservative-comedy-group/> (last visited Jan. 6, 2018).

²¹⁹ See, e.g., Edwin Kee, *Tumblr Censors Tags Related to "Torrents,"* UBERGIZMO.COM (Feb. 26, 2015, 4:55PST), <http://www.ubergizmo.com/2015/02/tumblr-censors-tags-related-to-torrent/> (last visited Jan. 6, 2018).

²²⁰ See, e.g., Natasha Lomas, *WhatsApp is Blocking Links to Rival App Telegram on Android*, TECHCRUNCH (Dec. 1, 2015), <https://techcrunch.com/2015/12/01/whatsapp-is-blocking-links-to-rival-app-telegram-on-android/> (last visited Jan. 6, 2018).

²²¹ As of November 2016, Facebook was by far the leading social media website in the United States, based on share of visits, with 42.1% (followed by YouTube with 25.2%). See <http://www.statista.com/statistics/265773/market-share-of-the-most-popular-social-media-websites-in-the-us/> (last visited Jan. 6, 2018). The leading social network worldwide, ranked by number of active users, as of August 2017, was also Facebook with more than 2 billion monthly active users (followed by Google-owned YouTube with 1.5 billion monthly active users and Facebook-owned WhatsApp with 1.2 billion monthly active users). See <http://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/> (last visited Jan. 6, 2018).

²²² See FACEBOOK, STATEMENT OF RIGHTS AND RESPONSIBILITIES §5(2), <https://www.facebook.com/terms.php> (last visited Jan. 6, 2018).

removal of content was a breach of the ToS²²³ (a burden which, as noted, would be practically impossible to lift).

To implement its regulatory functions, Facebook uses automated systems, hundreds of employees, outsourcing firms and users themselves, who are asked to "flag" any content they consider inappropriate.²²⁴ The internal process of content scrutiny is subject to internal guidelines that are not shared with the users,²²⁵ and, accordingly, the considerations underlying decisions relating to users' content remain unknown. But even had Facebook's internal guidelines been transparent, this would be of limited assistance to users since Facebook's ToS provide users with an opportunity to appeal content-removal decisions only in case of removal due to infringement of third-party copyrights.²²⁶ In practice, Facebook is more restrictive of content than other social media platforms (as well as Google).²²⁷ As demonstrated by Andrew Tutt, for example, Facebook's algorithm often labels art as pornography and political speech as harassing or hateful, leading to the removal of speech that is undoubtedly constitutional, only that it may test boundaries and challenge existing notions.²²⁸ Ben Wagner has suggested that this is because Facebook is designed as a network for anyone aged 13 and older and due to Facebook's interest in "managing" a reputation of a safe environment that serves its overall commercial interest.²²⁹ The challenge of scaling Facebook's policies for 1.4 billion users further pushes toward defining "clear" rules (rather than open standards) that can be consistently applied by hundreds of

²²³ See, e.g., Jacquelyn E. Fradette, *Online Terms of Service: A Shield for First Amendment Scrutiny of Government Action*, 89 NOTRE DAME L. REV. 947, 971 (2013).

²²⁴ See, e.g., Ammori, *supra* note 121, at 2277; Wagner, *supra* note 126, at 397.

²²⁵ Earlier versions of Facebook's internal guidelines have been leaked and published online, but not at Facebook's own initiative. See, e.g., Adrian Chen, *Inside Facebook's Outsourced Anti-Porn and Gore Brigade, Where 'Camel Toes' are More Offensive Than 'Crushed Heads'*, GAWKER (Feb. 16, 2012, 3:45PM), <http://gawker.com/5885714/inside-facebooks-outsourced-anti-porn-and-gore-brigade-where-camel-toes-are-more-offensive-than-crushed-heads> (last visited Jan. 6, 2018); Adrian Chen, *Facebook Releases New Content Guidelines, Now Allows Bodily Fluids*, GAWKER (Feb. 16, 2012, 6:00PM), <http://gawker.com/5885836/facebook-releases-new-content-guidelines-now-allows-bodily-fluids> (last visited Jan. 6, 2018).

²²⁶ FACEBOOK, STATEMENT OF RIGHTS AND RESPONSIBILITIES, *supra* note 222, at §5(4).

²²⁷ Wagner, *supra* note 126, at 397.

²²⁸ See Andrew Tutt, *The New Speech*, 41 HASTINGS CONST. L.Q. 235, 275-79 (2014).

²²⁹ Wagner, *supra* note 126, at 397.

employees worldwide, without them having to make judgment calls.²³⁰ The result, in any event, is a private regulatory system centered on restrictive norms akin to the norms of child protection legislation, rather than those of the First Amendment.²³¹

At an even more basic level than that of its ToS and internal policies, Facebook regulates speech through choice architecture, on its own websites as well as via its increasing presence across the Web with its system of Social Plugins. While the Facebook platform, with its repeated empty boxes inviting comments on others' status updates, constantly nudges users to interact,²³² the type and scope of allowable and desirable interaction within the platform are carefully constructed. Facebook's "News Feed," for example, shows the most commented or liked status updates from amongst the user's friends and groups (the only exception being sponsored links or updates from businesses or fan pages), focusing on opinions and events within the user's own social circle.²³³ A content analysis of Facebook's patents, press releases and Securities and Exchange Commission (SEC) filings conducted by Michael DeVito, has identified nine core algorithmic values that drive story selection on the Facebook News Feed: friend relationships, explicitly expressed user interests, prior user engagement, implicitly expressed user preferences, post's age, platform priorities, page relationships, negatively expressed preferences, and content quality.²³⁴ This set of selection values is obviously very different from what news outlets would consider as relevant to their editorial decision-making.²³⁵ DeVito has also found that friend

²³⁰ See Ammori, *supra* note 121, at 2278.

²³¹ See Wagner, *supra* note 126, at 398.

²³² See, e.g., Binns, *supra* note 204, at 85.

²³³ *Id.* Notably, users are often not even aware of the existence of the News Feed curation algorithm. See, e.g. Motahhare Eslami et al., "I Always Assumed that I Wasn't Really that Close to [her]": Reasoning about Invisible Algorithms in the News Feed, PROC. OF THE 33RD ANN. ACM CONF. ON HUM. FACTORS IN COMPUTING SYS. 153 (2015).

²³⁴ Michael A. DeVito, *From Editors to Algorithms: A Value-Based Approach to Understanding Story Selection in the Facebook News Feed*, 5 DIGITAL JOURNALISM 753 (2017).

²³⁵ See, e.g., the seminal work by Johan Galtung & Mari Ruge, *The Structure of Foreign News: The Presentation of the Congo, Cuba and Cyprus Crises in Four Norwegian Newspapers*, 1 J. INTL. PEACE RES. 64 (1965) (identifying 12 factors that play a role in the selection of news: frequency, threshold, unambiguity, meaningfulness, consonance, unexpectedness, continuity, composition, reference to elite nations, reference to elite people, reference to persons, reference to something negative); Tony Harcup & Deirdre O'Neill, *What Is News? Galtung and Ruge Revisited*, 2

relationships act as an overall influence on all other News Feed selection values.²³⁶ Indeed, in June 2016 Facebook announced that it would change its News Feed's algorithm so that it would focus, to an even greater extent, on users' friends and family.²³⁷

The ways and the degree to which the News Feed *de facto* limits or prevents exposure to attitude-challenging information is subject to ongoing research.²³⁸ It is clear, however, that the News Feed algorithm is biased, by design, towards creating or reinforcing "echo chambers" (in which users are exposed only to information from like-minded individuals) and producing agreement.²³⁹ This inevitably follows from the fact that people similar to each other tend to be friends on Facebook,²⁴⁰ combined with the fact, as noted above, that the primary value driving story selection on the News Feed is friend relationships. The result is a Feed of very little substantive news intermingled with a lot of other personalized information: commentary, gossip,

JOURNALISM STUD. 261 (2001) (revisiting Galtung and Ruge's factors for news selection and suggesting an alternative set of factors: the power elite, celebrity, entertainment, surprise, bad news, good news, magnitude, relevance, follow-up, newspaper agenda).

²³⁶ DeVito, *supra* note 234.

²³⁷ See, e.g., Mike Isaac & Sydney Ember, *Facebook to Change News Feed to Focus on Friends and Family*, N.Y. TIMES, June 30, 2016, at B1.

²³⁸ See, e.g., Eytan Bakshy, Solomon Messing & Lada A. Adamic, *Exposure to Ideologically Diverse News and Opinion on Facebook*, 348 SCIENCE 1130 (2015) (a research conducted by Facebook employees parsing the Facebook pages of ~10 million U.S. individuals with self-declared ideologies and finding that the curation of news feeds ideologically filters what we see, although its effect is modest relative to choices people make that filter information, including their selection of friends); Michela del Vicario et al., *Echo Chambers in the Age of Misinformation*, arXiv:1509.00189 (2015), <http://arxiv.org/pdf/1509.00189.pdf> (last visited Jan. 6, 2018) (finding that homogeneity is the primary driver for the diffusion of content on Facebook); Donghee Yvette Wohn & Brian J. Bowie, *Micro Agenda Setters: The Effect of Social Media on Young Adults' Exposure to and Attitude toward News*, 2 SOC. MEDIA + SOCIETY 1 (2016) (finding that the primary filter of news on Facebook are the individuals on the user's network and that algorithms are a secondary filter); Matthew J. Williams, Lulia Cioroianu & Hywel T.P. Williams, *Different News for Different Views: Political News-Sharing Communities on Social Media through the UK General Election in 2015*, Paper presented at the 1st International Workshop on News and Public Opinion, May 17, 2016, <http://eprints.ncrm.ac.uk/3793/1/neco.pdf> (last visited Jan. 6, 2018) (finding that ideological bias and selective news-sharing affect patterns of online media exposure in social media).

²³⁹ See generally, e.g., ELI PARISER, *THE FILTER BUBBLE: WHAT THE INTERNET IS HIDING FROM YOU* (2011); David Lazer, *The Rise of the Social Algorithm: Does Content Curation by Facebook Introduce Ideological Bias?*, 348 SCIENCE 1090 (2015); Zeynep Tufekci, *Facebook Said Its Algorithms Do Help Form Echo Chambers, and the Tech Press Missed It*, 32 NEW PERSP. Q. 9 (2015).

²⁴⁰ See, e.g., Jan-Erik Lönngqvist & Juha V.A. Itkonen, *Homogeneity of Personal Values and Personal Traits in Facebook Social Networks*, 60 J. RES. PERSP. 24 (2016).

personal observations, commercial messages and so on.²⁴¹ Thus, with Facebook emerging as one of the most powerful news referring source,²⁴² Cass Sunstein's and Nicholas Negroponte's vision of the fragmented Daily Me - a communications package that is personally designed, with each component fully chosen in advance²⁴³ - does not seem impossible, only that it comes with one important twist: Facebook gets to construct the Daily Me.

