

FEDERAL SEARCH COMMISSION? ACCESS, FAIRNESS, AND ACCOUNTABILITY IN THE LAW OF SEARCH

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Should search engines be subject to the types of regulation now applied to personal data collectors, cable networks, or phone books? In this Article, we make the case for some regulation of the ability of search engines to manipulate and structure their results. We demonstrate that the First Amendment, properly understood, does not prohibit such regulation. Nor will such intervention inevitably lead to the disclosure of important trade secrets.

After setting forth normative foundations for evaluating search engine manipulation, we explain how neither market discipline nor technological advance is likely to stop it. Though savvy users and personalized search may constrain abusive companies to some extent, they have little chance of checking untoward behavior by the oligopolists who now dominate the search market. Arguing against the trend among courts to declare search results unregulable speech, this Article makes a case for an ongoing conversation on search engine regulation.

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“My God, I thought, Google knows what our culture wants!”¹

Forty years ago, Jerome Barron’s seminal article on access to the press highlighted the double-edged nature of First Amendment rights when applied to mass-media. As he noted, dominant players have employed “free speech” rights quite skillfully, “[b]ut what of those whose ideas are too unacceptable to secure access to the media? To them the mass communications industry replies: The first amendment guarantees our freedom to do as we choose with our media.”²

The rise of the Internet during the last fifteen years led some to hope that technology would resolve this dilemma.³ Enthusiasts predicted the network would ameliorate the traditional mass-media bottleneck and render moot the policy and legal debates that surrounded it.⁴ Sadly, we now know better. As the Internet matured, it became evident that many of the old difficulties accompanied the new possibilities, though often in new guises.⁵ In this Article we extend Barron’s inquiry to the most influential gatekeepers of information and ideas in the digital age: Internet search engines.

Though rarely thought of as a “mass medium,” search engines occupy a critical junction in our networked society. Their influence on our culture, economy, and politics may eventually dwarf that of broadcast networks, radio stations, and newspapers.⁶ Located at bottlenecks of the information infrastructure, search engines exercise ex-

¹ JOHN BATTLE, *THE SEARCH: HOW GOOGLE AND ITS RIVALS REWROTE THE RULES OF BUSINESS AND TRANSFORMED OUR CULTURE* 2 (2005).

² Jerome A. Barron, *Access to the Press—A New First Amendment Right*, 80 HARV. L. REV. 1641, 1641–42 (1967).

³ See, e.g., Christopher S. Yoo, *Would Mandating Broadband Network Neutrality Help or Hurt Competition? A Comment on the End-to-End Debate*, 3 J. ON TELECOMM. & HIGH TECH. L. 23, 28–29 (2004); Markos Moulitsas Zúniga, *The National Entertainment State*, THE NATION, July 3, 2006, at 30 (“We need to focus on making sure progressives learn to use the tools of this new media landscape. That’s where the new-century media wars will be fought and won.”).

⁴ See, e.g., Zúniga, *supra* note 3.

⁵ See Rebecca MacKinnon, *The National Entertainment State*, THE NATION, July 3, 2006, at 18 (arguing that the new media conglomerates, such as Google, will eventually displace the old ones without solving issues discussed herein).

⁶ For a fanciful vision of this future, see EPIC 2014, (Robin Sloan & Matt Thompson), <http://www.robinsloan.com/epic/> (predicting a future where one large search engine company replaces news as we know it with an “evolving personalized information construct,” created by “computers [that] construct news stories dynamically, stripping sentences and facts from all content sources and recombining them”).

traordinary control over data flow in a largely decentralized network.⁷ Power, as always, is accompanied by opportunities for abuse, along with concerns over its limitation to legitimate and appropriate uses.

This Article concerns one aspect of this growing power: search engines' power to manipulate their results, thereby affecting the ability of Internet communicators to reach potential audiences.⁸ To date, the three courts that have adjudicated cases involving allegations of manipulation rejected all legal claims and refrained from imposing any meaningful restraints on the ability of search engines to manipulate their results.⁹ Moreover, two of these courts found that search results are opinions "entitled to full constitutional protection" under the First Amendment.¹⁰ Such decisions risk ending the discussion over search engine regulation before it has even begun. Yet they have been commended by commentators who see search engines as little different than newspapers and thus deserving of similar *laissez faire* treatment.¹¹

The purpose of this Article is twofold: first, we explain why search engines with a completely free reign to manipulate their results raise many concerns similar to those associated with traditional mass media; second, we make the case for *some* regulation of the ability of search engines to manipulate and structure their results.¹² Part I situates search engines in the context of Internet-speech scholarship. This

⁷ See BATTLE, *supra* note 1, at 1–3 (discussing the numerous sources of information about modern American culture that Google possesses and stockpiles, along with Google programs that make use of it).

⁸ For general surveys of the various policy and legal issues surrounding search engines, see generally Urs Gasser, *Regulating Search Engines: Taking Stock and Looking Ahead*, 8 YALE J.L. & TECH. 201 (2006), <http://www.yjolt.org/8/spring>; James Grimmelmann, *The Structure of Search Engine Law*, 93 IOWA L. REV. 1 (2007).

⁹ *Langdon v. Google, Inc.*, 474 F. Supp. 2d 622 (D. Del. 2007); *Kinderstart.com LLC v. Google, Inc.*, No. C 06-2057 JF (RS), 2006 U.S. Dist. LEXIS 82481 (N.D. Cal. July 13, 2006); *Search King, Inc. v. Google Tech., Inc.*, No. CIV-02-1457-M, 2003 U.S. Dist. LEXIS 27193 (W.D. Okla. May 27, 2003).

¹⁰ See *Search King*, 2003 U.S. Dist. LEXIS 27193, at *12 ("[T]he Court concludes that Google's PageRanks are entitled to 'full constitutional protection.'") (quotations and citations omitted); see also *Langdon*, 474 F. Supp. 2d at 630 ("[T]he Court will grant Google's and Microsoft's Motion To Dismiss the Amended Complaint on the basis that Plaintiff seeks relief precluded by their First Amendment rights."). To echo Barron's observation, search engines were vindicated in their claim for the "freedom to do as we choose with our media." Barron, *supra* note 2, at 1642.

¹¹ See, e.g., Eric Goldman, *Search Engine Bias and the Demise of Search Engine Utopianism*, 8 YALE J.L. & TECH. 188, 195 (2006), <http://www.yjolt.org/8/spring> ("Like any other media company, search engines simply cannot passively and neutrally redistribute third party content (in this case, web publisher content).").

¹² One early step in this direction was a proposal for the FTC to regulate paid listings in search engines. See generally Andrew Sinclair, Note, *Regulation of Paid Listings in Internet Search Engines: A Proposal for FTC Action*, 10 B.U. J. SCI. & TECH. L. 353 (2004). Our work focuses on the types of normative questions and constitutional concerns that must be addressed before proposals like Sinclair's can be comprehensively defended as a matter of law and policy.

scholarship has developed from early sweeping optimism about the speech-possibilities of a decentralized network to a variety of more cautious and sober positions.¹³ A key feature of Internet communication is the existence of gatekeepers—technological chokepoints whose configuration greatly affects the character of this medium.¹⁴ The section elaborates the claim that search engines constitute one of the most important gatekeepers on the Internet and gives an account of the problems caused by search engines' bias.

While manipulation of search results may seem instinctively problematic, it is not always clear what exactly is wrong with such practices. Part II lays the normative foundations for evaluating search engine manipulation. It briefly surveys the social values and interests that may be adversely affected by some forms of manipulation. Part III explains why, contrary to the belief of some commentators,¹⁵ the situation is not likely to fix itself. Though the market choices of users and technological developments constrain search engine abuse to some extent, they are unlikely to vindicate the values mentioned in Part II. Part IV discusses two threshold objections to any attempt to regulate search results manipulation. First, assuming that legal regulation of some manipulation practices is desirable, is it, nonetheless, barred by the First Amendment? We answer this question in the negative and explain why the First Amendment, properly understood, does not prohibit all regulation of search engines' results. Second, will regulation of manipulation require disclosure of secret information that could jeopardize the quality of search engines? We argue that the public and private interests in maintaining the secrecy of the search process should be balanced against the public interest in disclosure and that the proper institutions for achieving this balance may be developed. We conclude by sketching some possible directions for effective regulation.

I

SEARCH ENGINES AS POINTS OF CONTROL

A. A New Hope?

Barron's work on access to the press reflected decades of frustration with the mass media and its effect on speech, culture, and the

¹³ Cf. YOCHAI BENKLER, *THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM I* (2006) ("It seems passé today to speak of 'the Internet revolution.' In some academic circles, it is positively naïve. But it should not be.").

¹⁴ See Thomas F. Cotter, *Some Observations on the Law and Economics of Intermediaries*, 2006 MICH. ST. L. REV. 67, 69–71 (2006) (discussing some of the functions of technological intermediaries, including their control of information flow from suppliers to consumers).

¹⁵ See, e.g., Goldman, *supra* note 11, at 199–200 (arguing that problems with search engine bias are likely to work themselves out over time and that search engines should be allowed to evolve without regulatory interference).

democratic process.¹⁶ The broadcast model that consolidated during the twentieth century was characterized by a sharp dichotomy between broadcasters and consumers.¹⁷ The former—an ever-shrinking group of powerful and wealthy corporate giants—came to control the most influential information media.¹⁸ Viewers were largely reduced to the status of passive consumers, free only to choose among the informational commodities offered by the handful of giants.¹⁹ Broadcasters functioned in this system as the gatekeepers of society's information flows.²⁰ They were the essential intermediaries through which anyone who wanted to speak effectively to a significant number of people had to pass.²¹

There were many problems with this system. Unless one was wealthy enough to own a broadcasting entity or produced the kind of content approved by broadcasters, one had no voice in the mass media.²² This, in turn, cultivated a widespread habit of passive, unidirectional information-consumerism.²³ Second, even from a

¹⁶ See Barron, *supra* note 2, at 1642 (tracing the modern struggle over control of media to the 1930s).

¹⁷ See Yochai Benkler, *Communications Infrastructure Regulation and the Distribution of Control over Content*, 22 TELECOMM. POL'Y 183, 187–88 (1998).

¹⁸ See BENKLER, *supra* note 13, at 190 (“By 1926 . . . the industrial structure that would lead radio to follow the path of commercial, advertiser-supported, concentrated mass media, dependent on government licensing and specializing in influencing its own regulatory oversight process was already in place.”). Surveying the historical literature on media development, Benkler concludes that “[t]elevision followed radio, and was even more concentrated.” *Id.* at 196. A chart of the current state of concentration in the mass media indicates the continuation of these trends into the twenty-first century. Peter Ahlberg et al., *The National Entertainment State*, THE NATION, July 3, 2006, at 23–26 fig.1, available at <http://www.thenation.com/doc/20060703/mediachart>.

¹⁹ See LANGDON WINNER, *AUTONOMOUS TECHNOLOGY: TECHNICS-OUT-OF-CONTROL AS A THEME IN POLITICAL THOUGHT* 228 (1977) (“In the complex, large-scale systems that characterize our time, it is seldom the case that any single individual or group has access to a technological process along the whole of its conception, operation, and result. More common is a situation in which persons have the opportunity to enter into the process at one point only. . . . [such as] that of the consumer . . .”). See generally Jennifer Chandler, *The Autonomy of Technology: Do Courts Control Technology or Do They Just Legitimize Its Social Acceptance?*, 27 BULL. SCI. TECH. & SOC'Y 339 (2007) (discussing case studies supporting the hypothesis “that judges, through various private law principles, support and legitimize novel technologies. . . . [by] characteriz[ing] harm as flowing not from a technology that actually alters the world but from a rejection of that technology . . . and [] whittl[ing] away at fundamental theoretical principles of the law in order to promote efficiency in mass production and distribution.”).

²⁰ See generally Cotter, *supra* note 14.

²¹ See *id.*

²² Neil Weinstock Netanel, *Market Hierarchy and Copyright in Our System of Free Expression*, 53 VAND. L. REV. 1879, 1881 (2000). See generally ROBERT W. MCCHESENEY, *TELECOMMUNICATIONS, MASS MEDIA, AND DEMOCRACY: THE BATTLE FOR THE CONTROL OF U.S. BROADCASTING, 1928–1935* (1993) (providing a comprehensive view of broadcast reform efforts in the early twentieth century).