The News Feed is only one architectural tool through which Facebook constructs and controls its speech environment. An even more important tool is Facebook's system of social buttons through which Facebook enables only particular forms of social engagement and even dictates the range of emotions which users can express. Facebook's iconic Like button, which was introduced in February 2009,²⁴⁴ and expanded in 2010 to external websites through Facebook's system of Social Plugins,²⁴⁵ is the basis of what Carolin Gerlitz and Anne Helmond have termed "the Like economy."²⁴⁶ As Gerlitz and Helmond demonstrate, Facebook's extension into the entire web by focusing on social buttons has led to the rise of Likes as *the* metric for online social engagement (surpassing the "hit" and "link" metrics of the informational web); this type of engagement can be easily transformed into numbers on button counters, and then traded and

²⁴¹ As one recent study shows, only 1 in 300 outbound clicks from Facebook correspond to substantive news while most other clicks correspond to video and photo sharing sites. See Seth R. Flaxman, Sharad Goel & Justin M. Rao, *Filter Bubbles, Eco Chambers and Online News Consumption*, 80 PUB. OPINION Q. 298, 301 (2016).

²⁴² See, e.g., Kenny Olmstead, Amy Mitchell & Tom Rosenstiel, Pew Research Center, *Navigating News Online: Where People Go, How They Get There and What Lures Them Away* (2011), <http://www.journalism.org/files/legacy/NIELSEN%20STUDY%20-%20Copy.pdf> (last visited Jan. 6, 2018); Danny Wong, *In Q2, Facebook Drove 23.39% of Overall Visits to Sites*, SHAREAHOLIC BLOG (Jul. 21, 2014), <https://blog.shareaholic.com/social-media-traffic-trends-07-2014/> (last visited Jan. 6, 2018).

²⁴³ See SUNSTEIN, *supra* note 115, at 1-22.

²⁴⁴ See Kathy H. Chan, "I Like This," FACEBOOK BLOG (Feb. 9, 2009, 6:00PM), <https://www.facebook.com/notes/facebook/i-like-this/53024537130/> (last visited Jan. 6, 2018).

²⁴⁵ See Facebook, *How to Use the New Facebook Social Plugins for Your Business*, FACEBOOK BLOG (May 4, 2010, 12:29PM), <https://www.facebook.com/notes/facebook-for-developers/how-to-use-the-new-facebook-social-plugins-for-your-business/394310302301/> (last visited Jan. 6, 2018).

²⁴⁶ See Carolin Gerlitz & Anne Helmond, *The Like Economy: Social Buttons and the Data-Intensive Web*, 15 NEW MEDIA & SOC. 1348 (2013); Carolin Gerlitz & Anne Helmond, *Hit, Link, Like and Share: Organising the Social and the Fabric of the Web*, DIGITAL METHODS WINTER CONF. PROC. 1 (2011), <http://research.gold.ac.uk/7075/1/GerlitzHelmond-HitLinkLikeShare.pdf> (last visited Jan. 6, 2018). See also BRIAN CARTER, *THE LIKE ECONOMY: HOW BUSINESSES MAKE MONEY WITH FACEBOOK* (2011).

multiplied, while advancing Facebook as the central hub of the whole process.²⁴⁷ The Like Social Plugin, as shown by Arnold Roosendaal, also functions as an effective tracking device that traces the activities of Facebook users, regardless of whether they actually use the button when visiting a website, and is even able of tracking non-Facebook members, making all visitors to websites containing Facebook's Social Plugins participants by default in the Like economy.²⁴⁸ From the perspective of freedom of expression, this overall Like-clicking-based system supports highly questionable practices. Facebook has been accused, for example, of recycling Likes of users and using them to promote "Related Posts" about products and stores on friends' News Feeds, which the users never endorsed and may have never even seen, all in a process entirely invisible to the users themselves.²⁴⁹ This was being done at about the same time when Facebook agreed to settle a class-action lawsuit over its use of users' identities to promote Sponsored Stories, without the users' consent.²⁵⁰ These are clear instances of compelled speech, only that the compelling entity is a corporation, Facebook, rather than the government.²⁵¹

The Like economy also facilitates a web of positive sentiment and superficial social "engagement," in which users "are constantly prompted to like, enjoy, recommend and buy as

²⁴⁷ *Id.*

²⁴⁸ Arnold Roosendaal, *Facebook Tracks and Traces Everyone: Like This!* (Tilburg Law School Legal Studies Research Paper Series No. 03/2011, 2011), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1717563 (last visited Jan. 6, 2018).

²⁴⁹ See, e.g., Damien Gayle, *Is Facebook 'Impersonating' Users to Promote Stories They've Never Seen to All Their Friends?*, MAILONLINE (Jan. 24, 2013, 8:53AM), <http://www.dailymail.co.uk/sciencetech/article-2267575/Is-Facebook-impersonating-users-promote-stories-theyve-seen-friends.html> (last visited Jan. 6, 2018); Anthony Wing Kosner, *Facebook Is Recycling Your Likes to Promote Stories You've Never Seen to All Your Friends*, FORBES (Jan. 21, 2013, 8:04AM), <http://www.forbes.com/sites/anthonykosner/2013/01/21/facebook-is-recycling-your-likes-to-promote-stories-youve-never-seen-to-all-your-friends/#54f8b4825777> (last visited Oct. 1, 2017); Bernard Meisler, *Why Are Dead People Liking Stuff on Facebook?*, READWRITE (Dec. 11, 2012), <http://readwrite.com/2012/12/11/why-are-dead-people-liking-stuff-on-facebook/> (last visited Jan. 6, 2018).

²⁵⁰ See *Fraley v. Facebook, Inc., et al.*, no. 11-CV-01726 (N.D. Cal., Aug. 26, 2013) (order granting motion for final approval of settlement agreement); *Fraley v. Facebook, Inc., et al.*, no. 11-CV-01726 (N.D. Cal., Sept. 19, 2013) (final judgment).

²⁵¹ For an analysis of the compelled speech doctrine under American jurisprudence see, e.g., Steven H. Shiffrin, *What is Wrong with Compelled Speech?*, 29 J.L. & POL. 499 (2014); Larry Alexaner, *Compelled Speech*, 23 CONST. COMMENT. 147 (2006).

opposed to discuss and critique."²⁵² For years, Facebook has refused to add to the Like button a Dislike counterpart.²⁵³ Facebook CEO, Mark Zuckerberg, provided a rather odd explanation for why Facebook would not build a Dislike button, stating that enabling people to say that something isn't good is "not good for the world."²⁵⁴ However, as commentators have pointed out, the real reason for Facebook's opposition to a Dislike button (which does exist, for example, on YouTube) is most probably a business one.²⁵⁵ Facebook's algorithms optimize for "engagement"-posting, liking, clicking, sharing, and commenting; the more, the better. Anything discouraging people from mindlessly sharing, like a Dislike button, would undermine Facebook's business model.²⁵⁶ In February 2016, Facebook officially rolled out Reactions, an extension to the Like button that, according to Facebook, gives users "more ways to share [their] reaction to a post in a quick and easy way,"²⁵⁷ and provides them "more authentic ways to quickly and easily respond to posts."²⁵⁸ Reactions include (in addition to Like) "Love," "Haha," "Wow," "Sad," and "Angry," thus providing a limited way to express negative feelings (yet not to "Dislike").²⁵⁹ However, behind Facebook Reactions' stated contribution to users' social engagement lies enormous

²⁵² Gerlitz & Helmond, *The Like Economy*, *supra* note 246, at 1362. *See also*, e.g., Michelle N. Meyer, *Two Cheers for Corporate Experimentation: The A/B Illusion and the Virtues of Data-Driven Innovation*, 13 COLO. TECH. L. J. 273, 282-83 (2015) (arguing that Facebook prioritizes positive content).

²⁵³ *See*, e.g., Gerlitz & Helmond, *id.*; Binns, *supra* note 204, at 77.

²⁵⁴ *See*, e.g., Gail Sullivan, *A "Dislike" Button for Facebook? That's Not "Good for the World," Says Zuckerberg*, THE WASH. POST (Dec. 12, 2014), <https://www.washingtonpost.com/news/morning-mix/wp/2014/12/12/a-dislike-button-for-facebook-thats-not-good-for-the-world-says-zuckerberg/> (last visited Jan. 6, 2018). Notably, the assumption that the Like button is necessarily used for positive engagement is mistaken, as it can be used for negative purposes as well, such as liking a mean remark. *See*, e.g., Binns, *supra* note 204, at 77.

²⁵⁵ *See*, e.g., Veikko Eranti & Markku Lonkila, *The Social Significance of the Facebook Like Button*, 20 FIRST MONDAY, No. 6 (2015), <http://www.firstmonday.dk/ojs/index.php/fm/article/view/5505/4581>; Will Oremus, *You Can't Dislike This Article*, FUTURE TENSE BLOG (Dec. 15, 2014), http://www.slate.com/articles/technology/future_tense/2014/12/facebook_dislike_button_why_mark_zuckerberg_won_t_allow_it.html (last visited Jan. 6, 2018).

²⁵⁶ *See*, e.g., Oremus, *id.*

²⁵⁷ Sammi Krug, Product Manager, *Reactions Now Available Globally*, FACEBOOK BLOG (Feb. 24, 2016), <http://newsroom.fb.com/news/2016/02/reactions-now-available-globally/> (last visited Jan. 6, 2018).

²⁵⁸ Kathleen Chaykowski, *Facebook No Longer Just Has a 'Like' Button, Thanks to Global Launch of Emoji Reactions*, FORBES (Feb. 24, 2016, 8:16AM), <http://www.forbes.com/sites/kathleenchaykowski/2016/02/24/facebook-no-longer-just-has-a-like-button-thanks-to-global-launch-of-emoji-reactions/#374d982d4994> (last visited Jan. 6, 2018).

²⁵⁹ *See*, e.g., Chaykowski, *id.*; Liz Stinson, *Facebook Reactions, the Totally Redesigned Like Button, Is Here*, WIRED (Feb. 24, 2016, 8:00AM), <http://www.wired.com/2016/02/facebook-reactions-totally-redesigned-like-button/> (last visited Jan. 6, 2018).

financial potential, by providing brands a powerful tool for sentiment analysis.²⁶⁰ In fact, shortly after the launch of Reactions, Belgian police warned citizens not to use Facebook's new feature, to protect their privacy.²⁶¹ We see it also as a way for Facebook to fine-tune its ability to construct and monitor speech.