²³ See BENKLER, *supra* note 13, at 209 (describing this flow of information and noting that it is still the norm in mass communications); RONALD K.L. COLLINS & DAVID M. SKOVER, *THE DEATH OF DISCOURSE* 36 (1996) (“The electronic First Amendment . . . un-

Meiklejohnian perspective that is happy to sacrifice the ability of everybody to speak as long as everything worth saying is heard,²⁴ the broadcast system was highly problematic. Concentrated control over the channels of communication translated into concentrated control over content.²⁵ The media intermediaries were in a position to highlight preferred content and suppress or ignore unpopular points of view.²⁶ They were also in a position to give preference to content originating in a limited circle of allies and affiliates over that of “outsiders.”²⁷

More importantly, strong structural forces inherent in the broadcast system worked to suppress the controversial, marginal, and non-conventional. Broadcasters faced with high fixed costs had to attract a mass audience.²⁸ This created a bias toward the lowest common denominator, namely mainstream and majority preferences.²⁹ Similarly, the business models of many broadcasters dictated a bias toward the commercially effective: content that was more appealing to those likely to consume advertised goods and to reinforce consumerist impulses.³⁰ The net outcome of this system was hardly an ideal picture of a vital and diverse marketplace of ideas. Nevertheless, libertarian

leashes the forces of self-amusement and commercial corporate gain. It thereby debases the values of meaningful public discourse, effective dissent, and informed collective decisionmaking”); DANILO ZOLO, *DEMOCRACY AND COMPLEXITY: A REALIST APPROACH* 155–56 (David McKie trans., 1992) (calling for academic focus on the relationship between mass media outlets and the general population, seemingly as an effort to undermine the reality defining power of the former). For more on “theories of the consumer,” see Joseph Liu, *Copyright’s Law’s Theory of the Consumer*, 44 B. C. L. REV. 397, 397 (2003) (describing how “copyright law currently conceives of consumers in one of two ways, either as passive consumers of copyrighted works or as active authors in their own right.”).

²⁴ ALEXANDER MEIKLEJOHN, *The Rulers and the Ruled*, in *POLITICAL FREEDOM: THE CONSTITUTIONAL POWERS OF THE PEOPLE* 8, 25–28 (Oxford Univ. Press 1965) (1948).

²⁵ See generally BENKLER, *supra* note 13, at 199–204 (citing examples of such control).

²⁶ *Id.*

²⁷ See Netanel, *supra* note 22, at 1882 (describing the tendency to tailor content toward the wealthy); cf. C. EDWIN BAKER, *ADVERTISING AND A DEMOCRATIC PRESS* 50–56 (1994) (discussing the same tendency as favoring advertisers).

²⁸ BENKLER, *supra* note 13, at 165 (“[A]dvertiser-supported media tend to program lowest-common-denominator programs, intended to ‘capture the eyeballs’ of the largest possible number of viewers. These media do not seek to identify what viewers intensely want to watch, but tend to clear programs that are tolerable enough to viewers so that they do not switch off their television.”).

²⁹ BENKLER, *supra* note 13, at 204–08; Barton, *supra* note 2, at 1645–46.

³⁰ See BAKER, *supra* note 27, at 62–66 (describing the impact of advertiser concerns on content); see also AVNER OFFER, *THE CHALLENGE OF AFFLUENCE: SELF-CONTROL AND WELL-BEING IN THE UNITED STATES AND BRITAIN SINCE 1950*, at 135–37 (2006) (noting that “[f]reedom from advertising is a good . . . Unfortunately it is a public good, of which there is not always enough.”); NAOMI KLEIN, *NO LOGO: TAKING AIM AT THE BRAND BULLIES* 39 (2000) (“It is common knowledge that many advertisers rail at controversial content [and] pull their ads when they are criticized even slightly . . .”). See generally BENJAMIN R. BARBER, *CONSUMED: HOW MARKETS CORRUPT CHILDREN, INFANTILIZE ADULTS, AND SWALLOW CITIZENS WHOLE* (2007).

scholars questioned whether the situation was indeed so bleak and whether law could improve the situation.³¹ The deregulatory impulse of the past few decades has assured their dominance in agencies responsible for media regulation.³²

Then, in the early 1990s, a new technological hope arose for critics of an impoverished public sphere. The rise of the Internet as a pervasive alternative model of communication sparked widespread optimism.³³ Unlike traditional mass media's broadcast model, Internet communication was based on a peer model.³⁴ Instead of a few entities at the "center" that control the network and the content that is transmitted to the "ends," the Internet worked in a much more decentralized way: a common and open protocol was used to facilitate direct communication between all users or "ends" connected to the network.³⁵ More specifically, a few features of Internet communication seemed to combine to ameliorate the shortcomings of the broadcast system. Cheap and accessible multi-purpose computers and storage devices placed the ability to create, manipulate, and receive content in the hands of the many.³⁶ A global end-to-end network, unencumbered by the limitations of spectrum scarcity, enabled instantaneous mass dissemination of content along with bi-directional interactive communication among numerous users. Low barriers to entry meant less dependence on large income generated by mass audiences and hence less commercial pressure to attract a mass audience.³⁷

The Internet also made possible a variety of peer-production models.³⁸ Projects that require cooperation between many individuals and mass aggregation of resources were previously feasible only through the hierarchical and usually market-oriented structure of the

³¹ See, e.g., Carl Sessions Stepp, *Access in a Post-Social Responsibility Age*, in DEMOCRACY AND THE MASS MEDIA: A COLLECTION OF ESSAYS 186, 194 (Judith Lichtenberg ed., 1990) ("Part of the problem at hand is that the institutional press is already too much in alliance with the power classes; turning to government hardly alleviates the situation."); Yoo, *supra* note 3.

³² See, e.g., PETER W. HUBER ET AL., FEDERAL TELECOMMUNICATIONS LAW § 1.9, at 55 (2d ed. 1999) ("Congress called on the FCC to forbear from regulating, consistent with the public interest, wherever such regulation is not necessary to ensure that charges are just and reasonable or to protect consumers.").

³³ See BENKLER, *supra* note 13, at 2-3 (discussing the rise of the Internet as a primary factor in the changing of the information-exchange meta-structure).

³⁴ *Id.*

³⁵ Jonathan L. Zittrain, *The Generative Internet*, 119 HARV. L. REV. 1975, 1975 (2006) ("From the moment of its inception in 1969, the Internet has been designed to serve both as a means of establishing a logical network and as a means of subsuming existing heterogeneous networks while allowing those networks to function independently . . .").

³⁶ See BENKLER, *supra* note 13, at 2-3.

³⁷ See, e.g., *Reno v. ACLU*, 521 U.S. 844, 853 (1997) ("Any person or organization with a computer connected to the Internet can 'publish' information.").

³⁸ See Yochai Benkler, *Coase's Penguin, or, Linux and The Nature of the Firm*, 112 YALE L.J. 369 (2002) (describing the economic implications of peer production enterprises).

firm.³⁹ Now they became viable under a decentralized model of cooperation that could be pursued even in the absence of strong market orientation.⁴⁰ Most importantly for our context, the peer model of communication seemed to do away with the old intermediaries and their associated ills.⁴¹ “Avoiding the intermediaries” was the catchphrase of the early Internet.⁴²

These new production models attracted much optimism from various observers. Despite some early cautionary notes,⁴³ many saw the Internet as a speech utopia: a new and exciting opportunity to escape the shortcomings of the broadcast system and create a modern agora. Consider the following prophecy that appeared in a treatise on telecommunications law:

The network will supply room enough for every sight and sound, every thought and expression that any human mind will ever wish to communicate. It will make possible a wildness of spirit, where young minds can wander in adventurous, irresponsible, ungentle ways. It will contain not innocence, but a sort of naive gaiety, a buoyant, carefree feeling, filled with confidence in the future and an unquenchable sense of freedom and opportunity. It will be capitalist civilization at its best.⁴⁴

The Internet even excited the Supreme Court, which declared in 1997 that “any person with a phone line can become a town crier with a voice that resonates farther than it could from any soapbox. Through the use of web pages, mail exploders, and newsgroups, the same individual can become a pamphleteer.”⁴⁵

³⁹ See *id.* at 372 (citing Ronald H. Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937)).

⁴⁰ See *id.* at 371–72 (suggesting that the emergence of free software forces us to reexamine the traditional “firm” approach to productivity).

⁴¹ See Cotter, *supra* note 14, at 71; Kathleen M. Sullivan, *First Amendment Intermediaries in the Age of Cyberspace*, 45 *UCLA L. REV.* 1653, 1670–73 (1998); Eugene Volokh, *Cheap Speech and What It Will Do*, 104 *YALE L.J.* 1805, 1834–39 (1995) (describing the positive and negative effects of eliminating media intermediaries).

⁴² See, e.g., Mary Reinholz, *PR Users Find Power, Pitfalls on the Internet*, O'DWYER'S PR SERVICES REP., June 1995, at 1 (stating that the Internet eliminates the press intermediary); Martin Slofstra, *These Students Optimistic About What Future Holds*, *COMPUTING CAN.*, Nov. 8, 1995, at 8 (stating that the Internet eliminates business intermediaries).

⁴³ See, e.g., NEIL POSTMAN, *TECHNOPOLY: THE SURRENDER OF CULTURE TO TECHNOLOGY* (1992) (arguing that technology undermines social relations); DAVID SHENK, *DATA SMOG: SURVIVING THE INFORMATION GLUT* (1997) (arguing that the Internet creates an incessant barrage of stimulus); KRISTAN J. WHEATON, *THE WARNING SOLUTION: INTELLIGENT ANALYSIS IN THE AGE OF INFORMATION OVERLOAD* (2001); Benjamin R. Barber, *Three Scenarios for the Future of Technology and Strong Democracy*, 113 *POL. SCI. Q.* 573 (1999) (describing the Pangloss scenario, Pandora scenario, and Jeffersonian scenario for a technology-filled world); Anne Wells Branscomb, *Anonymity, Autonomy, and Accountability: Challenges to the First Amendment in Cyberspaces*, 104 *YALE L.J.* 1639 (1995) (describing how the Internet creates concerns of anonymity, autonomy, and accountability).

⁴⁴ HUBER ET AL., *supra* note 32, § 1.16, at 77–78.

⁴⁵ *Reno v. ACLU*, 521 U.S. 844, 870 (1997).

This Internet-speech utopianism had two main consequences for legal thought. First, commentators urged courts and policymakers to grant a high degree of protection to Internet speech.⁴⁶ Commentators justified this strong protection on two grounds: overzealous government regulation could thwart the new speech utopia;⁴⁷ and Internet communication does not possess the characteristics that supported broad regulation of broadcast media.⁴⁸ Second, a significant group of commentators began to claim that the best way to safeguard the Internet as a vital and diverse speech environment was for government to keep its hands off it altogether. Within the decades-long debate over broadcast regulation, there was a strong, though not universal, claim that government regulation was essential in order to enhance diversity and access, keep bias in check, and promote democracy.⁴⁹ The Internet, the argument went, fundamentally changed things. Even if the broadcast system needed some speech-enhancing regulation, the decentralized Internet environment was already free from the traditional speech-hierarchy, so regulation would be both unnecessary and dangerous.⁵⁰ Government, even when good-intentioned, had to be kept out.

The early hegemony of Internet-speech utopianism has gradually declined during the last decade or so as the number of more skeptical voices increased. The optimistic narrative has been challenged on va-

⁴⁶ They followed Ithiel de Sola Pool's approach, outlined in *Technologies of Freedom*, which "argued that media convergence and the democratizing aspects of the new media should bring a convergence of constitutional treatment, and that under the First Amendment all media should be governed by the print model." Patrick M. Garry, *The First Amendment in a Time of Media Proliferation: Does Freedom of Speech Entail a Private Right to Censor?*, 65 U. PITT. L. REV. 183, 194 (2004) (citing ITHIEL DE SOLA POOL, *TECHNOLOGIES OF FREEDOM* (1983)).

⁴⁷ See, e.g., *Ashcroft v. ACLU*, 542 U.S. 656 (2004) (invalidating the Child Online Protection Act); *Reno*, 521 U.S. at 885 ("The interest in encouraging freedom of expression in a democratic society outweighs any theoretical but unproven benefit of censorship."); *Ctr. for Democracy & Tech. v. Pappert*, 337 F. Supp. 2d 606 (E.D. Pa. 2004) (invalidating a state statute requiring Internet service providers to block websites displaying child pornography).

⁴⁸ See *Reno*, 521 U.S. at 870.

⁴⁹ Owen Fiss traced the history of this discussion in a chapter entitled "The Democratic Mission of the Press" in his book *The Irony of Free Speech*. OWEN M. FISS, *THE IRONY OF FREE SPEECH* 54 (1996) ("Others concerned with the constitutional adequacy of the market—the perfectionists—accepted the populist critique of the market but saw state intervention in more abstract terms. Their goal was not to offer what the people would want in some imagined democratic assembly but rather to achieve an objective ideal: apprising the people of the issues before them, providing them with the necessary information, and presenting them with the conflicting positions.").