(5) Additional Sources

The preceding analysis points out the main potential sources of interference with speech in the digital ecosystem, but it by no means exhausts all such possible sources. Apple, for example, exemplifies the integration of hardware, software, and content into one centralized, proprietary environment,²⁶² from the pentalobe screws physically sealing its iPhones,²⁶³ to its tightly-controlled mobile operating system (iOS).²⁶⁴ Payment processing intermediaries are in a unique position to exercise control over online transactions and associated speech (especially since approximately 80% of online transactions are made via a credit or debit card and most of those transactions are processed through MasterCard's or Visa's payment systems).²⁶⁵ Amazon,

²⁶⁰ See, e.g., Geetika Vashisht & Sangharsh Thakur, *Facebook as a Corpus for Emoticons-Based Sentiment Analysis*, 4 IJETAE 904 (2014); Andrew Grojean, *Facebook Reactions: What the Redesigned Like Button Means for Marketers*, ITOUCH SOLUTIONS BLOG (Mar. 8, 2016), <https://www.intouchsol.com/blog/facebook-reactions-what-the-redesigned-like-button-means-for-marketers> (last visited Jan. 6, 2018); Matthew Mooney, *Facebook Reactions: The Future for Sentiment Analysis*, LINKEDIN BLOG (Nov. 17, 2015), <https://www.linkedin.com/pulse/facebook-reactions-future-sentiment-analysis-matthew-mooney> (last visited Jan. 6, 2018).

²⁶¹ See, e.g., Andrew Griffin, *Facebook Reactions: Belgian Police Warn Citizens Not to React to Posts on Social Media*, INDEPENDENT (May 13, 2016), <http://www.independent.co.uk/life-style/gadgets-and-tech/news/facebook-reactions-belgian-police-warn-citizens-not-to-react-to-posts-on-social-media-a7027786.html> (last visited Jan. 6, 2018); Rhiannon Williams, *Don't Use Facebook's Reaction Buttons, Belgian Police Say*, THE TELEGRAPH (May 13, 2016, 2:44PM), <http://www.telegraph.co.uk/technology/2016/05/13/dont-use-facebooks-reaction-buttons-if-you-value-privacy-belgian/> (last visited Jan. 6, 2018).

²⁶² See generally, e.g., JONATHAN L. ZITTRAIN, *THE FUTURE OF THE INTERNET – AND HOW TO STOP IT* 67 (2008).

²⁶³ See, e.g., Chris Foresman, *Apple "Screwing" new iPhones Out of Simple DIY Repair*, ARSTECHNICA (Jan. 20, 2011, 7:42PM), <http://arstechnica.com/apple/2011/01/apple-screwing-new-iphones-out-of-simple-diy-repair/> (last visited Jan. 6, 2018).

²⁶⁴ See, e.g., Feida Lin & Weiguo Yen, *Operating System Battle in the Ecosystem of Smartphone Industry*, in IEEE 2009 INTERNATIONAL SYMPOSIUM ON INFORMATION ENGINEERING AND ELECTRONIC COMMERCE 617 (2009); Luis S. Hestres, *App Neutrality: Apple's App Store and Freedom of Expression Online*, 7 INT'L J. COMM. 1265 (2013).

²⁶⁵ See, e.g., Ronald J. Mann & Seth R. Belzley, *The Promise of Intermediary Liability*, 47 WM. & MARY L. REV. 239, 257-58, 280 (2005); Annemarie Bridy, *Internet Payment Blockades*, 67 FLA. L. REV. 1523, 1525-26 (2015). The most high-profile case of a "payment blockade" by online payment processors is that which was imposed on donations to WikiLeaks in August 2010, as a result of pressure by the U.S. government. See, e.g., Bridy, *id.*, at 1524-25.

among its many fields of activity, is by far the most dominant player in the market for e-books,²⁶⁶ and decides the criteria by which its users are able to purchase and navigate books.²⁶⁷ Amazon does not sell electronic versions of books but rather grants licenses to view them;²⁶⁸ it does not allow Kindle users to loan or sell their e-books;²⁶⁹ and in several of the bluntest (and most ironic) cases of interference with online content, it remotely removed e-books, including digital copies of George Orwell's "1984" and "Animal Farm," from users' Kindle devices along with all work that had been saved by users on those copies.²⁷⁰ This illustrates that all activity on e-readers is monitored and that Amazon can (and will) interfere with any content on such devices.²⁷¹ Relevant examples can be drawn from all across the digital ecosystem, all of which demonstrate the multi-modal exposure of online speech to interference by others.

(B) State-Encouraged Private Interference

The privatization of speech regulation in the digital ecosystem not only exposes individuals' speech to interference from multiple sources but also opens a variety of new channels for the classic historical censor, the government, to interfere with speech, while avoiding constitutional scrutiny. Things that democratic governments could not have done directly they can now supposedly do via private online intermediaries. A textbook example of an informal state-orchestrated assault on freedom of expression, in collaboration with (or using) the private sector, is the shutdown of WikiLeaks' website in 2010;²⁷² but, as Derek Bambauer and Seth

²⁶⁶ See, e.g., MARTIN MOORE, *TECH GIANTS AND CIVIC POWER* 13 (2016), <http://www.kcl.ac.uk/sspp/policy-institute/CMCP/Tech-Giants-and-Civic-Power.pdf> (last visited Jan. 6, 2018).

²⁶⁷ *Id.*, at 29.

²⁶⁸ See AMAZON, KINDLE STORE TERMS OF USE §1, <http://www.amazon.com/gp/help/customer/display.html?nodeId=201014950> (last visited Jan. 6, 2018).

²⁶⁹ *Id.*

²⁷⁰ See, e.g., Brad Stone, *Amazon Erases Orwell Books from Kindle*, N.Y. TIMES, Jul. 18, 2009, at B1.

²⁷¹ See, e.g., Elizabeth Henslee, *Down the Rabbit Hole: E-books and User Privacy in the 21st Century*, 49 CREIGHTON L. REV. 23, 25 (2015).

²⁷² See, e.g., Yochai Benkler, *A Free Irresponsible Press: Wikileaks and the Battle over the Soul of the Networked Fourth Estate*, 46 HARV. C.R.-C.L. L. REV. 311 (2011); Angela Daly, *Internet Privatization, Wikileaks, and Free Expression*, 8 INT'L J. COMM. 2693 (2014); Angela Daly, *Private Power and New Media: The Case of the Corporate Suppression of WikiLeaks and its Implications for the Exercise of Fundamental Rights on the Internet*, in HUMAN

Kreimer, among others, have demonstrated, the case of WikiLeaks is not an isolated one, as the state regularly uses various methods of "hard" and "soft" censorship by proxy, in order to control the Internet.²⁷³ Jacquelin Fradette has shown, for example, how the government uses takedown requests directed at online intermediaries as a censorial tool. The fact that both users and the government act through intermediaries' ToS effectively shields the government from constitutional scrutiny of its take-down requests, while at the same time limiting speakers' ability to directly challenge government action concerning their speech.²⁷⁴ In 2003, Michael Birnhack and Niva Elkin-Koren warned against the emergence of this type of informal public-private partnership, which they termed "the invisible handshake."²⁷⁵ Recently, Elkin-Koren and Eldar Haber have based on this notion a thorough analysis of what they call "governance by proxy" – the rise of new types of collaboration between governments and online intermediaries in managing online behavior, which take place in a "regulatory twilight zone," out of the reach of constitutional law.²⁷⁶

It is important to note, however, that informal collaboration between the government and online intermediaries is only one aspect of governance by proxy in the digital ecosystem. The government does not only take advantage of the fact that most speech today is intermediated but also consciously delegates regulatory power to online intermediaries and formally reinforces their discretion to silence users' speech. As Elkin-Koren and Maayan Perel have indicated, for example, algorithmic copyright enforcement under the Digital Millennium Copyright Act (DMCA)²⁷⁷ is a classic example of delegation of power from the government to online

RIGHTS AND RISKS IN THE DIGITAL ERA: GLOBALIZATION AND THE EFFECTS OF INFORMATION TECHNOLOGIES 81 (Christina M. Akrivopoulou & Nicolaos Garipidis, eds., 2012).

²⁷³ Kreimer, *supra* note 186; Bambauer, *supra* note 186; Derek E. Bambauer, *Orwell's Armchair*, 79 U. CHI. L. REV. 863 (2012).

²⁷⁴ See Fradette, *supra* note 223.

²⁷⁵ See Michael D. Birnhack & Niva Elkin-Koren, *The Invisible Handshake: The Reemergence of the State in the Digital Environment*, 8 VA. J. L. & TECH. (2003).

²⁷⁶ Niva Elkin-Koren & Eldar Haber, *Governance by Proxy*, 82 BROOK L. REV. 105 (2016).

²⁷⁷ Digital Millennium Copyright Act, 17 U.S.C. § 1201 (1998).

intermediaries that effectively act like public administrative agencies.²⁷⁸ Similarly, the governance of the Internet's domain name system is in the hands of the Internet Corporation for Assigned Names and Numbers (ICANN), a private not-for-profit corporation that was established by the US government and to which the government transferred by contract all power over the DNS.²⁷⁹ As David Post and Michael Froomkin have indicated, this has worked as a way to route around constitutional limitations and has left ICANN with largely unreviewable power.²⁸⁰ Another example in point is Section 230 of the Communications Decency Act.²⁸¹ CDA 230 has been hailed as "one of the strongest bulwarks for free expression" today.²⁸² Such statements tend to focus on CDA 230(c)(1),²⁸³ which grants online service providers immunity from liability for third-party content,²⁸⁴ thus incentivizing them not to interfere with user-generated content that may defame (or otherwise tortiously interfere with the rights of) another user.²⁸⁵ Of course, CDA 230(c)(1) does not prevent online intermediaries from adopting a stricter policy toward undesirable speech even if such intermediaries could carry it without fear of liability,²⁸⁶ and research, in fact, shows that online intermediaries have plenty of business and other incentives to

²⁷⁸ Maayan Perel & Niva Elkin-Koren, *Accountability in Algorithmic Copyright Enforcement*, 19 STAN. TECH. L. REV. 473 (2016).

²⁷⁹ See, e.g., David G. Post, *Governing Cyberspace, or Where is James Madison When We Need Him?* (1999), <http://www.temple.edu/lawschool/dpost/icann/comment1.html> (last visited Jan. 6, 2018); A. Michael Froomkin, *Wrong Turn in Cyberspace: Using ICANN to Route around the APA and the Constitution*, 50 DUKE L. J. 17 (2000).

²⁸⁰ *Id.*

²⁸¹ 47 U.S. Code §230 (2000).

²⁸² Ammori, *supra* note 121, at 2290.

²⁸³ CDA 230(c)(1) determines that "[n]o provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another content provider."