⁵⁰ See, e.g., 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, 1131–32 (1999) (arguing that government regulation of the Internet may skew the flow of public debate); Volokh, *supra* note 41, at 1846–47 (suggesting that the Court's libertarian rationale for free speech applies to the Internet even more than print media).

rious grounds but the strand of arguments most relevant for our purposes is the one that takes information-overload as its starting point. The Achilles heel of Internet communication is not lack of information but, rather, too much information.⁵¹ Users have found themselves surrounded by “data smog”; they are bombarded by much more information than they could ever process, most of which was of little or no use to them.⁵² Filtration designed to find relevant, credible, and effective information has become the key to web communication. The ultimate goal of speakers has become to capture as much attention of as many users as possible.⁵³

The first generation of Internet-speech skeptics claimed that the old media intermediaries or their subsidiaries would enjoy significant advantages over all other speakers.⁵⁴ Content producers compete for attention, and the established and wealthy players possess many superior capacities to attract and capture users’ attention: producing expensive content in high-quality formats; advertising, promotion, and visibility-enhancement abilities; stealth marketing techniques; and various cooperation and exclusion strategies.⁵⁵ If successful, these strategies would gradually reproduce the traditional speech-hierarchy of broadcasting in the Internet environment; small, independent speakers would be relegated to an increasingly marginal position while a handful of commercial giants capture the overwhelming majority of users’ attention and reemerge as the essential gateways for effective speech.⁵⁶

Emerging empirical research on patterns of Internet use has tended to support this claim. The visibility of websites, usually measured through links, turns out to be highly skewed, consisting of a power law distribution of a very small number of highly visible web-

⁵¹ See Frank Pasquale, *Copyright in an Era of Information Overload: Toward the Privileging of Categorizers*, 60 VAND. L. REV. 135, 165 (2007) (“[A]ny bit of expression that signals something to one who wants exposure to it may constitute noise to thousands of others.”).

⁵² SHENK, *supra* note 43, at 30–31 (describing declining “signal-to-noise ratio” in contemporary communication).

⁵³ Cf. RICHARD A. LANHAM, *THE ECONOMICS OF ATTENTION: STYLE AND SUBSTANCE IN THE AGE OF INFORMATION* 7 (2006) (“What then is the new scarcity that economics seeks to describe? It can only be the human attention needed to make sense of information.”).

⁵⁴ See Neil Weinstock Netanel, *Cyberspace Self-Governance: A Skeptical View From Liberal Democratic Theory*, 88 CAL. L. REV. 395, 440–42, 463–64 (2000).

⁵⁵ Cf. Guy Pessach, *Copyright Law as a Silencing Restriction on Noninfringing Materials: Unveiling the Scope of Copyright’s Diversity Externalities*, 76 S. CAL. L. REV. 1067, 1091 (2003) (arguing that dominant media corporations can act as gatekeepers because of high financial costs and economies of scale).

⁵⁶ See Netanel, *supra* note 22, at 1887–93; Timothy Wu, *Application-Centered Internet Analysis*, 85 VA. L. REV. 1163, 1179–80 (1999); see also Eli M. Noam, *Will the Internet Be Bad for Democracy?*, Nov. 2001, http://www.citi.columbia.edu/elinoam/articles/int_bad_dem.htm (“[I]t would be . . . naive to cling to the image of the early Internet—nonprofit, cooperative, and free—and ignore that it is becoming a commercial medium . . .”).

sites and a very “long tail” of almost unnoticed ones.⁵⁷ One of the more influential works found a “*complete* absence of democracy, fairness, and egalitarian values on the Web” and concluded that “the topology of the Web prevents us from seeing anything but a mere handful of the billion documents out there.”⁵⁸ In short, on the Internet, everyone may be formally equal in communicative capacity, but media giants establish dominant positions and are actually more powerful than others.

More refined versions of Internet-speech optimism have recently emerged to counter skeptics who emphasized the continued dominance of old-style content intermediaries. For example, Yochai Benkler defends the relative superiority of Internet speech (in comparison with old broadcasting and print models) by analyzing patterns of information flow and visibility on the network.⁵⁹ The web, he explains, consists of multiple levels of clusters of interlinked websites; local clusters based on topic, interest, or similar criteria coalesce to form higher-order clusters.⁶⁰ These high-order clusters are characterized by a very small number of highly visible sites and a multitude of nearly invisible ones; lower-level clusters have a small number of dominant sites too, but visibility and exposure is much more broadly and evenly distributed among the other websites.⁶¹

This structures results in a bottom-up filtration system. At the lowest level, a large number of speakers receive relatively broad exposure within local communities likely composed of individuals with high-intensity interest or expertise.⁶² Speakers who gain salience at the lower levels may gradually gain recognition in higher-order clusters and eventually reach general visibility.⁶³ Benkler argues that a grass-roots, decentralized filtering system of this kind is much less susceptible to the degrading effect of mass-consumption commercial models.⁶⁴

⁵⁷ Clay Shirky, *Power Laws, Weblogs, and Inequality*, NETWORKS ECON. & CULTURE MAILING LIST, Feb. 8, 2003, http://www.shirky.com/writings/powerlaw_weblog.html (“Diversity plus freedom of choice creates inequality, and the greater the diversity, the more extreme the inequality. In systems where many people are free to choose between many options, a small subset of the whole will get a disproportionate amount of traffic (or attention, or income), even if no members of the system actively work towards such an outcome. . . . The very act of choosing, spread widely enough and freely enough, creates a power law distribution.”).

⁵⁸ ALBERT-LÁSZLÓ BARABÁSI, LINKED: HOW EVERYTHING IS CONNECTED TO EVERYTHING ELSE AND WHAT IT MEANS FOR BUSINESS, SCIENCE, AND EVERYDAY LIFE 56 (2003).

⁵⁹ See BENKLER, *supra* note 13.

⁶⁰ See *id.* at 12–13.

⁶¹ See *id.* at 253–55.

⁶² See *id.* at 242.

⁶³ See *id.* at 242, 247–53.

⁶⁴ See *id.* at 260–61 (“The pattern of information flow in such a network is more resistant to the application of control or influence than was the mass-media model.”). Benkler

Jack Balkin offers a somewhat different, but not inconsistent, defense of Internet-speech optimism. Balkin acknowledges that though speakers in the digital network environment can occasionally “route around” traditional media intermediaries, the giant intermediaries are likely to maintain significantly superior salience and exposure, both on and off the Internet.⁶⁵ Balkin suggests that the real hope comes from the cultural practices, augmented by digital technology, that he calls “glomming on.” “Glomming on” takes the widespread use of content from the giant intermediaries as a broadly accessible point of reference, while reinterpreting, manipulating, or changing this content to imbue it with new meaning and create new speech.⁶⁶ Thus, from Balkin’s perspective, the promise of the Internet is not the decline of the old intermediaries but the appearance of an additional, democratized avenue of expression that coexists with intermediaries in a complex symbiosis.⁶⁷

The crux of the new speech-optimism espoused by Benkler, Balkin, and others is the claim that the Internet, while it falls short of a speech utopia, still opens up significant opportunities for improvement over the traditional mass-media system. The optimists concede that the old intermediaries or their Net-replicas will maintain some level of power but argue that there are also new and non-trivial alternatives for effective speech. These alternatives are claimed to constitute a much more decentralized and open model and significantly ameliorate many of the ills identified by critics of mass-media.

has conceded that the type of concentration we diagnose here could vitiate these developments. *See id.* at 261 (“Google could become so powerful on the desktop, in the e-mail utility, and on the Web, that it will effectively become a supernode that will indeed raise the prospect of a reemergence of a mass-media model. Then the politics of search engines . . . become central.”).

⁶⁵ *See* Jack M. Balkin, *Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society*, 79 N.Y.U. L. REV. 1, 9–10 (2004).

⁶⁶ *See id.* at 9–13 (“[T]he Internet has provided an additional layer of communication that rests atop the mass media, draws from it, and in turn influences it.”); *see also* James Grimmelmann, *Trackback and Free Speech*, YALE LAWMEMO, June 18, 2003 (noting that a Trackback function effectively creates a “right of reply” that demands almost nothing of replied-to speech, for “if you write a blog entry which comments on my blog entry, you can send the ‘ping’ to my server at the same time as you post the entry to your blog. This means that readers of my blog now know that you’ve written something following up on my entry and can immediately click through to read it.”). *But see* Frank Pasquale, *From Right-of-Reply to Norm-of-Trackback*, CONCURRING OPINIONS, May 2, 2007, http://www.concurringopinions.com/archives/2007/05/from_rightofrep.html (observing that some mainstream media sites do not indicate “trackbacks” on articles’ websites).

⁶⁷ *See* Balkin, *supra* note 65, at 9–13, 31–32.

B. The Intermediaries Strike Back

1. *The New Intermediaries*

To understand the next phase of the Internet-speech debate in which general purpose search engines finally enter the picture, one has to situate it within the general trends in Internet thought. Many saw the early days of the popularized Internet as a libertarian dream-come-true.⁶⁸ Whether they celebrated or lamented it, many observers agreed that the Internet significantly reduced the state's ability to effectively regulate human behavior.⁶⁹ Effective regulation seemed all but impossible in a highly decentralized network where there was no easily controllable center and where millions of nodes could instantaneously, cheaply, and relatively anonymously transmit and retransmit information across jurisdictional borders.⁷⁰ This seemed equally true in regard to any attempt to regulate or control the flow of information over the Net.

Gradually, however, technolibertarian visions of the Internet lost plausibility. They have now been supplanted by perspectives that emphasize the Internet's "points of control," which have several components.

First, the point-of-control theory recognizes that various social actors develop and control the technology that comprises the Internet, including physical communication infrastructure, interconnection standards, and the hardware and software that constitute the nodes connected to the network.⁷¹ While the Internet has no center, the actors who control these technological components can create bottlenecks that are points of control. Such gatekeepers can influence even the decentralized flow of information, and business and government

⁶⁸ See, e.g., PAULINA BORSOOK, *CYBERSELFISH: A CRITICAL ROMP THROUGH THE TERRIBLY LIBERTARIAN CULTURE OF HIGH TECH* 2-3, 8-9 (2000) (discussing technolibertarianism).

⁶⁹ Compare JAMES DALE DAVIDSON & WILLIAM REES-MOGG, *THE SOVEREIGN INDIVIDUAL: HOW TO SURVIVE AND THRIVE DURING THE COLLAPSE OF THE WELFARE STATE* 14-18 (1997) (predicting an Internet-driven demise of the nation-state as cybercurrency replaces traditional forms of money), with JACK GOLDSMITH & TIM WU, *WHO CONTROLS THE INTERNET? ILLUSIONS OF A BORDERLESS WORLD* 6-7 (2006) (describing in detail the steps governments have taken to prevent the Internet from undermining their powers).

⁷⁰ See, e.g., John Perty Barlow, *The Economy of Ideas: A Framework for Rethinking Patents and Copyrights in the Digital Age*, WIRED, Mar. 1994, at 84, 85, available at http://www.wired.com/wired/archive/2.03/economy.ideas_pr.html ("Intellectual property law cannot be patched, retrofitted, or expanded to contain digitized expression any more than real estate law might be revised to cover the allocation of broadcasting spectrum (which, in fact, rather resembles what is being attempted here).").

⁷¹ Cf. GOLDSMITH & WU, *supra* note 69, at 6-7 (discussing how IP-identification technology and self-reporting might permit companies to identify users by geography for the purpose of filtering content).

soon discovered their usefulness in monitoring and shaping human behavior.⁷²

Second, the technological structure of the Internet is not static.⁷³ Technology is a plastic medium, open to a broad range of reshaping, entailing various patterns and degrees of control.⁷⁴ Regulation of the Internet through technological gatekeepers, combined with the possibility of reshaping technology, can make possible previously unimaginable levels of control and surveillance.⁷⁵

Third, either private forces or public pressures, or some combination of the two, can shape technology and the control opportunities that it offers.⁷⁶ As demonstrated by numerous works in the field of Science and Technology Studies (STS), such forces shape both the development and the diffusion of new technologies.⁷⁷ Annalise Riles has observed that, far from being neutral instruments, “technologies come into being in order to overcome the political and epistemological limits of existing knowledge, and hence these technologies are best understood quite literally as politics by other means.”⁷⁸ Just as

⁷² See Michael D. Birnhack & Niva Elkin-Koren, *The Invisible Handshake: The Reemergence of the State in the Digital Environment*, 8 VA. J.L. & TECH. 6, 7–9 (2003); Ronald J. Mann & Seth R. Belzley, *The Promise of Internet Intermediary Liability*, 47 WM. & MARY L. REV. 239, 275–306 (2005) (discussing the potential regulation of auction intermediaries, payment intermediaries, and ISPs, among others); Jonathan Zittrain, *Internet Points of Control*, 44 B.C. L. REV. 653, 654–55 (2003).

⁷³ See LAWRENCE LESSIG, *CODE AND OTHER LAWS OF CYBERSPACE* 109 (1999) (“Nature doesn’t determine cyberspace. Code does. Code is not constant. It changes.”).

⁷⁴ See *id.* at 6 (arguing that the Internet, as a product of technology, is a malleable entity that continues to evolve at the hands of regulators).

⁷⁵ See generally James Boyle, *Foucault in Cyberspace: Surveillance, Sovereignty, and Hardwired Censors*, 66 U. CIN. L. REV. 177 (1997) (arguing that, contrary to long-held popular belief, the state has the capability to regulate the Internet through private systems of digital surveillance and control).

⁷⁶ See Gaia Bernstein, *The Socio-Legal Acceptance of New Technologies: A Close Look at Artificial Insemination*, 77 WASH. L. REV. 1035, 1040 (2002) (“[O]nce an innovation enters society it is influenced by more than economic forces driven by competitive considerations and laws targeted at the technological makeup of the innovation. Societal values, norms, or institutes and their legal manifestations that were not originally formed to apply to the technology in question may force the technology to be altered or even completely rejected.”).

⁷⁷ See Gaia Bernstein, *Accommodating Technological Innovation: Identity, Genetic Testing and the Internet*, 57 Vand. L. Rev. 963, 963 (2004); Bernstein, *supra* note 76, at 1039–40; Julie E. Cohen, *Creativity and Culture in Copyright Theory*, 40 U.C. DAVIS L. REV. 1151, 1168 (2007) (“[T]he umbrella field known as science and technology studies (“STS”) has sought to illuminate the social construction of both scientific knowledge and technical artifacts using the tools of social and cultural theory.”); Annalise Riles, *A New Agenda for the Cultural Study of Law: Taking on the Technicalities*, 53 BUFF. L. REV. 973, 985 (2005) (“Science and Technology Studies (STS) . . . scholars have long recognized the value of an ethnographic approach to the production of scientific and technical thought.”).

⁷⁸ Riles, *supra* note 77, at 986.

technology influences the development of policy, policy can shape technology.⁷⁹

Fourth, the law, in combination with other social factors, plays an important role in shaping technological development.⁸⁰ It may do so directly by mandating or prohibiting certain technological standards.⁸¹ It may also work indirectly by shaping the social or market conditions that in turn influence technological development.⁸²

Much of Internet law scholarship since the late 1990s has focused intently on the points of control outlook.⁸³ Growing awareness of these points of control has led to a second generation of academic skepticism about the potential of the Internet to liberate speech. These commentators argue that network gatekeepers, who exercise control over the Internet's technological bottlenecks, constitute the new speech intermediaries.⁸⁴ Although sometimes cooperating or allying with the old media intermediaries, these new entities derive their crucial position from a different communication model than that of the traditional broadcast; thus, they may exercise power in different ways.⁸⁵ Nevertheless, under certain conditions, the new intermediaries of Internet communication may replicate many of the ills produced by the old intermediaries of the mass-media system.⁸⁶

Early on, Niva Elkin-Koren identified search engines as an important class of new intermediaries.⁸⁷ Search engines play a crucial role in managing the enormous amount of information available on the

⁷⁹ See WINNER, *supra* note 19, at 55; Chandler, *supra* note 19, at 348 (discussing case studies supporting the hypothesis "that judges, through various private law principles, support and legitimize novel technologies. . . . [by] characteriz[ing] harm as flowing not from a technology that actually alters the world but from a rejection of that technology . . . and[] whittl[ing] away at fundamental theoretical principles of the law in order to promote efficiency in mass production and distribution.").

⁸⁰ See LESSIG, *supra* note 73, at 91–92 (discussing examples of the ways in which the law can force changes in technology).

⁸¹ For example, "[t]he Communications Assistance for Law Enforcement Act . . . requires extensive and costly modifications to equipment to help law enforcement officials tap into the modern digital network and its cataracts of hyperentropic bits." HUBER ET AL., *supra* note 32, § 14.2.5, at 1223 (citing Communications Assistance for Law Enforcement Act, 47 U.S.C. §§ 1001–1009 (2000)).

⁸² See *id.* § 1.8, at 49 ("After the FCC finally approved commercial cellular telephone systems in 1982, the market grew explosively.").

⁸³ See, 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); Lucas D. Introna & Helen Nissenbaum, *Shaping the Web: Why the Politics of Search Engines Matters*, 16 INFO. SOC'Y 169 (2000).

⁸⁴ See, e.g., Elkin-Koren, *supra* note 83, at 185 ("Search engines function as virtual gatekeepers and could considerably affect the available options for online consumers, and thus, their actual choices.").

⁸⁵ See *id.* at 183–85.

⁸⁶ See Introna & Nissenbaum, *supra* note 83, at 169–70.

⁸⁷ Elkin-Koren, *supra* note 83, at 180; Niva Elkin-Koren, *The New Intermediaries in the Virtual Marketplace*, 6 MISHPAT U-MIMSHAL 365, 396–98 (2002) (in Hebrew).

Internet.⁸⁸ They help users locate the information most relevant and important to them and lead an audience (and interlocutors) to content providers.⁸⁹ With this gatekeeping role comes tremendous power, which several traits of the search process and market serve to consolidate.⁹⁰

First, Internet sites have much riding on their index and ranking: as Nissenbaum & Introna memorably put it, “to exist [online] is to be indexed by a search engine.”⁹¹ While users can locate relevant information on the Net in other ways, search engines now constitute the dominant platform through which content producers and audiences can reach each other.⁹² Moreover, the search process itself is structured as a high-stakes, winner-takes-(almost)-all competition.⁹³ Search-results lists, which rank the outcomes for a user’s search query hierarchically, may provide an effective filter for any given user, but rapidly congealing patterns of Internet use may lock speakers into a fierce zero-sum competition for recognition.⁹⁴ The number of users attracted by a listed website steeply drops in correlation with its rank, beginning with the site ranked as second.⁹⁵ By the time one reaches

⁸⁸ See Elkin-Koren, *supra* note 83, at 185.

⁸⁹ See *id.*

⁹⁰ See *id.*

⁹¹ Introna & Nissenbaum, *supra* note 83, at 171.

⁹² Users may, for example, try to guess a URL for a trademarked company’s site or products, and a guess like www.cocacola.com will lead to the company that owns the mark COCA-COLA. There are also web-based directories like those maintained by Yahoo! and the Open Directory project. But the vast majority of searchers use search engines, and it is hard to imagine this changing any time soon. See Pasquale, *supra* note 51, at 175 (“Both trademarks and categorizers [like search engines] help ease the burden of choosing between an ever-increasing number of goods and services.”).

⁹³ See Frank Pasquale, *Ranking vs. Mapping Knowledge*, MADISONIAN.NET, June 25, 2006, <http://madisonian.net/archives/2006/06/25/ranking-vs-mapping-knowledge> (noting the problems caused by ranking systems and calling for “a technological or even aesthetic [method] . . . of representing data that does not lend itself to the commensurating metric of ranking.”).

⁹⁴ See Frank Pasquale, *Rankings, Reductionism, and Responsibility*, 54 CLEV. ST. L. REV. 115, 130–31 (2006) (“Economists have explored how positional dynamics in a number of different markets . . . have led to socially wasteful ‘arms races’ for positional advantage. In ordinary markets, the presence of high-spending consumers will draw more producers so that, eventually, supply will approach demand. However, there can only be one ‘top-ranked’ site. Tactics to influence unpaid listings and prices for paid listings are sure to escalate, but it is not clear that this competition creates much utility.”).

⁹⁵ See NICO BROOKS, ATLAS INST., THE ATLAS RANK REPORT: HOW SEARCH ENGINE RANK IMPACTS TRAFFIC 3, (2004), <http://app.atlasonepoint.com/pdf/AtlasRankReport.pdf> (“Traffic drops significantly by rank.”); DEBORAH FALLOWS ET AL., PEW INTERNET & AM. LIFE PROJECT, DATA MEMO: THE POPULARITY AND IMPORTANCE OF SEARCH ENGINES 2 (Aug. 12, 2004), http://www.pewinternet.org/pdfs/PIP_Data_Memo_Searchengines.pdf (“The average visitor scrolled through 1.8 result pages during a typical search.”); LESLIE MARABLE, CONSUMER WEB WATCH, FALSE ORACLES: CONSUMER REACTION TO LEARNING THE TRUTH ABOUT HOW SEARCH ENGINES WORK—RESULTS OF AN ETHNOGRAPHIC STUDY 5 (June 30, 2003), <http://www.consumerwebwatch.org/pdfs/false-oracles.pdf>; Robyn Greenspan, *Searching for Balance*, CLICKZ STATS, Apr. 30, 2004, <http://www.clickz.com/showPage.html?>

later pages of the search-results list, such a rank is almost as bad as not being indexed at all.⁹⁶ In such an environment, where both commercial and non-commercial speakers place great weight on attracting users' attention, a high ranking is critical to success. Furthermore, a very small number of significant players dominate the lion's share of the search engine market, which has inherent structural characteristics that accelerate concentration and erect high barriers to entry.⁹⁷

The result is that very few entities control the critical junction of Internet communication, and this situation generates problems similar to those diagnosed in broadcasting long ago.⁹⁸ These new gatekeepers can directly manipulate the flow of information—suppressing some sources while highlighting others—whether on the basis of intrinsic preferences or in response to inducements or pressures by others.⁹⁹ Second, the hierarchical ranking system, at least in its current one-size fits all form, has a strong bias toward majority preferences.¹⁰⁰ The majority bias partly overlaps with a dominance of well-financed and commercial speakers.¹⁰¹ Third, the system tilts toward consumerist content both because consumption-oriented content-producers can more successfully induce manipulation and, more importantly, because search engines have an interest in channeling users

page=3348071 (“[A]ttaining top-10 rankings in Google is hard work Search marketing today requires that companies address the entire search result page, not just the left or the right side.”) (internal quotations omitted).

⁹⁶ See Bernard J. Jansen & Marc Resnick, *Examining Searcher Perceptions of and Interactions with Sponsored Results 2* (June 2005) (unpublished paper, presented at the Workshop on Sponsored Search Auctions at ACM Conference on Electronic Commerce, Vancouver, BC, Canada), available at http://ist.psu.edu/faculty_pages/jjansen/academic/pubs/jansen_ecommerce_workshop.pdf (“[T]he likelihood of a searcher selecting a sponsored listing is a curvilinear function of its placement on the page (i.e., based on rank). The higher the link’s placement in the results listing, the more likely a searcher is to select it. The study found similar results with organic listings. Generally, the difference between the first position and the tenth position is a 20%–30% drop in click through (i.e., customer that actually visits a web site by clicking on a link from a SERP [search engine results page]) for the listing. . . . [T]he conversion rate (i.e. customers that actually buy something) drops nearly 90% between the first and tenth position. Obviously, there appears to be an intrinsic trust value associated with the rating of a listing.”) (citing NICO BROOKS, ATLAS INST., *THE ATLAS RANK REPORT—PART II: HOW SEARCH ENGINE RANK IMPACTS CONVERSIONS* (2004), <http://app.atlasonepoint.com/pdf/AtlasRankReportPart2.pdf>).

⁹⁷ Securing copyright permissions for indexed material is but one of many factors tending toward concentration. See Pasquale, *supra* note 51, at 180 (“In a world in which categorizers need licenses for all the content they sample [and index], only the wealthiest and most established entities will be able to get the permissions necessary to run a categorizing site.”); see *infra* Part III.A (discussing this and other factors contributing to concentration).

⁹⁸ See *supra* note 86 and accompanying text.

⁹⁹ See *supra* notes 83–92 and accompanying text.

¹⁰⁰ See Goldman, *supra* note 11, at 193.