²⁸⁴ The exact scope of immunity afforded to online service providers under CDA 230(c)(1) has not been fully determined by U.S. federal courts. Compare, e.g., the broad approach adopted in *Zeran v. America Online, Inc.*, 129 F.3d 327, 330 (4th Cir. 1997); *Johnson v. Arden*, 614 F.3d 785, 791 (8th Cir. 2010); and *Almeda v. Amazon.com, Inc.*, 456 F.3d 1316, 1321 (11th Cir. 2006), with the narrower approach in *City of Chicago v. StubHub!, Inc.*, 624 F.3d 363, 366 (7th Cir. 2010); and *Barnes v. Yahoo!, Inc.*, 570 F.3d 1096, 1100 (9th Cir. 2009). It is clear, however, that CDA 230(c)(1) protects online intermediaries from claims of defamation and a range of other civil torts.

²⁸⁵ Notably, in Europe the scope of immunity granted to online intermediaries seems to be narrower. In a recent judgment rendered by the European Court of Human Rights, it was held that a contracting party could impose liability on an online news portal for comments posted to its site by third parties, although the portal lacked knowledge of the unlawful nature of the comments and promptly removed them when requested to do so. *Delfi AS v Estonia* [2015] ECtHR 64669/09.

²⁸⁶ Ammori, *supra* note 121, at 2287-88.

voluntarily police speech, as they often do.²⁸⁷ Moreover, CDA 230(c)(2), which is often overlooked, generally immunizes online intermediaries from liability for any voluntary decision taken by them in "good faith" to filter "objectionable" content, regardless of whether such content is constitutionally protected.²⁸⁸ Consequently, on top of the contractual discretion to filter content that online intermediaries reserve for themselves in their own ToS, CDA 230(c)(2) actively delegates to online intermediaries the authority to regulate online speech, without them having any significant corresponding responsibility for the results of their actions, and provides them with a formal statutory incentive to filter constitutional content.²⁸⁹

(C) Multiple Modes of Interference

The third dimension of pressure on liberty in the digital ecosystem stems from the fact that interference with online speech takes on different, often undetectable, shapes, which do not necessarily conform to classic censorship. The relationship between users and online intermediaries is one of asymmetrical power, in which the intermediary is more powerful than the user, resulting in an asymmetrical exercise of influence or control by the power holder (the intermediary) over the power endurer (the user).²⁹⁰ One type of power relations is *force*, in which the power holder strips the power endurer from the ability to act in a certain way; another is

²⁸⁷ See, e.g., David. S. Ardia, *Free Speech Savior or Shield for Scoundrels: An Empirical Study of Intermediary Immunity Under Section 230 of the Communications Decency Act*, 43 LOY. L.A. L. REV. 373 (2010); Julie Adler, *The Public's Burden in a Digital Age: Pressures on Intermediaries and the Privatization of Internet Censorship*, 20 J. L. & POLY 231, 244-46 (2011). As also indicated by Adler (*id.*, at 246-48), self-censorship by intermediaries, beyond that which is required by law, is also common under the DMCA.

²⁸⁸ See, e.g., Yemini, *supra* note 52, at ¶ 24; Eric Goldman, *Online User Account Termination and 47 U.S.C. §230 (c)(2)*, 2 U.C. IRVINE L. REV. 659 (2012). As noted by Goldman, *id.*, CDA 230(c)(2) most probably also provides online intermediaries with immunity from users' claims against account terminations.

²⁸⁹ Nicholas Conlon has argued that CDA 230(c)(2) was originally intended to incentivize the dissemination of technologies that would enhance users' own ability to control the material they receive. Clearly, however, the statute, as applied by the courts, has been broadly interpreted to encompass filtering that does not comport with users' preferences. See Nicholas Conlon, *Freedom to Filter Versus User Control: Limiting the Scope of § 230(c)(2) Immunity*, 2014 J. L. TECH. & POLY 105 (2014). See also, e.g., Jonathan Zittrain, *A History of Online Gatekeeping*, 19 HARV. J.L. & TECH. 253, 262 (2006) ("Without requiring filtering by gatekeepers, the CDA expressed a desire to encourage it").

²⁹⁰ Cf. Philip Brey, *The Technological Construction of Social Power*, 22 SOC. EPISTEMOLOGY 71, 77 (2008).

coercion, in which the power endurer's compliance is achieved by the threat of deprivation.²⁹¹ In the context of freedom of expression, force and coercion manifest in *ex-ante* censorship and threats of *ex-post* punishment. As analyzed above, both types of power relations also exist in the digital ecosystem (e.g. through restrictions on "objectionable" speech, threats of account termination and so on).

However, in addition to force and coercion, scholars have identified other types of power relations, including *influence* (when the power holder causes the power endurer to change her course of action without an overt threat of deprivation);²⁹² *authority* (when the power endurer complies because she recognizes that the power holder's command is reasonable in terms of her own values);²⁹³ and most importantly for our purposes - *seduction* (the exercise of power through positive incentives);²⁹⁴ and *manipulation* (when the power holder gets people to act in a certain way by performing actions behinds their back, withholding information from them or deceiving them in some way).²⁹⁵ Seduction and manipulation play key roles in our current digital ecosystem. Although these types of power relations have always been part of our system of free expression,²⁹⁶ in the digital ecosystem they have become, as demonstrated in the preceding analysis, pervasive and routine.²⁹⁷ Moreover, the business model of many of the major online intermediaries, rests on what can be described as a synergy of seduction at the "front end" and

²⁹¹ See generally, e.g., PETER BACHRACH & MORTON S. BARATZ, *POWER AND POVERTY: THEORY AND PRACTICE* (1970); STEVEN LUKES, *POWER: A RADICAL VIEW* (1974, 2005).

²⁹² See, e.g., LUKES, *id.*, at 21.

²⁹³ *Id.*

²⁹⁴ See, e.g., Bertram H. Raven, *The Bases of Power: Origins and Recent Developments*, 49 J. SOC. ISSUES 227 (1993); Brey, *supra* note 290, at 78-79.

²⁹⁵ See, e.g., Brey, *id.*, at 80.

²⁹⁶ See, e.g., David A. Strauss, *Persuasion, Autonomy, and Freedom of Expression*, 91 COLUM. L. REV. 334 (1991) (discussing the persuasion principle, according to which the government may not suppress speech, including by way of manipulation, on the ground that the speech may persuade people to do something that the government considers harmful); JEROME BARRON, *FREEDOM OF THE PRESS FOR WHOM?* (1973) (discussing the ways in which mass media manipulate public opinion); MARK G. YUDOF, *WHEN GOVERNMENT SPEAKS: POLITICS, LAW, AND GOVERNMENT EXPRESSION IN AMERICA* (1983) (arguing that the government's power to use government speech in order to manipulate consent should be restricted).

²⁹⁷ See also generally, e.g., Zeynep Tufekci, *Algorithmic Harms Beyond Facebook and Google: Emergent Challenges of Computational Agency*, 13 COLO. TECH. L.J. 203 (2015).

manipulation at the "back end:" online intermediaries, such as Google and Facebook, offer appealing and even indispensable free services that present themselves as serving individual users' interests, while the surveillance tools and methods of controlling users' speech environment, which such intermediaries employ in order to serve their own economic interests, remain largely invisible.²⁹⁸

An astonishing peek into the manipulative power of online intermediaries was made possible through a couple of academic articles that documented experiments conducted on Facebook's platform at Facebook's initiative. One article, published in *Nature* in 2012, reported the results of a randomized controlled trial of political mobilization messages delivered to 61 million Facebook users during the 2010 U.S. congressional elections.²⁹⁹ The results showed that the messages, prompting users to vote by showing them that their friends had already voted, directly influenced millions of people who wouldn't otherwise go to the polls, to cast a vote.³⁰⁰ While the results of this specific experiment may have been commendable, the idea that Facebook could have the power to influence users' political behavior in such a way is problematic. As Jonathan Zittrain has correctly observed, nothing would prevent Facebook in a future election to manipulate its algorithm not only to mobilize people to vote but to mobilize them to vote for a specific candidate (by arranging the same encouragement to vote to appear on the News Feeds of a politically identified group).³⁰¹ Notably, the basis of the manipulation in Facebook's experiment lies in the fact that it did not seek its users' consent for their participation in the trial. Facebook seems to have treated this experiment as no different as any other change it

²⁹⁸ Cf., e.g., Lauren Murphy, *Terms of Servitude* 20 (2015) (Honors Thesis, Australian National University College of Law), https://www.researchgate.net/publication/292148744_Terms_of_Servitude (last visited Jan. 6, 2018); Roberto Pizzato, *Online Behaviours and Facebook Narratives in the Post-Snowden Era* 17-18 (2015) (Master's Thesis, The University of Amsterdam), <http://dare.uva.nl/document/606338> (last visited Jan. 6, 2018).

²⁹⁹ Robert M. Bond et al., *A 61-Million-Person Experiment in Social Influence and Political Mobilization*, 489 *NATURE* 295 (2012).

³⁰⁰ *Id.*

³⁰¹ Jonathan Zittrain, Response, *Engineering an Election: Digital Gerrymandering Poses a Threat to Democracy*, 127 *HARV. L. REV. F.* 335 (2014).

makes to its News Feed algorithm. This type of conduct led to public outcry when it was revealed that in another experiment, Facebook (together with Cornell researchers) attempted to affect the emotions of approximately 700,000 people through the display of positive or negative posts on their News Feed.³⁰² The results showed that it did.³⁰³

As Cass Sunstein recently observed (following Joseph Raz, among others), "the most obvious problem with manipulation is that it can insult both autonomy and dignity."³⁰⁴ Autonomy requires a meaningful variety of choices, information about the state of the world, the capacity to evaluate this information, and the ability to choose.³⁰⁵ If an online intermediary controls information flows in ways that shape and constrain users' choices, in a process lacking transparency which users cannot avoid, then users' autonomy is limited.³⁰⁶ From the perspective of dignity, manipulation can be humiliating; it does not treat people with respect.³⁰⁷ Manipulation also raises concerns about its effect on democratic values.³⁰⁸ These concerns recall the classic critiques of mass media,³⁰⁹ but may be even greater. While concerns with respect to twentieth-century mass media centered on a general (and relatively vague) fear from their ability to manipulate public opinion, manipulation by online intermediaries can be both large-scale *and* highly-personalized.

³⁰² See, e.g., Meyer, *supra* note 252, at 276.

³⁰³ See Adam D.I. Kramer, Jamie E. Guillory & Jeffrey T. Hancock, *Experimental Evidence of Massive-Scale Emotional Contagion Through Social Networks*, 111 PROC. NAT'L ACAD. SCI. 8788 (2014).

³⁰⁴ Cass R. Sunstein, *Fifty Shades of Manipulation*, 1 J. MARKETING BEHAV. 213, 226 (2015). See also, e.g., JOSEPH RAZ, *THE MORALITY OF FREEDOM* 377-79 (1986).

³⁰⁵ See RAZ, *id.*, at 370.

³⁰⁶ See Bracha & Pasquale, *supra* note 25, at 1178.

³⁰⁷ See Sunstein, *supra* note 304, at 226.

³⁰⁸ See, e.g., Bracha & Pasquale, *supra* note 25, at 1171-73.

³⁰⁹ See generally *supra* note 296.

(D) New-Media Concentration

Twentieth-century mass media, by the nature of their business, carried their own speech and were powerful in the sense of being powerful speakers.³¹⁰ Their threat to free expression lied not in their ability to directly interfere with others' speech, but in their concentrated control over the means of expression, which was believed to adversely affect the quality of public debate.³¹¹ In the 2010s, on the other hand, the architecture of our speech environment features an abundance of content and speakers, but as analyzed above, these are layered on top of a small number of intermediaries,³¹² which, by the nature of their business, stand between potential speakers and their potential audience.³¹³ Thus, contrary to conventional wisdom, the problem of media concentration has not disappeared with the advent of the Internet but has rather changed character. As Gregory Magarian has argued, "the same economic factors that have produced concentration and undermined diversity in traditional mass media have carried over in substantial measure to cyberspace."³¹⁴

A recent comprehensive study of media concentration around the world has found that Internet media, such as online news, search, and ISPs are more concentrated than twentieth-century audiovisual media, such as film, radio, broadcast TV, and cable TV.³¹⁵ The ISP market is highly concentrated worldwide, with only a handful of players in even the most competitive

³¹⁰ See Tutt, *supra* note 228, at 236.

³¹¹ See generally *supra* note 47 and the accompanying text.

³¹² See also, e.g., Wu, *supra* note 126, at 94.

³¹³ The only pre-Internet media entities, which bear slight resemblance to what online intermediaries do today, are cable companies, which as part of their program offerings carried content packaged by others. Although the Supreme Court acknowledged that cable companies had editorial discretion protected under the First Amendment to choose the channels offered over their platforms, it nevertheless upheld government regulations ("must carry" rules) which required cable companies to carry certain channels. In doing so, the Court acknowledged that private cable operators' position as "gatekeepers" of public access to information justifies a more lenient standard in reviewing regulations of their programming decisions. See *Turner Broad. Sys. v. FCC*, 512 U.S. 622, 675 (1994) ("The First Amendment's command that government not impede the freedom of speech does not disable the government from taking steps to ensure that private interests not restrict, through physical control of a critical pathway of communication, the free flow of information and ideas").

³¹⁴ Gregory P. Magarian, *Market Triumphalism, Electoral Pathologies, and the Abiding Wisdom of First Amendment Access Rights*, 35 HOFSTRA L. REV. 1373, 1386 (2007).

³¹⁵ ELI M. NOAM ET AL., WHO OWNS THE WORLD'S MEDIA?: MEDIA CONCENTRATION AND OWNERSHIP AROUND THE WORLD 1314-22 (2016).

markets;³¹⁶ the search engine industry is the most concentrated industry of all, due to Google's extraordinary dominance in most countries;³¹⁷ and various other market segments have their own dominant players – Amazon, eBay, Microsoft, Facebook, YouTube (Google), Apple, etc.³¹⁸ Since most content, including news, is accessed through or provided by these highly-dominant online intermediaries,³¹⁹ new-media concentration continues to be a pressing issue, which correlates with the other dimensions undermining liberty in the digital ecosystem, as discussed above.

Some commentators have posited that market forces could provide a solution to the problem of new-media concentration.³²⁰ The fundamental problem with this approach is that it relies on consumer preferences, while the normative concerns associated with new-media concentration very partially overlap with such preferences and cannot be fully cast in economic terms.³²¹ The economic argument assumes that users would respond to an online intermediary's abuse of its power to control speech by migrating to a competing platform (and that such competing platforms would develop to satisfy this demand). Of course, users would need to be aware of such abuse, which, as discussed above, is far from trivial considering intermediaries' lack of transparency and the ubiquitousness of online manipulation. But even assuming the existence of such knowledge, the economic argument simply cannot answer the concerns for freedom of expression that stem from the problem of new-media concentration, such as its potential adverse effect on democratic discourse. Most importantly, the economic argument, by

³¹⁶ *Id.*, at 1091-94.

³¹⁷ In 20 out of the 30 countries surveyed in the study, Google holds a market share of 90% or more. In India, Canada and Switzerland it has a market share of more than 80%. In the U.S., it holds 68.4% of the market. In the handful of countries where Google is not the dominant search engine, the largest search engine by volume tends to be the one based in that country, and they too hold huge market shares, such as Baidu in China (78.6%), NHN in South Korea (68.8%) and Yandex in Russia (47.1%). *See id.*, at 1095-99.

³¹⁸ *Id.*, at 1315.

³¹⁹ *See, e.g.,* Philip M. Napoli, *Social Media and the Public Interest: Governance of News Platforms in the Realm of Individual and Algorithmic Gatekeepers*, 39 TELECOMM. POLY 751, 752 (2015) (noting that social media platforms, such as Facebook and Twitter, have emerged (alongside Google) "as some of the most significant new media organizations of the 21st century").

³²⁰ In the context of the search market *see, e.g.,* Gasser, *supra* note 198, at 224; Goldman, *supra* note 183, at 196-98.

³²¹ *See, e.g.,* Introna & Nissenbaum, *supra* note 170, at 177-78; Bracha & Pasquale, *supra* note 25, at 1185-86.

its very nature, aggregates across individual lives in a utilitarian mode of analysis.³²² This mode of analysis is not suited for dealing with rights-based concerns that treat each individual as a separate unit of moral accounting.³²³ Accordingly, the economic argument cannot capture the problem with Google excluding a specific content provider from its page rankings or with Facebook censoring a particular person (unless such actions affect overall user preferences).

In any event, even from a purely economic perspective, the problem of new-media concentration is unlikely to fix itself. The economics of digital media lead to two opposite trends: on the one hand, digital media provides greater expressive capacity for individuals and plays a positive role in niche markets of the "long tail," where entry has become easier, scale is low, and competition from large players is not a major factor.³²⁴ However, off the long tail – at the center of media activities, infrastructure, and central nodes – the Internet fosters winner-takes-all markets.³²⁵ On the supply side, the Internet's underlying economics are high fixed costs and low marginal costs. Platform media, such as telecommunications networks, have always been capital intensive, but new media is even more capital intensive than old ones and, particularly, their ratio of capital costs to marginal costs is higher.³²⁶ Consequently, new media's scale economies are greater and their market concentration is greater. On the demand side, the economics of the Internet are characterized by strong network effects: the value of connecting to a network depends on the number of other people already connected, and switching costs are high, leading to a strong lock-in effect (consider, for example, trying to switch from Facebook to another social

³²² Cf. Jeremy Waldron, *From Authors to Copiers: Individual Rights and Social Values in Intellectual Property*, 68 CHI.-KENT L. REV. 841, 857 (1993).

³²³ Cf., e.g., Yemini, *supra* note 52, at ¶¶ 46-49; MARTHA C. NUSSBAUM, CREATING CAPABILITIES: THE HUMAN DEVELOPMENT APPROACH 55-56 (2011); Philip M. Napoli & Sheea T. Sybblis, *Access to Audiences as a First Amendment Right: Its Relevance and Implications for Electronic Media Policy*, 12 VA. J.L. & TECH (2007).

³²⁴ NOAM ET AL., *supra* note 315, at 1339.

³²⁵ *Id.*, at 9.

³²⁶ *Id.*, at 10. See also, e.g., Bracha & Pasquale, *supra* note 25, at 1179-86.

network).³²⁷ This, again, creates high barriers to entry to the market. Since these factors will remain, the pressures toward rising concentration are an economic reality and the Internet, far from being the solution to media concentration, has become part of the problem.³²⁸

(E) Lack of Anonymity

In the early days of commercial Internet, legal scholars grappled with a new problem - how to cope with a medium in which complete anonymity thrives.³²⁹ Two decades later it seems that the Internet "is the place where anonymity dies."³³⁰ The main reason for this is the unprecedented technical ability for surveillance that digital technologies provide. The same system that provides increased expressive capacities is also the most efficient tool ever built for tracking people and recording their actions.³³¹ The archetypal examples of using digital surveillance involve states (both democratic and authoritarian) monitoring citizens' and non-citizens' online communication for security and political reasons – the United States government's monumental bulk telephony metadata collection program, known as PRISM;³³² the so-called Great Firewall of China;³³³ digital surveillance techniques utilized by the Iranian

³²⁷ *Id.*, at 10-11. See also, e.g., Adam Andrzejuk, *Economic Strategies Used by Companies Dealing with Information Goods, Based on Software Example*, 5 INFO. SYS. MGMT. 161, 165-66 (2016).

³²⁸ As Noam et al. indicate, in terms of potential options there is seemingly much greater media pluralism than before (since, in principle, anyone can, for example, surf to a website of her interest), but in terms of the actual choices exercised there is often much greater concentration than before (since, for example, one depends on Google in order to practically reach a website of her interest). *Id.*, at 9.

³²⁹ See, e.g., Trotter Hardy, *The Proper Legal Regime for 'Cyberspace'*, 55 U. PITT. L. REV. 993, 1110-12 (1994); George P. Long, III, *Comment, Who Are You? Identity and Anonymity in Cyberspace*, 55 U. PITT. L. REV. 1177 (1994); Anne W. Branscomb, *Anonymity, Autonomy, and Accountability: Challenges to the First Amendment in Cyberspaces*, 104 YALE L.J. 1639 (1995); Michael Froomkin, *Flood Control in the Information Ocean: Living with Anonymity, Digital Cash, and Distributed Databases*, 15 PITT. J.L. & COMM. 395 (1996); Noah Levine, *Establishing Legal Accountability for Anonymous Communication in Cyberspace*, 96 COLUM. L. REV. 1526 (1996).

³³⁰ Brian Stetler, *Upending Anonymity, These Days the Web Unmasks Everyone*, N.Y. TIMES, June 21, 2011, at A1.

³³¹ See generally, e.g., Neil Richards, *The Dangers of Surveillance*, 126 HARV. L. REV. 1934 (2013).

³³² PRISM allowed the National Security Agency (NSA), by virtue of a top-secret, sweeping Foreign Intelligence Surveillance Court order, to access ISPs' and other entities' records ("metadata") on the web-activity of millions of users. See, e.g., Glenn Greenwald & Ewen MacAskill, *NSA Prism Taps in User Data of Apple, Google and Others*, THE GUARDIAN (June 7, 2013, 8:23PM), <http://www.guardian.co.uk/world/2013/jun/06/us-tech-giants-nsa-data> (last visited Jan. 6, 2018); David Streitfeld & Quentin Hardy, *Data-Driven Tech Industry Is Shaken by Online Privacy Fears*, N.Y. TIMES, June 10, 2013, at B1.