¹⁰¹ See *id.*

toward sites with which they cooperate under various commercial schemes.¹⁰²

Whether and to what extent such worrisome effects will materialize depends on many technological, social, and economic factors. The law, too, may exacerbate or ameliorate these problems. Many Internet-speech optimists of the newer generation happily concede that their vision exists only as a future possibility, whose realization depends, among other things, upon the technological, social, and economic environment shaped by the law.¹⁰³ In the context of search engines, the typical line of argument arising out of this assumption has focused on minimizing constraints on search engines.¹⁰⁴ The basic premise of these arguments is that the best structural remedy to the problems associated with search engines is to increase competition and lower barriers to entry in the field.¹⁰⁵ This, in turn, requires minimizing two sets of legal constraints that may make the operation of search engines cumbersome and costly: limitations under intellectual-property law and other doctrines, which restrict the ability of search engines to access and present the information relevant to their function, as well as the host of legal doctrines that create liability based on the content provided by indexed entities.¹⁰⁶ In order to facilitate a competitive and diverse arena of search engines, scholars have proposed that the law should reduce limitations on access to in-

¹⁰² Before Google went public, its founders explained its basic design and, in an appendix to that paper, said “we expect that advertising funded search engines will be inherently biased towards the advertisers and away from the needs of the consumers.” Sergey Brin & Lawrence Page, Computer Science Department of Stanford University, *The Anatomy of a Large-Scale Hypertextual Web Search Engine* § 8, at 18 (2000), <http://info-lab.stanford.edu/~backrub/google.html>. See also Grimmelmann, *supra* note 8, at 11–13 (arguing that the method by which most search engines obtain funding creates incentives to favor sites that advertise with the search engine). For a recent analysis of revenue flow in the search business, see Brian Grow & Ben Elgin, *Click Fraud: The Dark Side of Online Advertising*, BUS. WK., Oct. 2, 2006, at 46. Recent research based on interviews of search engineers confirms these worries:

The schemas clearly in the ascendant—the dominant market schema and the science-technology schema—provide little scope to raise issues of public welfare, fairness, or bias. Instead, they emphasize profit, in the case of the market schema, or progress and efficiency, in the case of the science-technology schema

Elizabeth Van Couvering, *Is Relevance Relevant? Market, Science, and War: Discourses of Search Engine Quality*, 12 J. COMPUTER-MEDIATED COMM. 866, 884 (2007).

¹⁰³ See BENKLER, *supra* note 13, at 12 (The “emergence of non-market, peer-produced alternative sources of filtration and accreditation in place of the market-based alternatives” is one key response “to the information overload problem.”); Balkin, *supra* note 65, at 9.

¹⁰⁴ See Balkin, *supra* note 65, at 9.

¹⁰⁵ See *id.*

¹⁰⁶ See Elkin-Koren, *supra* note 83, at 192–95; Elkin-Koren, *supra* note 87, at 396; Pasquale, *supra* note 51, at 140–41 (advocating better fair use treatment of categorizers who “creat[e] the types of navigational tools and filters that help consumers make sense of the ocean of” expression incentivized by copyright law).

formation¹⁰⁷ and should shield search engines from liability arising out of the content of indexed entities or keyword sales.¹⁰⁸

However, while these two guiding principles may effectively facilitate comprehensive and authoritative search engines, they do not assure responsible ones.¹⁰⁹ Even absent pressures from content owners leveraging various legal doctrines, a search engine may have strong incentives to exercise its power in troublesome ways.¹¹⁰ Therefore, policymakers should at least consider restrictions on the ability of search engines to manipulate their results or legal remedies for those treated unfairly. In the next section, we demarcate the relatively narrow set of search engines' troubling practices, with which we will concern ourselves in this Article.

2. *Search Engine Bias*

Various phenomena that involve the manipulation or shaping of search engine results are usually referred to under the common rubric of "search engine bias."¹¹¹ In fact, "search engine bias" covers a very broad range of different phenomena that merit diverse legal responses—and sometimes no legal response at all, given regulators' potential clumsiness in certain areas.¹¹² The following does not present a complete map of the universe of search engine bias but rather introduces a few important distinctions, helpful in demarcating our discussion here.

Instances of results manipulation by search engines differ from each other along several dimensions. First, there is the breadth of the manipulation. A search engine bias may affect the indexing of unspecified websites relatively universally, on the basis of generally applicable criteria. As Eric Goldman points out, every search engine is

¹⁰⁷ See Pasquale, *supra* note 51, at 184 (calling for more fair use protection for categorizing and indexing services); Hannibal Travis, *Google Book Search and Fair Use: iTunes for Authors, or Napster for Books?*, 61 U. MIAMI L. REV. 87, 91 (2006) ("[C]ourts will best serve intellectual property and antitrust policy by concluding that Google is making fair and permissible uses of copyrighted works when it enhances the efficiency with which they are marketed and sold.").

¹⁰⁸ Eric Goldman, *Deregulating Relevancy in Internet Trademark Law*, 54 EMORY L.J. 507, 511, 590–93 (2005) (arguing that "search providers should have both common law and statutory safe harbors").

¹⁰⁹ For more on "authoritativeness" and "responsibility" as normative bases of search law, see Pasquale, *supra* note 94, at 125–28 (outlining "Twin Goals for Search Law: Responsible and Authoritative Metadata").

¹¹⁰ See *infra* Part I.B.2.

¹¹¹ See *infra*.

¹¹² See *infra* Parts III–IV (explaining how regulation can help to solve the problems of search engine manipulation and detailing the obstacles to regulation with regard to these problems).

“biased” in the strong universal sense.¹¹³ Despite familiar claims about “neutrality” and “objectivity,” search engines filter and rank websites and, as such, they must favor some entities and disfavor others.¹¹⁴ Whether the ranking relies on a completely automated algorithm or includes manual human intervention, the process must involve the application of some set of criteria. These criteria will be “biased,” in that they will either purposefully or indirectly give priority to some speakers and marginalize others.¹¹⁵ Optimization of these criteria is an inherent and essential part of search engines’ operation.¹¹⁶ Optimization occurs through an iterative process, and with each “tweak” of the algorithm some sites will rise in prominence and others will fall.

At the other extreme, a manipulation may be highly specific or local. For example, a specific website could be individually targeted. Its rank could be increased or decreased, or it could be completely excluded.¹¹⁷ The distinction is one of degree: there is a broad spectrum that stretches between completely specific manipulations and general biases. We focus on the former set of problems, aware that they may sometimes be exacerbated (or motivated) by the same pressures that drive the latter.

Second, search engine manipulations have various objectionable or at least controversial effects. The most intuitive kind of effect is suppression—situations in which the manipulation excludes a particu-

¹¹³ Goldman, *supra* note 11, at 189 (“Like other media companies, search engines make editorial choices designed to satisfy their audience. These choices systematically favor certain types of content over others, producing a phenomenon called ‘search engine bias.’”); *see also* Batya Friedman & Helen Nissenbaum, *Bias in Computer Systems*, 14 ACM TRANSACTIONS ON INFO. SYSTEMS 330 (1996) (discussing bias in reservation systems); Abbe Mowshowitz & Akira Kawaguchi, *Bias on the Web*, 45 COMM. ACM 56 (2002) (computing the bias of Google and other search engines in some searches).

¹¹⁴ *See* Goldman, *supra* note 11, at 189.

¹¹⁵ *See id.* at 191–92.

¹¹⁶ *See id.* at 195–97; Grimmelmann, *supra* note 8, at 21 (“Several problems make it difficult to set a proper baseline of ‘unbiased’ results.”). Though the leading search engines are commercial enterprises, a universal structural bias in favor of commercial sites could still be quite troubling, depending on one’s normative standpoint. *See* Ellen P. Goodman, *Stealth Marketing and Editorial Integrity*, 85 TEX. L. REV. 83, 89 (2006) (“Stealth marketing . . . [can take the form of] conventional payola, where the sponsor promotes a media experience, such as a musical work, by purchasing audience exposure to the experience as a form of advertisement. Pay-for-play in broadcasting is similar to the use of slotting fees in the retail industries to obtain preferential shelf space in supermarkets and book stores. Online retail outlets also use slotting fees of a sort when portals like Amazon and Google accept payments for exposure of a particular product or service.”).

¹¹⁷ These were the allegations at stake in the Search King case; Search King claimed that Google had lowered its ranking. As Google’s answer put it, “Search King filed its Complaint and Amended Complaint *solely* on the basis that Google improperly reduced the PageRank it assigned to pages on Search King’s site.” Answer at 1, *Search King, Inc. v. Google Tech., Inc.*, No. CIV-02-1457M, U.S. Dist. LEXIS 27193 (W.D. Okla. Dec. 30, 2002).

lar site or relegates it to obscurity.¹¹⁸ The diametrically opposed effect is that of unwanted exposure—situations in which information about or presentation of a particular entity gains a high degree of salience, often in a particular context or in response to particular keywords, contrary to that entity’s wishes or interest.¹¹⁹ Although not strictly separate from the previous two classes of effects from search engine manipulation, trademark-related harms warrant independent discussion. Such harms can involve unwanted suppression, unwanted exposure, or undue exposure for a site that appropriates a competitor’s mark. For example, mark owners may claim that the use of trademarks as adwords by competitors of the trademarks’ owners creates consumer confusion, dilution of marks or other reputational harms.¹²⁰

Third, search engines manipulate and shape their results for many reasons. They are in a constant race to optimize their algorithm in order to satisfy users and maintain a competitive edge over rivals.¹²¹ They must also foil attempted manipulation of results by indexed entities (and the “search engine optimizers” they hire to boost their ranking).¹²² Site owners employ various tactics to boost their prominence, some legitimate, and some less so.¹²³ In some cases, search engines

¹¹⁸ See Pasquale, *supra* note 94, at 117 (“Such harms include unwanted high-ranking results relating to them, or exclusion from a page they claim it is their “due” to appear on.”); see also Grimmelmman, *supra* note 8, at 24–27 (discussing content providers’ interest in maintaining some control over the type and number of users that navigate to their content).

¹¹⁹ Grimmelmman discusses inclusion harms under the headings of “reputation” and “privacy.” See Grimmelmman, *supra* note 8, at 27–30 (discussing the harm caused to providers when search engines allow users to access their content without proper authorization).

¹²⁰ See Grimmelmman, *supra* note 8, at 27–28. See generally, Goldman, *supra* note 108 (arguing that courts should “[d]eregulate the keyword in Internet searching” and proposing adjustment to trademark law suitable for achieving this purpose); Greg Lastowka, *Google’s Law*, 73 BROOK. L. REV. 1327 (2008) (summarizing how trademark law has been applied to search engines, starting with early meta tag cases and concluding with Google’s current attempts to insulate itself from liability under an expanded doctrine of trademark use).

¹²¹ Saul Hansell, *Inside the Black Box: Why Google Can’t Stop Tweaking Its Search Engine*, N.Y. TIMES, June 3, 2007, at C1 (describing constant changes to algorithms devised by the search quality department at Google).

¹²² Van Couvering, *supra* note 102, at 877; Grimmelmman, *supra* note 8, at 36–39. Van Couvering describes a “war schema,” adopted in response to hackers and spammers, whereby decision making is characterized not by any kind of appeal to hierarchy, consensus, or objective measure but rather by who can “win,” even though several interviewees likened it to an “arms race” in which no one was likely to come out on top. This particular metaphor, the “arms race,” was not used about competing with other businesses. Spammers were also likened to criminals, particularly fraudsters or conmen, and specifically contrasted with “honest” people. Van Couvering, *supra* note 102, at 877.

¹²³ See Letter from Heather Hipsley, Acting Assoc. Dir. of Adver. Practices, FTC, to Gary Ruskin, Executive Dir., Commercial Alert (June 27, 2002), <http://www.commercialalert.org/PDFs/ftcresponse.pdf> (recommending that search engines segregate organic results from those resulting from purchased adwords); see also Shari Thurow, *Black-Hat Myths*

directly punish such attempts by banning the relevant websites from their results or specifically relegating them to a low rank.¹²⁴

Search engines can also manipulate results in response to positive or negative inducements from other parties. In exchange for purchase of adwords, they can prominently display a site in response to certain keyword searches.¹²⁵ They may, at least in theory, demote a specific website upon payment from an interested third party. Search engines can also suppress a particular website in response to public pressures or demands from powerful private players, sometimes backed by various legal claims.¹²⁶

Finally, search engines can and, to some extent, do manipulate results in order to serve their own self-interest. Thus, for example, the rank of a specific website could be reduced simply because the search engine sees it as a competitive challenge or a threat, because it dislikes the site's policies, or because of other ad hoc reasons. On the flipside, search engines can boost the visibility of websites in whose volume of traffic they have an interest, such as business partners and allies, or sites that participate in advertisement programs sponsored by the search engine.