³³³ See, e.g., Kristina M. Reed, *From the Great Firewall of China to the Berlin Firewall: The Cost of Content Regulation on Internet Commerce*, 12 TRANSNAT'L LAW 543 (1999); Ronald J. Deibert, *Dark Guests and Great*

government during the so-called "Green Revolution" and by other governments during the so-called "Arab Spring;"³³⁴ and so on.³³⁵

However, a host of other converging developments also pushes towards anonymity in the digital ecosystem becoming extinct. There is a growing hostile climate towards online anonymity due to its contribution to harassment, cyber-bullying, defamation and other legal wrongs in the commission of which anonymity is exploited as a shield from accountability;³³⁶ copyright holders push for legally mandated tracking of infringing users through intermediary liability and other means;³³⁷ law enforcement agencies ubiquitously use digital technologies such as GPS-enabled surveillance and face recognition technologies (FRT) in order to track down suspects;³³⁸ and perhaps most importantly, a powerful ad-funded Internet industry tracks, aggregates and disseminates enormous volumes of personal information and shapes an online environment that

Firewalls: The Internet and Chinese Security Policy, 58 J. SOC. STUD. 143 (2002); Roya Ensafi et al., *Analyzing the Great Firewall of China over Space and Time*, 2015(1) PROC. PRIV. ENHANC. TECH. 61 (2015).

³³⁴ See, e.g., Alex Comminos, *E-Revolutions and Cyber Crackdowns: User Generated Content and Social Networking in Protests in MENA and Beyond*, in GLOBAL INFORMATION SOCIETY WATCH 2011: INTERNET RIGHTS AND DEMOCRATIZATION 29 (2011) (noting that governments were able to take advantage of advanced internet filters to block content during the Arab Spring uprisings and that social media platforms were used by security and intelligence agencies to identify and locate activists and protesters).

³³⁵ Notably, surveillance methods need not necessarily be all that sophisticated in order to yield the results sought by repressive regimes. Social media, for example, has been used to identify dissenters and silence opposition. As noted, for example, by Morozov, "in the past, the KGB resorted to torture to learn of connections between activists; today, they simply need to get on Facebook." EVGENY MOROZOV, *THE NET DELUSION: THE DARK SIDE OF INTERNET FREEDOM* 156 (2011).

³³⁶ See, e.g., 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, 95-97 (2012) and the references therein; Robert Bodle, *The Ethics of Online Anonymity or Zuckerberg vs. "Moot"*, 43 ACM SIGCAS COMPUTERS & SOC. 22 (2013); Rick A. Waltman, *Veiling Cyberbullies: First Amendment Protection for Anonymity Per Se Strengthens the Voice of Online Predators*, 36 U. LA VERNE L. REV. 145 (2014).

³³⁷ See, e.g., Shepard & Belmas, *id.*, at 115-23; Joshua M. Dickman, *Anonymity and the Demands of Civil Procedure in Music Downloading Lawsuits*, 82 TUL. L. REV. 1049 (2008); Jeffrey M. Levinsohn, *Protecting Copyright at the Expense of Internet Anonymity: The Constitutionality of Forced Identity Disclosure under 512(h) of the Digital Millennium Copyright Act*, 23 TEMP. ENVTL. L. & TECH. J. 243 (2004).

³³⁸ See, e.g., Kimberly N. Brown, *Anonymity, Faceprints, and the Constitution*, 21 GOE. MASON L. REV. 409, 426-27 (2014) and the references therein; Elizabeth E. Joh, *The New Surveillance Automated Suspicion, Big Data, and Policing*, 10 HARV. L. & POLY REV. 15 (2016).

prohibits anonymity by design and reinforces negative attitudes towards non-identifiable communication.³³⁹

It is practically impossible to follow all types of digital technologies and processes, i.e. Big Data tools,³⁴⁰ which threaten anonymity by way of tracking personal online and offline activities; aggregating massive amounts of metadata; and analyzing and transferring such aggregated data for profit. Some of the technologies that gather personal information include, *inter alia*, digital transaction platforms, social plugins and networks, HTTP cookies, supercookies, search engines, operating systems, browsers, mobile applications and devices, Global Positioning Systems, cloud computing services, FRT, drones, surveillance cameras, optical head-mounted display, Internet of Things and so on and so forth.³⁴¹ The trackers of personal information include not only online retailers and service providers, but also what Amitai Etzioni has called "privacy merchants," i.e., corporations the main line of business of which is to shadow Internet users in order to sell the information they gather on them to whoever pays the required price, including law enforcement agencies.³⁴² The information collected may include names, addresses, contact details, gender, race, age, occupation, hobbies, education, economic status, health status, personal habits and preferences, political leanings and even information about "life events", such as getting married or getting divorced. When combined with Big Data tools such as Hadoop software, the aggregated information is used to create a personal profile in order to identify and

³³⁹ See generally, e.g., VIKTOR MAYER-SCHÖNBERGER & KENNETH CUKIER, *BIG DATA: A REVOLUTION THAT WILL TRANSFORM HOW WE LIVE, WORK, AND THINK* (2013); Bodle, *supra* note 336; Harry E. Pence, *Will Big Data Mean the End of Privacy?*, 44 J. EDUC. TECH. 253 (2015); FRANK PASQUALE, *THE BLACK BOX SOCIETY* (2015).

³⁴⁰ For a detailed definition of Big Data see, e.g., Andrea De Mauro, Marco Greco & Michele Grimaldi, *What is Big Data? A Consensual Definition and a Review of Key Research Topics*, 1644 AIP CONF. PROC. 97 (2015); Harry E. Pence, *What Is Big Data and Why Is It Important?*, 43 J. EDUC. TECH. SYS. 159 (2014).

³⁴¹ See, e.g., Bodle, *supra* note 336; Pence, *supra* note 339; Carolin Gerlitz & Anne Helmond, *The Like Economy*, *supra* note 246, at 1348.

³⁴² Amitai Etzioni, *The Privacy Merchants: What Is to Be Done?*, 14 J. CONST. L. 929 (2012). See also, e.g., Chris J. Hoofnagle, *Big Brother's Little Helpers: How ChoicePoint and Other Commercial Data Brokers Collect and Package Your Data for Law Enforcement*, 29 N.C. J. INT'L L. & COMM. REG. 595 (2004); DANIEL J. SOLOVE, *THE DIGITAL PERSON: TECHNOLOGY AND PRIVACY IN THE INFORMATION AGE* 169 (2004).

influence personal habits, attitudes, and behavior.³⁴³ Notably, surveilling entities often claim that when datasets are shared by them with other entities, personal information is removed to make them anonymous.³⁴⁴ As several studies have demonstrated, however, the combination of Big Data tools and extensive information available online makes it unrealistic to claim that any sharing of data is truly anonymous.³⁴⁵

Moreover, as noted above, the same Internet companies that benefit from aggregating and analyzing personal information have a market incentive to discourage online anonymity, both by way of design and by way of influencing social norms. This market incentive coincides with state security interests towards downgrading the value and necessity of online anonymity.³⁴⁶ The strongest advocate of this anti-anonymity culture is probably Facebook, which expressly prohibits anonymity in its Statement of Rights and Responsibilities, under which users are expected to declare that they will not provide any false personal information on Facebook; or create an account for anyone other than themselves without permission; or create more than one

³⁴³ See, e.g., Pence, *supra* note 339, at 258; Richards, *supra* note 331, at 1939-40; Neil M. Richards & Jonathan H. King, *Big Data Ethics*, 49 WAKE FOREST L. REV. 393, 422-26 (2014); Etzioni, *id.*, at 929-34.

³⁴⁴ See, e.g., Facebook's Data Policy, according to which Facebook does not "share information that personally identifies you (personally identifiable information is information like name or email address that can by itself be used to contact you or identifies who you are) with advertising, measurement or analytics partners" unless given permission to do so. FACEBOOK, DATA POLICY, <https://www.facebook.com/about/privacy/#> (last visited Jan. 6, 2018); Google's Privacy Policy, which states, *inter alia*, that Google "may share non-personally identifiable information publicly." WELCOME TO THE GOOGLE PRIVACY POLICY, <https://www.google.com/intl/en/policies/privacy/> (last visited Jan. 6, 2018).

³⁴⁵ See, e.g., Arvid Narayanan & Vitaly Shmatikov, *Robust De-anonymization of Large Sparse Datasets*, paper presented at the 29th IEEE Symposium on Security and Privacy (2008), DOI 10.1109/SP.2008.33, https://www.cs.cornell.edu/~shmat/shmat_oak08netflix.pdf (last visited Jan. 6, 2018) (applying a de-anonymization methodology to the Netflix Prize dataset and showing that political preferences and other potentially sensitive information of individual subscribers can be easily derived from that supposedly anonymous dataset); Arvid Narayanan & Vitaly Shmatikov, *De-anonymizing Social Networks*, paper presented at the 30th IEEE Symposium on Security and Privacy (2009), arXiv:0903.3276[cs.CR], https://www.cs.cornell.edu/~shmat/shmat_oak09.pdf (last visited Jan. 6, 2018) (showing that a third of the users of both Twitter and Flickr can be re-identified in the anonymous Twitter graph with only a 12% error rate); Yves-Alexandre de Montjoye et al., *Unique in the Shopping mall: On the Reidentifiability of Credit Card Metadata*, 347 SCIENCE 536 (2015) (showing that four data points are enough to uniquely identify 90% of the individuals in 3 months of "anonymous" credit card records for 1.1 million people); Paul Ohm, *Broken Promises of Privacy: Responding to the Surprising Failure of Anonymization*, 57 UCLA L. REV. 1701, 1703-04 (2010) (concluding that, because of advances in re-identification science, "[d]ata can be either useful or perfectly anonymous, but never both").

³⁴⁶ See, e.g., Bodle, *supra* note 336, at 22-23.

personal account.³⁴⁷ The justification for this prohibition, as advocated by Mark Zuckerberg himself, is that "having two identities" online is "an example of lack of integrity;"³⁴⁸ Zuckerberg has also supplemented this argument with a supposedly descriptive statement that privacy is "no longer a social norm."³⁴⁹ Google's CEO, Eric Schmidt, has similarly dismissed the importance of privacy.³⁵⁰ In reality, however, such statements are more prescriptive than descriptive, as Internet giants like Google and Facebook play an active role in shaping a culture that legitimizes the erosion of privacy, in general, and anonymity, in particular.³⁵¹

An environment which does not leave room for anonymous (as well as pseudonymous³⁵²) action and communication is an environment that undermines not only privacy but also freedom of expression. The value of anonymity, as noted by Nissenbaum, lies in the possibility of acting or participating while remaining out of reach.³⁵³ Although the possibility of being unreachable does entail a potential "dark side,"³⁵⁴ its importance for a system of free expression cannot be underestimated for clear reasons, which have long been recognized by free speech theory and

³⁴⁷ FACEBOOK, STATEMENT OF RIGHTS AND RESPONSIBILITIES, *supra* note 222, at §4.

³⁴⁸ DAVID KIRKPATRICK, THE FACEBOOK EFFECT: THE INSIDE STORY OF THE COMPANY THAT IS CONNECTING THE WORLD 199 (2010) (interview with Mark Zuckerberg).

³⁴⁹ See, e.g., Bobbie Johnson, *Privacy No Longer a Social Norm, Says Facebook Founder*, THE GUARDIAN (Jan. 11, 2010, 1:58AM), <https://www.theguardian.com/technology/2010/jan/11/facebook-privacy> (last visited Jan. 6, 2018).

³⁵⁰ See Richard Esguerra, Electronic Frontier Foundation, *Google CEO Eric Schmidt Dismisses the Importance of Privacy* (Dec. 10, 2009), <https://www.eff.org/deeplinks/2009/12/google-ceo-eric-schmidt-dismisses-privacy> (last visited Jan. 6, 2018).

³⁵¹ See, e.g., Danah Boyd & Alice Marwick, *Social Privacy in Networked Publics: Teens Attitudes, Practices, and Strategies*, in PROC. OF A DECADE IN INTERNET TIME: OII SYMPOSIUM ON THE DYNAMICS OF THE INTERNET AND SOCIETY 1 (2011), http://papers.ssrn.com/sol3/Papers.cfm?abstract_id=1925128 (last visited Jan. 6, 2018); Etzioni, *supra* note 342, at 938-40; Grant Blank, Gillian Bolsover & Elizabeth Dubios, *A New Privacy Paradox: Young People and Privacy on Social Network Sites* (Oxford Internet Institute Global Cyber Security Capacity Centre, Working Paper, 2014), <http://www.oxfordmartin.ox.ac.uk/downloads/A%20New%20Privacy%20Paradox%20April%202014.pdf> (last visited Jan. 6, 2018).

³⁵² In a number of notable cases, Facebook's policy of prohibiting the provision of any "false" personal information led to the suspension of accounts of drag queens because they were using their drag names, which Facebook did not consider "real". Eventually, after protests by the LGBT community and a small defection of Facebook users to Ello, a social media site without a real-name policy, Facebook apologized, but without making any policy changes. Instead, Facebook's chief product office, Chris Cox, announced that drag queens' use of their drag name in their Facebook accounts was actually in line with Facebook's policy that "everyone on Facebook uses the authentic name they use in real life." See, e.g., Vauhini Vara, *Who's Real Enough for Facebook?*, THE NEW YORKER (Oct. 2, 2014), <http://www.newyorker.com/business/currency/whos-real-enough-facebook> (last visited Jan. 6, 2018).

³⁵³ Helen Nissenbaum, *The Meaning of Anonymity in an Information Age*, 15 INFO. SOC. 141 (1999).

³⁵⁴ See generally, e.g., Waltman, *supra* note 336; Frederick Schauer, *Anonymity and Authority*, 27 J.L. & POL'Y. 597 (2012).

doctrine. Anonymity has been tied with speakers' autonomy to control the content of their speech, including how they present their identities to others; it may encourage expression in circumstances where individuals would not otherwise participate in public discussion for fear of being ridiculed, harassed or retaliated against; and it supports such valuable institutions as whistle-blowing, voting and political engagement.³⁵⁵

While the right to privacy and the right to freedom of expression have often been treated and analyzed as conflicting values (which they sometimes are),³⁵⁶ the realities of the digital ecosystem actually highlight the extent to which these values are interrelated, at least as regards anonymity, which plays a role in both.³⁵⁷ Protecting anonymity in the digital ecosystem requires withholding the information that enables getting to a person by way of surveillance technologies.³⁵⁸ This, as stated by the UN Human Rights Council, makes respect for privacy "an essential requirement for the realization of the right to freedom of expression."³⁵⁹ Unfettered surveillance, on the other hand, creates a chilling effect on speech not only in the simplest sense of stopping people from speaking when they know they are being watched but in much broader and deeper senses. Empirical research shows that surveillance prevents the development of minority ideas; discourages individuals with unformed ideas from deviating from majority

³⁵⁵ See generally, e.g., Brown, *supra* note 338, at 412-27; Shepard & Belmas, *supra* note 336, at 94-105.

³⁵⁶ See, e.g., Peter B. Edelman, *Free Press v. Privacy: Haunted by the Ghost of Justice Black*, 68 TEX. L. REV. 1195 (1990); 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); Neil M. Richards, *Reconciling Data Privacy and the First Amendment*, 52 UCLA L. REV. 1149 (2004). A potentially genuine conflict between freedom of expression and privacy in the digital ecosystem is reflected, for example, in the May 13, 2014 ruling by the Court of Justice of the European Union (CJEU), which recognized users' rights to have search-engine results relating to them be delisted (i.e. the "right to be forgotten"). See Case C-131/12, *Google Spain SL v. Agencia Espanola de Protección de Datos, Mario Costeja González*, 2014 E.C.R. 317, <http://eurlex.europa.eu/legal-content/EN/TXT/?uri=CELEX:62012CJ0131> (last visited Jan. 6, 2018).

³⁵⁷ Cf. e.g., Nicole B. Casarez, *The Synergy of Privacy and Speech*, 18 J. CONST. L. 813 (2016); Ronald J. Krotoszynski, Jr., *Bringing Meiklejohn to Privacy: On the Essential Complementarity of Privacy and Speech*, in INFORMATION AND LAW IN TRANSITION 243 (Anna-Sara Lind, Inger Österdahl & Jane Reichel eds., 2015); Nadine Strossen, *Beyond the Fourth Amendment: Additional Constitutional Guarantees that Mass Surveillance Violates*, 63 DRAKE L. REV. 1143 (2015).

³⁵⁸ Nissenbaum, *supra* note 353, at 142-43.

³⁵⁹ See, e.g., Human Rights Council, *Report of the Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression, Frank La Rue 7-8* (Apr. 17, 2013) (finding that undue interference with individuals' privacy may also limit freedom of speech by, for example, compromising anonymity).

political views; encourages individuals to follow what they think others expect from them and conform to perceived norms; and negatively affects online activities, including access to information and knowledge online.³⁶⁰

Despite continuing calls for recognizing a general constitutional right to anonymity and for reconsidering traditional Fourth Amendment and First Amendment doctrine in the face of widespread governmental surveillance,³⁶¹ and although the U.S. Supreme Court has recognized that digital surveillance technologies necessitate a rethinking of traditional constitutional protections of privacy and freedom of expression,³⁶² constitutional doctrine, as it stands, does not generally consider pervasive digital surveillance as being in violation of the First and Fourth Amendments.³⁶³ In this regard, the American Civil Liberties Union's (ACLU) attempt to directly challenge the constitutionality of the PRISM surveillance program³⁶⁴ was denied by the courts.³⁶⁵

³⁶⁰ See, e.g. Cásarez, *supra* note 357, at 853-59; Margot E. Kaminski & Shane Witnov, *The Conforming Effect: First Amendment Implications of Surveillance, Beyond Chilling Speech*, 49 U. RICH. L. REV. 465 (2015); Elizabeth Stoycheff, *Under Surveillance: Examining Facebook's Spiral of Silence Effects in the Wake of NSA Internet Monitoring*, 93 J. MASS COMM. 296 (2016); Alex Mathews & Catherine Tucker, *Government Surveillance and Internet Search Behavior* (2015), <http://ssrn.com/abstract=2412564> (last visited Jan. 6, 2018); Jonathon W. Penney, *Chilling Effects: Online Surveillance and Wikipedia Use*, 31 BERKELEY TECH. L.J. 1 (2016).

³⁶¹ See, e.g., Christopher Slobogin, *Public Privacy: Camera Surveillance of Public Places and the Right to Anonymity*, 72 MISS. L.J. 213, 238 (2002); Katherine J. Strandburg, *Freedom of Association in a Networked World: First Amendment Regulation of Relational Surveillance*, 49 B.C.L. REV. 741 (2008); Timothy Zick, *Clouds, Cameras, and Computers: The First Amendment and Networked Public Places*, 59 FLA. L. REV. 1 (2007); Matthew Lynch, *Closing the Orwellian Loophole: The Present Constitutionality of Big Brother and the Potential for a First Amendment Cure*, 5 FIRST AMENDMENT L. REV. 234 (2007); Brown, *supra* note 765; Shepard & Belmas, *supra* note 336; Cásarez, *supra* note 357.

³⁶² For one of the clearest exposition of this sentiment see *United States v. Jones*, 132 S. Ct. 945 (2012), *particularly at* 954-58 (Sotomayor J., concurring).

³⁶³ For detailed analyses of the development of legal doctrine in this regard and the reasons for its inadequacy for dealing with modern technologies of surveillance see *supra* note 361.

³⁶⁴ See *ACLU et al. v. Clapper et al.*, Compl. for Decl. and Inj. Relief (June 11, 2013), http://www.aclu.org/files/assets/nsa_phone_spying_complaint.pdf (last visited Jan. 6, 2018).

³⁶⁵ On December 27, 2013, the U.S. District Court for the Southern District of New York granted the U.S. government's motion to dismiss the ACLU's complaint, holding that the NSA bulk telephony metadata collection program was lawful. *ACLU et al. v. Clapper*, 959 F. Supp. 2d 724 (S.D.N.Y. 2013). On appeal, the U.S. Court of Appeals for the Second Circuit reversed the District Court's ruling, holding that the bulk telephony metadata collection program was illegal on statutory grounds, but while affirming the District Court's decision to deny the plaintiffs' motion for a preliminary injunction on constitutional grounds. *ACLU v. Clapper*, 785 F.3d 787 (2d Cir. 2015). Following the passage of the USA FREEDOM Act (H.R. 2048, Pub. L. 114-23), which created an alternative surveillance program, the ACLU again moved for a preliminary injunction to bar the government, *inter alia*, from collecting Appellants' call records during the pendency of the litigation and the transition period until the entry into force of the new program. The Appeals' Court declined to reach the constitutional issues presented by the ACLU and denied an injunction. *ACLU v. Clapper*, 14-42-cv, 2015 WL 6516757 (2d Cir. Oct. 29, 2015).

Moreover, the debate over the constitutionality of surveillance methods does not even begin to address the issue of non-governmental surveillance, which is arguably no less pervasive and problematic than governmental surveillance. Consequently, a state of constant interference with the liberty of speech is built into the structure of our current digital ecosystem.