Each of these types of search engine bias merits extensive analysis. We concentrate here on instances of manipulation by search engines that are relatively specific or local and whose troubling effect is suppression. Various relevant motivations will be discussed in the appropriate places. It is possible that our normative discussion and outline of possible legal regimes could be extended to other subsets of the universe of search engine bias, but this is likely to entail adjustments that will have to be undertaken elsewhere.

Before sketching legal regimes that are meant to deal with the problem of search engines' bias, two questions have to be addressed. First, we must identify the nature of the problem. Intuitive objections

About White-Hat SEO, CLICKZ, Jan. 31, 2005, <http://www.clickz.com/showPage.html?page=3465751> (“[A] white-hat search engine marketing (SEM) firm, commonly known as an ethical SEM firm, follows all the guidelines, terms, and conditions set forth by the search engines. A black-hat SEM firm doesn't follow all the search engines' rules.”).

¹²⁴ Erik J. Heels, *The Brand Wars are Coming! How to Defend Your Brands on the Internet*, L. PRAC., July 2007, at 24, available at <http://www.abanet.org/lpm/magazine/articles/v33/is5/an16.shtml> (“Don't think that you can use search engine optimization (SEO) or other tricks alone to improve your standing with Google. If you try to trick Google, then you run the risk of having your organic search results demoted (graylisting) or removed entirely (blacklisting). So if Google says that paying for other sites to link to your site is a bad thing, you may have to listen, at least until a viable competitor to Google steps up.”).

¹²⁵ See, e.g., Google, Welcome to Adwords: Advertise Your Business on Google, <https://adwords.google.com/select/Login> (last visited Apr. 8, 2008). The major search engines maintain a visual separation between paid and organic rankings. To the extent this separation is blurred, the FTC might step in to prevent deception of consumers. See Letter from Heather Hipsley to Gary Ruskin, *supra* note 123.

¹²⁶ See Pasquale, *supra* note 94, at 121.

need to be grounded in guiding principles that give us clarity about what exactly is wrong with search engine manipulation practices. Second, even if the possibility of search engine manipulation does seem problematic, before rushing in to impose legal regulation, we have to ask whether market forces, new technology, or existing or developing norms may address our concerns. Do they render the theoretical possibility of suspect manipulation by search engines unlikely in practice? The following two sections address these issues respectively.

II

WHAT IS WRONG WITH SEARCH ENGINE MANIPULATION?

Assuming that local manipulation practices by search engines do take place and are likely to continue in the future, what, if anything, is normatively wrong with them? We discuss briefly how search engine manipulation can undermine democratic values, economic efficiency, fairness, and individual autonomy.

Democracy

Concerns about the effect of search engine manipulation on democratic values recall the classic critiques of mass media reviewed above. An important democratic value, at least within concepts of democracy that are not so impoverished as to reduce it only to a majoritarian process, is an open and diverse public sphere.¹²⁷ There are two related rationales to the centrality of a robust speech arena. The one is the centrality to the polity of a public deliberative process that is as free as possible from public coercion and private power.¹²⁸ In such civic dialogues, a wide array of subjects get a chance to enter the public agenda; all relevant information and views, including unpopular and marginal ones, have some opportunity to be aired, ex-

¹²⁷ As John Dewey observed, "Majority rule, just as majority rule, is as foolish as its critics charge it with being. But it never is *merely* majority rule. . . . 'The means by which a majority comes to be a majority is the more important thing': antecedent debates, modification of views to meet the opinions of minorities The essential need, in other words, is the improvement of the methods and conditions of debate, discussion, and persuasion." JOHN DEWEY, *THE PUBLIC AND ITS PROBLEMS* 207–08 (Ohio Univ. Press 1976) (1927). See generally ALAN MCKEE, *THE PUBLIC SPHERE: AN INTRODUCTION* (2005); AFTER HABERMAS: *NEW PERSPECTIVES ON THE PUBLIC SPHERE* (Nick Crossley & John Michael Roberts eds., 2004); HABERMAS AND THE PUBLIC SPHERE (Craig Calhoun ed., 1992). For an example of the application of this idea to the media context, see Nicholas Garnham, *The Media and the Public Sphere*, in *COMMUNICATING POLITICS: MASS COMMUNICATIONS AND THE POLITICAL PROCESS* 37 (Peter Golding et al. eds., 1986).

¹²⁸ JÜRGEN HABERMAS, *THE STRUCTURAL TRANSFORMATION OF THE PUBLIC SPHERE: AN INQUIRY INTO A CATEGORY OF BOURGEOIS SOCIETY* (Thomas Burger trans., paperback ed. 1991) (1962) (anticipating regulative ideal of an "ideal speech situation" designed to give primacy to the "unforced force of the better argument").

amined, and debated.¹²⁹ The other rationale is the importance of an open and relatively equal chance to all members of society for participation in the cultural sphere. An important aspect of individual freedom is the ability to take part in the process of public-meaning-making and to engage with, reshape, or imbue with new meanings existing concepts, symbols, or beliefs.¹³⁰

The specter of control by a handful of powerful gatekeepers over critical bottlenecks of informational flow threatens the openness and diversity of the Internet as a system of public expression. In some respects, the more significant threat is posed by the broad structural biases of search engines. Any inherent preference of search engines for content that is mainstream, produced by the powerful and well financed, or commercial is particularly significant because of its systematic character and effect.¹³¹ Local, targeted manipulations may seem less significant by comparison.

This priority of concerns may be reversed, however, given Internet-speech optimists' recent justifications of patterns of prominence on the Net. The inherent, structural bias of search engines is mainly the result of the reliance of their ranking algorithms on number of links to a ranked website and the assignment of more substantial weight to links from sites that are highly visible or popular.¹³² However, if Benkler's defense of Internet speech is correct, the fear of visibility that is skewed toward the preferences of a few popular, dominant, and usually wealthy websites loses much of its force.¹³³

According to Benkler, the web functions as a decentralized, peer-based filtering system: lower-order clusters, where a large number of various speakers enjoy exposure to a community of intense-interest individuals, organically elevate a small number of sites to the attention of higher-order clusters. At the most general level, a power law distribution dictates that a small fraction of all websites receive most of the visibility. To the extent that the small group of winners was produced by the decentralized filtering system just described (and not picked by a few powerful players catering to the lowest common denominator),

¹²⁹ See Niva Elkin-Koren, *Cyberlaw and Social Change: A Democratic Approach to Copyright Law in Cyberspace*, 14 CARDOZO ARTS & ENT. L.J. 215, 219–24 (1996). This idea is captured by the Supreme Court's famous observation that the First Amendment "rests on the assumption that the widest possible dissemination of information from diverse and antagonistic sources is essential to the welfare of the public." *Associated Press v. United States*, 326 U.S. 1, 20 (1945).

¹³⁰ See Balkin, *supra* note 65, at 33–45.

¹³¹ Introna & Nissenbaum, *supra* note 83, at 170 ("Search engines constitute a powerful source of access and accessibility within the Web.").

¹³² AMY N. LANGVILLE & CARL D. MEYER, *GOOGLE'S PAGERANK AND BEYOND: THE SCIENCE OF SEARCH ENGINE RANKINGS* 28 (2006) ("PageRank's thesis is that a webpage is important if it is pointed to by other important pages.").

¹³³ See *supra* text accompanying notes 93–97.

it should not be troubling. A mix of democracy and merit trumped plutocracy. By derivation, the same consoling logic applies to the structural bias of search engines. Search engine algorithms may give a high weight to the preferences of relatively few dominant websites in determining their rankings. But those preferences, and hence the search engine ranking that assigns them a high weight, are, to a large extent, a product of a bottom-up, “democratic” filtering system.

Yet this logic does not apply to more targeted manipulations by search engines. When a search engine specifically decides to intervene, for whatever reason, to enhance or reduce the visibility of a specific website or a group of websites, the decentralized filtering system may be circumvented. Instead of reflecting the synthesized results of a bottom-up filtering process, the search engine imposes its own preferences or the preferences of those who are powerful enough to induce it to act.¹³⁴ The aggregate result of specific interventions of this kind by search engines that determine which content reaches viewers may be prejudicial to the democratic aspiration of a free, open, and diverse expressive sphere.

Economic Efficiency

Concentrated control over the flow of information, coupled with the ability to manipulate this flow, may reduce economic efficiency by stifling competition. The centrality of information to efficient markets is well known.¹³⁵ Market participants need information about products and services to make informed economic decisions.¹³⁶ To the extent information is less available or more costly to obtain, the market will be less efficient and prices will be less competitive. Search engine manipulation may adversely affect the flow of information critical to the decisions of participants in the market. It may highlight market actors that otherwise would have enjoyed less popularity or suppress other actors and their ability to compete effectively. Put dif-

¹³⁴ See, e.g., Frank Pasquale, *Political Google Bombing*, CONCURRING OPINIONS, Oct. 27, 2006, http://www.concurringopinions.com/archives/2006/10/political_google.html (critiquing “search engine optimization” as a “commodification of salience”).

¹³⁵ For a critical treatment of the “perfect information” ideal in economic thought, see JAMES BOYLE, SHAMANS, SOFTWARE, AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY 35–46 (1996) (discussing problems that arise due to the commodification of information, when information is treated simultaneously as a product and a prerequisite of a well-functioning market).

¹³⁶ A perfect market is usually defined as one in which all participants possess full information. Joseph E. Stiglitz, *Information*, in THE CONCISE ENCYCLOPEDIA OF ECONOMICS 267, 267 (David R. Henderson ed., 2008), available at <http://www.econlib.org/library/Enc/Information.html> (last visited Apr. 8, 2008) (observing that “[m]any of the central theories and principles in economics are based on assumptions about perfect information”). Of course, the concept is doomed to be an idealized one, but it remains one of the regulative ideals of economic thought. See Sanford J. Grossman & Joseph E. Stiglitz, *On the Impossibility of Informationally Efficient Markets*, 70 AM. ECON. REV. 393 (1980).

ferently, attaining visibility and access to users is critical to competition and cooperation online. Centralized control or manipulation by search engines may stifle innovation by firms relegated to obscurity. The problem is directly analogous to the concerns raised by advocates of net neutrality in the wake of the growing prospect of traffic discrimination by another kind of Internet gatekeepers: Internet Service Providers (ISPs).¹³⁷

Manipulation of this kind is likely to result in high barriers to entry that depress competition. Entrenched and well-established entities are more likely to have the resources necessary to induce search engines to manipulate results and thus preserve their market dominance.¹³⁸ New entrants and smaller competitors may find themselves excluded or unable to reach public consciousness.¹³⁹ As the Internet becomes a central site for both market transactions and the informa-

¹³⁷ This concern in regard to search engine manipulation is directly parallel to the points made by advocates of net neutrality, who worry about the economic consequences of giving ISP's a right to discriminate among traffic from different users or applications. The analogy is between gatekeepers who can exercise their position to decrease or increase the ability of various users to effectively interact or compete using the Net's infrastructure, thereby adversely affecting competition, innovation, and value-generating activities at the "ends" of the network. See Brett M. Frischmann & Barbara van Schewick, *Network Neutrality and the Economics of an Information Superhighway: A Reply to Professor Yoo*, 47 JURIMETRICS J. 383, 409 (2007); 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); Tim Wu, *Why Have a Telecommunications Law?*, 5 J. ON TELECOMM. & HIGH TECH. L. 15 (2006). There are two main differences between ISP discrimination and search engine manipulation that may make the latter a more complex issue. First, unlike ISP discrimination, search engine manipulation often does not directly influence the quality of the product, service, or interaction supplied by the affected entities. Second, unlike packet routing, search results, due to their inherently hierarchical structure, cannot be entirely neutral: someone will have to be at the top of the list and others at the bottom. Nevertheless, the effect of manipulation on an element that is critical for many actors' ability to effectively compete in the market and the potential of radical intervention by search engines exercising control over the relevant infrastructure make the case analogous to ISP discrimination. Ironically, Google—the archenemy of regulating search engine manipulation—is one of the foremost corporate advocates of net neutrality. See, e.g., *A Guide to Net Neutrality for Google Users*, <http://www.google.com/help/netneutrality.html> (last visited Apr. 8, 2008); Richard Whitt, *What Do We Mean by "Net Neutrality"?*, GOOGLE PUB. POL'Y BLOG, June 16, 2007, <http://googlepublicpolicy.blogspot.com/2007/06/what-do-we-mean-by-net-neutrality.html> ("Without nondiscrimination safeguards that preserve an environment of network neutrality, the Internet could be shaped in ways that only serve the interests of broadband carriers, rather than U.S. consumers and Web entrepreneurs.").