(F) Lack of Inviolability

The preceding aspects of diminishing liberty in the digital ecosystem – interference from multiple sources; state-encouraged private regulation; multiple modes of interference; new-media concentration; and lack of anonymity – all underline a sixth important aspect that encapsulates much of what is problematic about our current speech environment: lack of inviolability. In an article published in 1995, Thomas Nagel suggested that we think of rights as a "*status* - part of what is involved in being a member of a moral community."³⁶⁶ "Moral status, as conferred by moral rights," says Nagel, is a "normative condition, consisting of what is permitted to be done to persons, what persons are permitted to do, what sorts of justifications are required for preventing them from doing what they want, and so forth."³⁶⁷ This condition is that of a certain kind of inviolability; it means that "one *may not* be violated in certain ways – such treatment is inadmissible, and if it occurs, the person has been wronged."³⁶⁸ Importantly, the fact of a person having or lacking this type of moral status carries value apart from whether that status is violated; what *may be done* to us is important, quite apart from whether or not it *is done* to us (and the same is true of what we *may* do as opposed to what we *actually* do).³⁶⁹ This is the independent normative value of inviolability.

³⁶⁶ Nagel, *supra* note 109, at 85.

³⁶⁷ *Id.*

³⁶⁸ *Id.*, at 89-90. *See also, e.g.*, Frances Myrna Kamm, *Harming Some to Save Others*, 57 PHIL. STUD. 251 (1989); Frances Myrna Kamm, *Non-consequentialism, the Person as an End-in-Itself, and the Significance of Status*, 21 PHIL. PUB. AFF. 381 (1992); Warren S. Quinn, *Actions, Intentions and Consequences: The Doctrine of Doing and Allowing*, PHIL. REV. 98 (1989).

³⁶⁹ *Id.*, at 91.

Inviolability, as it manifests in the right to freedom of expression, lies in the notion that regardless of whether a potential speaker ever wants to say anything objectionable, the idea that she could be stopped if she did, is in itself a violation of such potential speaker's integrity.³⁷⁰ Unfortunately, in terms of the independent value of inviolability, our current digital ecosystem suffers from a serious normative deficit compared to the pre-Internet era. The state was never the only threat to free expression, but before the digital age, it was, by far, the major potential silencer of speech. Under the mass-media model of information production, the biggest problem was a concentrated media industry that provided little diversity and less access to most of the society's constituents.³⁷¹ However, direct interference of private entities with others' speech was less of a concern (as opposed to, for example, content scarcity).³⁷² In that speech environment, the idea of inviolability was an overarching norm backed-up by strong constitutional protections against the primary censor, i.e. the government.

In the digital ecosystem of the twenty-first century - a system of constant surveillance, many potential censors, and multiple modes of interference - inviolability is not the norm. As things currently stand, nothing prevents private online intermediaries from stopping any of their users from speaking (except for their self-written rules, which obviously do not pose a serious obstacle),³⁷³ and not much prevents the government from circumventing constitutional

³⁷⁰ *Id.*, at 96.

³⁷¹ *See, e.g.*, Yemini, *supra* note 52, at ¶47 and the references therein.

³⁷² This is because the major media companies of the time were themselves content providers, and not carriers of others' speech, while telecommunications providers were subject to common carriage obligations. For a short overview of the development of broadcasting, common carriage and cable communications regulation in the U.S. during the twentieth-century *see, e.g.*, Amit Schejter & Moran Yemini, "*Justice and Only Justice You Shall Pursue*": *Network Neutrality, the First Amendment and John Rawls's Theory of Justice*, 14 MICH. TELECOMM. TECH. L. REV. 137, 148-54 (2007).

³⁷³ While in practice, some online intermediaries may show more tolerance for their users' speech than others (for a comparison *see* York, *supra* note 126), all such intermediaries reserve absolute discretion to control user-generated content. As a matter of example, Facebook reserves the right to "remove any content or information" posted by a user if Facebook believes that it violates "this Statement" or its "policies." FACEBOOK, STATEMENT OF RIGHTS AND RESPONSIBILITIES, *supra* note 222, at §5(2). YouTube reserves the right to remove any content that violates its Terms of Service, at its sole discretion and without prior notice. YOUTUBE, TERMS OF SERVICE §7(B), <https://www.youtube.com/static?gl=US&template=terms> (last visited Jan. 6, 2018). YouTube's parent company,

restrictions by applying censorship through private regulatory channels. Consequently, the idea that things cannot be done to prevent us from speaking, which was once the overarching principle in the landscape of free speech, has been eroded to the point where it covers only part, and not necessarily the most significant part, of our speech environment.

III. CONCLUSION

The system of free expression of the twentieth century has taught us that liberty to speak has limited meaning without the capacity to act on it. The system of free expression of the twenty-first century teaches us that expressive capacity has limited meaning without liberty from interference. In the digital age, the right to freedom of expression is steadily and increasingly being reshaped as a privilege.³⁷⁴ This process is not simple to detect because license to speak is very easily obtained. Practically anyone can set up a Facebook or Twitter or Snapchat account (or all of these together), and Googling does not even require that. With all the speech going on everywhere it is sometimes easy to forget that whatever users wish to do and to be through the

Google, uses somewhat narrower terms, stating that it may "remove or refuse to display content" that it "reasonably believes" violates its policies or the law. GOOGLE TERMS OF SERVICE, <https://www.google.com/intl/en/policies/terms/> (last visited Jan. 6, 2018). Under Yahoo!'s Terms of Service, it "may reject, categorize or delete any User Content that is available via Yahoo Services that violates the Terms or is otherwise objectionable." YAHOO, TERMS OF SERVICE §7(2), <https://policies.yahoo.com/ie/en/yahoo/terms/utos/index.htm> (last visited Jan. 6, 2018). Twitter reserves the right "at all times" to "remove or refuse to distribute any Content on the Services, to suspend or terminate users, and to reclaim usernames" without liability to its users. TWITTER TERMS OF SERVICE §8, <https://twitter.com/tos#content> (last visited Jan. 6, 2018). Apple iCloud's Terms and Conditions stipulate that Apple may "determine whether Content is appropriate and in compliance with this Agreement, and may pre-screen, move, refuse, modify and/or remove Content at any time, without prior notice and in its sole discretion, if such Content is found to be in violation of this Agreement or is otherwise objectionable." iCloud TERMS AND CONDITIONS, *supra* note 153, at §V(C); and so forth. For clarity, online intermediaries are also subject to external rules, such as national legislation, but when such external rules relate to users' speech they are most commonly designed to prevent online intermediaries from *allowing* their users to speak (e.g. laws which prohibit the publication of certain types of content or impose liabilities on intermediaries for carrying certain types of content), but not to prevent them from *stopping* their users from speaking. The only major exception in this regard is network neutrality rules.

³⁷⁴ For the seminal discussion on the legal distinction between rights and privileges *see generally, e.g.*, Wesley Newcomb Hohfeld, *Some Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 23 YALE L. J. 16 (1913) (hereinafter: "Hohfeld 1913"); Wesley Newcomb Hohfeld, *Some Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 26 YALE L. J. 710 (1917). *See also, e.g.*, Rodney A. Smolla, *Preserving the Bill of Rights in the Modern Administrative-Industrial State*, 31 WM. & MARY L. REV. 321, 326-27 (1990) (explaining the distinction between rights and privileges in American constitutional law).

use of these platforms, their interests are always subject to the grace of the platform. Borrowing from Wesley Hohfeld, online intermediaries wish their legal relationships with users to rest on the following proposition: "speak if you can; you have our license to do so, but we don't agree not to interfere with you."³⁷⁵ No matter how wide the privilege, it is not a right. Since most speech today takes place on these terms, liberty in the digital ecosystem is seriously threatened.³⁷⁶

Normative scrutiny of online intermediaries' liberty-infringing practices would have been expected to invoke legal conclusions and motivate liberty-enhancing policies. A legal system concerned with liberty would have been expected, for example, to limit online intermediaries' ability to censor users' speech based on its content; to require online intermediaries to provide at least some amount of process before terminating users' account; to demand from them a reasonable level of transparency as to the way their algorithms work; to regulate their ability to aggregate, transfer and sell personal user data; to scrutinize ToS agreements that immunize online intermediaries from any liability towards their users; and so on.

In reality, however, the law does not function in this way. In fact, the whole organization of binding legal instruments is aligned to do the exact opposite, i.e. to provide online intermediaries with practically absolute discretion over the speech of their users. ToS agreements legitimize censorship, manipulation, and exclusion;³⁷⁷ federal legislation encourages private censorship;³⁷⁸ and most importantly, the constitutional setting protects online intermediaries' interests in censoring and utilizing their users' speech commercially, at the expense of individual

³⁷⁵ Hohfeld 1913, *id.*, at 35. I have replaced the words "eat the salad" in the original, with the word "speak."

³⁷⁶ Recently for example, it has been reported that Facebook is developing software to suppress content from appearing specifically in people's News Feeds in China, in order to get back to the Chinese market (from which it has been banned for the last seven years). See Mike Isaac, *For Facebook, Censorship Tool Could Reopen a Door to China*, N.Y. TIMES, Nov. 23, 2016, at A1. Gradually, then, when profit is on the line, even the façade of being an ally of freedom of expression is put aside.

³⁷⁷ See *supra* notes 221-231, 373 and the accompanying text.

³⁷⁸ See *supra* notes 277-289 and the accompanying text.

users' interests in speaking freely.³⁷⁹ Consequently, instead of supporting an environment of liberty, the law supports an environment of interference; an environment of speech without (legal) rights.³⁸⁰

For the digital ecosystem to form an environment of liberty, the role which law plays in it must change, so as to take much greater account of users' liberty. Notably, this does not necessarily mean stripping online intermediaries from *any* power to regulate speech on their platforms. As James Grimmelman has argued, online moderation also has considerable advantages, since when moderators do their job right, they facilitate communication and create the conditions which enable cooperation in online communities.³⁸¹ The key, however, as noted by Bruce Ackerman, is that "no form of power is immune from the question of legitimacy,"³⁸² and there is no reason why this should not apply to online intermediaries as well. Instead of incentivizing online intermediaries to exercise their power as they deem fit, by exempting them from the need to legitimize their actions, the law should see that online intermediaries exercise their power legitimately.³⁸³ Future research will further explore how to reach this objective.

³⁷⁹ See, e.g., Tutt, *supra* note 228, at 238-41 (noting that users do not have a First Amendment right against infringements by online intermediaries, while online intermediaries' own activities increasingly enjoy First Amendment protection against government regulation).

³⁸⁰ I have borrowed this phrase from Laura Stein, *Speech Without Rights: The Status of Public Space on the Internet*, 11 COMM. REV. 1 (2008).

³⁸¹ James Grimmelman, *The Virtues of Moderation*, 17 YALE J.L. & TECH 42, 45 (2015). See also, e.g., Tal Z. Zarsky, *Law and Online Social Networks: Mapping the Challenges and Promises of User-Generated Information Flows*, 18 FORDHAM INTELL. PROP. MEDIA & ENT. J. 741, 778 (2008).

³⁸² BRUCE A. ACKERMAN, *SOCIAL JUSTICE IN THE LIBERAL STATE* 4 (1980).

³⁸³ Cf. Grimmelman, *supra* note 381, at 103-07.