¹³⁸ Frank Pasquale, *Internet Nondiscrimination Principles: Commercial Ethics for Carriers and Search Engines*, 2008 U. CHI. LEGAL F. (forthcoming Oct. 2008) (arguing that search engines' advocacy for transparency and accountability for carriers—via principles such as net neutrality—suggests guidelines for the regulation of search engines themselves).

¹³⁹ Jon Kleinberg & Steve Lawrence, *The Structure of the Web*, 294 SCIENCE 1849 (2001), available at <http://www.sciencemag.org/cgi/reprint/294/5548/1849.pdf> ("New or niche sites with few links to them may have difficulty competing with highly prominent sites for attention. By favoring more highly linked sites, search tools may increase this effect."); see also Abbe Mowshowitz & Akira Kawaguchi, *Measuring Search Engine Bias*, 41 INFO. PROCESSING & MGMT., 1193 (2005).

tion needed to make informed purchasing decisions, the anti-competitive effect of skewed information flows is likely to intensify.

Fairness

Probably the most intuitive problem associated with manipulation of search engine results is the sense of unfair treatment for those affected by a process they can neither fully comprehend nor effectively respond to.¹⁴⁰ Since major players in the field wield tremendous power, targeted interventions can lead their victims to lose a substantial part of their audience or business on the basis of an arbitrary or unfairly influenced decision by the search engine. Search engines command unlimited and unaccountable power to manipulate their results.

It may seem easy to dismiss this objection because search engines are private entities, not governmental organs.¹⁴¹ Even if one uncritically accepts this public/private distinction, however, there is a subset of cases in which applying fairness norms to private entities is far from unheard of: when affected parties cannot “exit” or to turn to other alternatives.¹⁴² When a private party occupies an extraordinary position of power that makes it indispensable to others for obtaining certain important resources, goods, or services, and when alternatives are very limited, traditionally there has been more receptiveness to the application of fairness and accountability norms.¹⁴³ When, for example, in the nineteenth century, railroads came to exercise vast, near-

¹⁴⁰ See, for example, the story of Neil Moncrief, the proprietor of 2bigfeet.com (a seller of large-sized men’s shoes), whose site was knocked off the first page of Google’s rankings by a sudden algorithm shift in November 2003, right before the Christmas buying season. See BATTLELLE, *supra* note 1, at 156–57. Moncrief attempted to contact Google several times, but “never got a response.” *Id.* at 157.

¹⁴¹ General requirements of fairness and accountability are usually limited to public entities, while private parties are left to act as arbitrarily and unfairly as they wish, as long as they abide by some basic criminal and civil rules of the game. However, even private firms must abide by the consumer protection and fair competition rules devised by entities like the Federal Trade Commission and the U.S. Department of Justice, along with their state-level counterparts.

¹⁴² ALBERT O. HIRSCHMAN, *Exit and Voice: An Expanding Sphere of Influence*, in RIVAL VIEWS OF MARKET SOCIETY AND OTHER RECENT ESSAYS 78–80 (1986) (describing “exit” and “voice” as two classic options of reform or protest).

¹⁴³ As, for instance, in the essential facilities doctrine in antitrust law. See Robert W. Crandall, *The Remedy for the “Bottleneck Monopoly” in Telecom: Isolate It, Share It, or Ignore It?*, 72 U. CHI. L. REV. 3 (2005); Philip J. Weiser, Goldwasser, *The Telecom Act, and Reflections on Antitrust Remedies*, 55 ADMIN. L. REV. 1 (2003); Stanley M. Gorinson, *Overview: Essential Facilities And Regulation*, 58 ANTITRUST L.J. 871 (1990); Marina Lao, *Aspen Skiing and Trinko: Antitrust Intent and “Sacrifice”*, 73 ANTITRUST L.J. 171 (2005); Brett Frischmann & Spencer Weber Waller, *Revitalizing Essential Facilities*, 75 ANTITRUST L.J. (forthcoming 2008), (manuscript at 1), available at http://papers.ssrn.com/abstract_id=961609 (“connect[ing] the essential facilities debate in the antitrust field to the broader question of private rights versus open access in other areas of the law, particularly intellectual property law[and] propos[ing] and apply[ing] an economic theory of infrastructure that comprehensively de-

exclusive power over the ability of individuals to ship their goods and engaged in practices that were deemed unfair or discriminatory, the result was administrative and legal regulation of such practices.¹⁴⁴ Later, as the field of regulation developed, various schemes that enforce fairness norms, among other regulatory schemes, were applied to other private industries whose structure entailed similar exclusive power of private entities over the lives of individuals.¹⁴⁵ We will return to this parallel between search engines and other historically regulated industries later.¹⁴⁶ At the moment it suffices to point out that specific manipulations by search engines raise serious fairness issues under circumstances that traditionally mitigated the tendency not to apply fairness or accountability norms to private entities.

Deception and Autonomy

Some describe search engine manipulation as deception.¹⁴⁷ To date, the only governmental action signaling any intention to limit search engine manipulation was based on a consumer deception theory: a letter sent by the Federal Trade Commission (FTC) to various search engine firms recommended they clearly and conspicuously distinguish paid placements from other results.¹⁴⁸ The FTC sent the letter in response to a complaint by the organization Commercial Alert¹⁴⁹ that requested FTC investigation of whether several search engines' use of paid placements constituted unlawful deceptive advertising.¹⁵⁰ The deception argument as applied to search engines is a

fines what facilities are essential and must be shared on an open and non-discriminatory basis").

¹⁴⁴ See CHARLES MONROE, HAAR & DANIEL WILLIAM, FESSLER, *THE WRONG SIDE OF THE TRACKS: A REVOLUTIONARY REDISCOVERY OF THE COMMON LAW TRADITION OF FAIRNESS IN THE STRUGGLE AGAINST INEQUALITY* (1986); Herbert Hovenkamp, *Regulatory Conflict in the Gilded Age: Federalism and the Railroad Problem*, 97 YALE L.J. 1017 (1988).

¹⁴⁵ See Jim Rossi, *The Common Law "Duty to Serve" and Protection of Consumers in an Age of Competitive Retail Public Utility Restructuring*, 51 VAND. L. REV. 1233 (1998).

¹⁴⁶ See *infra* text accompanying notes 307–11. Critics of Google's advocacy of net neutrality have also drawn this connection. See Holman Jenkins, *Sort of Evil*, WALL. ST. J., July 18, 2007, at A11 ("[B]y relentlessly pitching broadband suppliers as an 'enemy' industry ripe for regulation, Google hopes to forestall the day when Washington begins to examine Google's own dominance in search and advertising. Here, we can hardly blame the company. Its ability to control which websites and web businesses receive traffic makes it a far likelier candidate for 'public utility' treatment than the diverse and growing array of players who make up the broadband world.").

¹⁴⁷ *E.g.*, Grimmelmann, *supra* note 8, at 23 (discussing the possibility of bringing a fraud claim against a search engine for its result manipulation); see also Gasser, *supra* note 8, at 219 (describing various legal means and proposed legal means to combat online fraud).

¹⁴⁸ See Letter from Heather Hipsley to Gary Ruskin, *supra* note 123.

¹⁴⁹ Letter from Gary Ruskin, Executive Dir., Commercial Alert, to Donald Clark, Sec'y, Fed. Trade Comm'n (July 16, 2001), available at <http://www.commercialalert.org/PDFs/ftcresponse.pdf>.

¹⁵⁰ See 15 U.S.C. § 45(a)(1) (2000).

variant of the more general criticism of stealth marketing in the media.¹⁵¹ Users, the argument goes, are misled “to believe that search results are based on relevancy alone”¹⁵² when in fact they are based on other grounds.

The applicability of the deception characterization, although relevant to some search engine manipulation practices, is limited. Deception is contingent upon users’ expectations. In some cases, the misrepresented fact is not likely to deceive the user or the user may be indifferent to it. More importantly, users’ attitudes are dynamic and sensitive to practice. With time and growing public awareness, even originally trusting or naïve users may grow more skeptical of search engine practices and hence less susceptible to deception.¹⁵³

A related problem that is more fundamental than deception is the effect of search engine manipulation on the autonomy of users. Meaningful autonomy requires more than the simple absence of external constraints on an individual’s ability to make a choice and act upon it.¹⁵⁴ At a minimum, autonomy requires a meaningful variety of choices, information on the relevant state of the world, the capacity to evaluate this information, and the ability to make a choice.¹⁵⁵ If A controls the window through which B sees the world and systematically exercises power over the relevant information about the world, including all of the available alternatives and options, that reaches B, then A diminishes B’s autonomy.¹⁵⁶ To control informational flows in ways that shape and constrain another person’s choices is to limit that person’s autonomy, whether that person is deceived or not. When search engines highlight or suppress critical information, they do just that.¹⁵⁷

¹⁵¹ See Goodman, *supra* note 116, at 108–12.

¹⁵² Letter from Gary Ruskin to Donald Clark, *supra* note 149, at 1.

¹⁵³ See Goodman, *supra* note 116, at 111–12.

¹⁵⁴ See 2 CHARLES TAYLOR, *What’s Wrong with Negative Liberty*, in PHILOSOPHICAL PAPERS: PHILOSOPHY AND THE HUMAN SCIENCES 211, 224 (1985) (discussing the incoherence of a strictly negative concept of liberty).

¹⁵⁵ See JOSEPH RAZ, *THE MORALITY OF FREEDOM* 370 (1986) (focusing on the adequacy of options as a precondition for autonomy).

¹⁵⁶ See Yochai Benkler, *Siren Songs and Amish Children: Autonomy, Information and Law*, 76 N.Y.U. L. REV. 23, 65–67 (2001).

¹⁵⁷ Jennifer A. Chandler, *A Right to Reach an Audience: An Approach to Intermediary Bias on the Internet*, 35 HOFSTRA L. REV. 1095, 1117 (2007) (arguing that “search engines should not remove websites from their indices unless required by law to do so. The removal of any website and the reason for the removal should be made known within a publicly-accessible list.”). Chandler is concerned that the removal of websites from search engine indices effectively amounts to a hiding of content from users. See *id.* Those in favor of search engine’s untrammled right to control information flows might argue that this information would never have been accessible in the first place were it not for the search engine. However, the search engine still has autonomy-diminishing characteristics if it induces its users into believing it is comprehensive, and actually is biased or partial. See *id.*

How significant is the infringement of individual autonomy by search engine manipulation? Two factors play a role in answering this question: the transparency of the intervention to users and the ability of users to avoid the power of the manipulating entity.¹⁵⁸ Search engine manipulation does poorly under both factors. Due to the “black box” nature of the search algorithm¹⁵⁹ and the secrecy surrounding search engine practices, manipulation is highly opaque from the point of view of users.¹⁶⁰ All users see is the supposedly objective final results, not the intervention by the gatekeeper.¹⁶¹ Missing results are an “unknown unknown:” users for whom certain information is suppressed do not even know that they do not know the information.¹⁶²

Nor are users able to avoid the search engine’s power. The relevant market, while not completely monopolistic, is dominated by a very small number of players.¹⁶³ As we explain below,¹⁶⁴ competition in such a market is not likely to undermine manipulation and may even promote it. Moreover, absent highly public manipulation—

¹⁵⁸ BENKLER, *supra* note 13, at 156.

¹⁵⁹ As Bruno Latour notes, “The word *black box* is used by cyberneticians whenever a piece of machinery or a set of commands is too complex. In its place they draw a little box about which they need to know nothing but its input and output.” BRUNO LATOUR, *SCIENCE IN ACTION: HOW TO FOLLOW SCIENTISTS AND ENGINEERS THROUGH SOCIETY* 2–3 (1987). For a comparison of search engines to other “black boxes,” see Frank Pasquale, *Battling Black Boxes*, MADISONIAN.NET, Sept. 21, 2006, <http://madisonian.net/archives/2006/09/21/battling-black-boxes/>.

¹⁶⁰ See Hansell, *supra* note 121 (“[The] ‘ranking algorithm’—the formulas that decide which Web pages best answer each user’s question . . . [—]is a crucial part of Google’s inner sanctum, a department called ‘search quality’ that the company treats like a state secret.”); see also DAVID A. VISE & MARK MALSEED, *THE GOOGLE STORY* 256 (2005) (describing Google’s refusal to “provide more details about how its business really made money”).

¹⁶¹ For an illuminating comparison, consider the rise of contemporary media criticism and analysis. Many academics have used insights from sources inside and outside traditional media outlets in order to examine and criticize the ways in which those media entities prioritize and publicize news stories. See, e.g., HERBERT J. GANS, *DECIDING WHAT’S NEWS* (1980). It is very hard to imagine similar analysis of Google News (or Google generally) if its current trade secrecy protections remain as potent as they are now. Insiders are most likely barred by contract from revealing important trade secrets in the algorithm. The company may even treat the question of whether such contracts exist as a trade secret.

¹⁶² Cf. NASSIM NICHOLAS TALEB, *THE BLACK SWAN: THE IMPACT OF THE HIGHLY IMPROBABLE* (2007) (distinguishing between the types of issues we can try to estimate (known unknowns) and those which are impossible to factor into our evaluation of a situation because we do not know they are relevant (unknown unknowns)). Google has taken some care to respond to this situation in some cases of government censorship; for example, in Germany, they will let users know if there are query results to which the German government forbids them to provide links. See Posting of Andrew McLaughlin, Google Senior Policy Counsel, to The Official Google Blog, <http://googleblog.blogspot.com/2006/01/google-in-china.html> (Jan. 27, 2006, 11:58 AM).

¹⁶³ See Pasquale, *supra* note 94, at 130 (suggesting that general purpose search is a natural monopoly or oligopoly).

¹⁶⁴ See *infra* Part III.A.

which search engines' notorious secrecy makes unlikely—user defection is not likely to correlate with manipulation.¹⁶⁵

A defection option matters little when users are not aware of the manipulation or its effect. The fact that users can and do receive relevant information from other sources, like portals, social networks, traditional media, or word of mouth, supplies some opportunities to avoid—and perhaps detect—a manipulative search engine. Nevertheless, for the near future, search engines are likely to remain a dominant source of information and one that is both opaque and irreplaceable (barring massive technological change). Thus, the autonomy-constraining effect of search engines' ability to systematically shape the information and options visible to individuals occurs under conditions that make this effect particularly worrisome.

III

WHY CAN'T NON-REGULATORY ALTERNATIVES SOLVE THE PROBLEM?

Despite the troubling implications of search engine manipulation, many are unconvinced that there is a problem requiring legal intervention. To the academy, the rarity of known instances of search engine manipulation, the unsympathetic nature of current claimants, and sunny optimism about technology and markets have led to skepticism about search engine regulation.¹⁶⁶ Skeptics are confident that either the market, new technology, or some combination of the two will deter search engine manipulation by “punishing” the “misbehaving” search engines.¹⁶⁷ There are, however, good reasons to doubt that either the market or technology will provide a satisfactory solution in the near future.

A. Market Discipline

Defenders of a laissez faire approach argue that legal intervention is unnecessary because market discipline already keeps search engine abuse in check and does so much more effectively than would any regulatory regime.¹⁶⁸ If a search engine tries to manipulate its results in ways that are prejudicial to or unacceptable to users, the

¹⁶⁵ See *infra* text accompanying notes 187–200.

¹⁶⁶ See, e.g., Neil Gandal, *The Dynamics of Competition in the Internet Search Engine Market*, 19 INT'L J. INDUS. ORG. 1103, 1116 (2001); Gasser, *supra* note 8, at 224 (noting the “power of new technologies to reallocate the market power of search engine operators”); Goldman, *supra* note 11, at 196–98; cf. Grimmelmann, *supra* note 8, at 44–46 (describing the strong market forces that combat attempts by providers to sabotage one another's searches).

¹⁶⁷ Cf. Gandal, *supra* note 166, at 1116; Gasser, *supra* note 8, at 224; Grimmelmann, *supra* note 8, at 44–46.

¹⁶⁸ See, e.g., Goldman, *supra* note 11, at 196–98.

argument goes, users will simply migrate to a competing search engine.¹⁶⁹ Fearful of losing users and market-share to competitors, search engines would avoid abusing their power.¹⁷⁰ Thus, in the late 1990s and early 2000s, competitors overtook search engines like Overture that systematically prioritized paid listings.¹⁷¹

The market discipline argument is based on two key premises: robust competition in the search market and users' responsiveness to abuse. Unfortunately, both of these premises are highly problematic.

Commentators tend to view the search engine industry as inherently unstable and dynamic, constantly at risk of Schumpeterian "creative destruction."¹⁷² In 2000, one of Google's founders expressed this view, commenting that "[t]he great thing about search is that we are not going to solve it any time soon. . . . If we aren't a lot better next year, we will already be forgotten."¹⁷³ Google itself rose rapidly to dethrone Yahoo! and Lycos in the late 1990s. Even today, despite its overwhelming dominance in the American and global search market, Google worries about competitors. MSN and Yahoo! have a large, installed base of users, while Clusty, Ask.com, and other small search services may soon nip at Google's heels.¹⁷⁴

While competition certainly exists, the search engine market has features that make robust and dynamic competition unlikely.¹⁷⁵ It is unclear whether search engines fall under the strict definition of a natural monopoly,¹⁷⁶ but they exhibit very similar characteristics.

¹⁶⁹ See *id.*

¹⁷⁰ See *id.*

¹⁷¹ See VISE & MALSEED, *supra* note 160, at 87–88, 114–16 (discussing Google's overtaking of Overture and attributing Google's success to its commitment "to make it clear they wouldn't bias the search results" in the course of selling ads).

¹⁷² In a 1988 book review essay, Professor Glen O. Robinson referred to AT&T and the monopolistic telecommunications industry as one that would be "vulnerable at least to a kind of Schumpeterian 'creative destruction.'" Glen O. Robinson, *The Titanic Remembered: AT&T and the Changing World of Telecommunications*, 5 YALE J. ON REG. 517, 544 (1988) (quoting JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM, AND DEMOCRACY 81–86 (3d ed. 1950)).

¹⁷³ VISE & MALSEED, *supra* note 160, at 90 (quoting Google cofounder Larry Page).

¹⁷⁴ See Danny Sullivan, comScore Media Metrix Search Engine Ratings (Aug. 21, 2006), <http://searchenginewatch.com/showPage.html?page=2156431> (offering "qSearch data[,] gathered by monitoring the web activities of 1.5 million English-speakers worldwide").

¹⁷⁵ Empirical data on this question is incomplete and inconclusive. The few existing works in this vein reach different conclusions using relatively old data. Compare Gandal, *supra* note 166, at 1105 (finding entry barriers are low in the Internet search engine market), with Tair-Rong Sheu & Kathleen Carley, Monopoly Power on the Web—A Preliminary Investigation of Search Engines 17–18 (Oct. 27, 2001) (unpublished paper presented at the 29th Telecommunications Policy Research Conference), <http://arxiv.org/ftp/cs/papers/0109/0109054.pdf> (finding that barriers to entry in the search engine market seem high).

¹⁷⁶ A natural monopoly is usually defined as a market in which the average cost of a good declines as volume of production increases throughout the relevant range of de-

Search engines have very high fixed costs and a relatively low marginal cost. This, in turn, results in substantial economies of scale, creating a market with a declining average cost per unit and high barriers to entry. To understand this structure of the search engine market, consider the following:

1) *The Search Engine Algorithm.* The heart of a search engine and the key to its success is its search algorithm. Effective algorithms are protected by a veil of secrecy and by various intellectual property rights.¹⁷⁷ As a result, new entrants cannot easily appropriate existing algorithms. Moreover, many algorithms are trade secrets.¹⁷⁸ Unlike patents, which the patent holder must disclose and which eventually expire,¹⁷⁹ these trade secrets may never enter the public domain. Search algorithms may be analogous to the high-cost infrastructure required for entry into the utility or railroad markets.

2) *Network Effects in Improving Search Responsiveness.* The more searches an engine gets, the better able it is to sharpen and perfect its algorithm.¹⁸⁰ The result is that each additional user decreases the cost of a better quality service for all subsequent users. Thus, incumbents with large numbers of users enjoy substantial advantages over smaller entrants.

3) *Licensing Costs.* A key to competition in the search market is having a comprehensive database of searchable materials. The ability to obtain exclusive legal rights over searchable materials, however, may substantially increase the cost of obtaining and displaying this data and the metadata needed to organize it.¹⁸¹ Exclusion rights entail licensing (or legal advice) fees, which in the aggregate may raise fixed cost substantially. Google's notable fight to obtain favorable fair use treatment for an index of books,¹⁸² for example, obscures its exclusive licensing deals with audiovisual content prov-

mand. See SANFORD V. BERG & JOHN TSCHIRHART, *NATURAL MONOPOLY REGULATION: PRINCIPLES AND PRACTICE* 21–24 (1988); JOSEPH E. STIGLITZ, *ECONOMICS OF THE PUBLIC SECTOR* 191 (3d ed. 1986). While a natural monopoly often leads to the survival of only one firm, it does not require that the relevant market be an actual monopoly at any given moment.

¹⁷⁷ See Gasser, *supra* note 8, at 232–33.

¹⁷⁸ See *id.*

¹⁷⁹ See 35 U.S.C. § 154 (2000 & Supp. V 2005).

¹⁸⁰ For example, if 100 people search for “pork rinds” on a search engine on a given day and all pick the third-ranked result, the search algorithm may adjust itself and put the third-ranked result as the first result the next day. The most-used search engine will have more data to tweak its algorithms than its less-used rivals. Until search becomes more personalized, we should expect the most-used search engine's algorithms to better reflect mass taste, and in turn to draw in more of the data that permits it to do so. See also VISE & MALSEED, *supra* note 160, at 215.

¹⁸¹ See Elkin-Koren, *supra* note 83, at 194–95; Elkin-Koren, *supra* note 87, at 396–98.

¹⁸² See Complaint, McGraw-Hill Cos., Inc. v. Google Inc., No. 05-CV-8881 (S.D.N.Y. filed Oct. 19, 2005); Complaint, Author's Guild v. Google Inc., No. 05-CV-8136 (S.D.N.Y. filed Sept. 20, 2005). See generally Travis, *supra* note 107; Siva Vaidhyanathan, *The Googlization of Everything and the Future of Copyright*, 40 U.C. DAVIS L. REV. 1207 (2007); Emily Anne Proskine, Note, *Google's Technicolor Dreamcoat: A Copyright Analysis of the Google Book Search Library Project*, 21 BERKELEY TECH. L.J. 213 (2006).

iders. To what extent exclusion power through licensing is the industry norm is the subject of a host of legal battles taking place on various fronts. If such licenses become the industry practice, only the wealthiest players will be able to afford to develop a comprehensive database of searchable material.

4) *Consumer Habit*. Many searchers are accustomed to using a certain number of providers, use them relatively habitually, and are reluctant to switch, despite the existence of alternatives. Exactly how high are search engine switching costs is an empirical question that has not been satisfactorily answered to date.¹⁸³ Google did manage to displace Yahoo! but only after developing much better technology.¹⁸⁴ Thus, to switch a substantial number of users, a new entrant has to supply a product of significantly better quality, again, steeply raising fixed cost.¹⁸⁵ Another factor that may raise switching costs is the trend toward personalized search.¹⁸⁶ The correlation between the quality of search and the length of use in personalized search is likely to further lock users in with an existing provider.

The net results of these structural features of the general purpose search market are substantial advantages to large incumbents and very high barriers to entry. These results suggest that the market's current

¹⁸³ On this issue, too, empirical research is incomplete and offers conflicting conclusions. Compare Rahul Telang et al., *An Empirical Analysis of Internet Search Engine Choice* 25 (Darden Graduate Sch. of Bus. Admin., Univ. of Va., Working Paper No. 03-05, 2003), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=412782 (finding the effect of loyalty is small when users use engines primarily for search purposes but large when they use personalized features), with Sheu & Carley, *supra* note 175, at 18 (concluding that search engines have a high switching cost).

¹⁸⁴ See VISE & MALSEED, *supra* note 160, at 204–19. If innovation in general-purpose search technology has plateaued (or has become the property of Google via its trade secret protections), we should not expect another company to displace Google in the same way it supplanted Yahoo.

¹⁸⁵ See, e.g., Randall Stross, *The Human Touch that May Loosen Google's Grip*, N.Y. TIMES, June 24, 2007, § 3, at 3 (describing how the search engine Mahalo is developing new and sometimes costly competitive strategies). Though Stross speculates that many new entrants will try to build niches in the search market, *see id.*, our discussion demonstrates the difficulties any entrant will face if it tries to compete with Google directly for the lion's share of searches.

¹⁸⁶ With personalized search, a search engine can use methods such as artificial intelligence to gradually "learn" what a user most likely wants. For example, if a user habitually searches for recipes, the search engine may weight food sites more heavily than other sites when confronted with an ambiguous term (such as "cake," which could refer either to a confection or to the rock band). A "learning" search engine would save the user from having to type in longer terms like "cake food" or "cake cooking." See James Pitkow et al., *Personalized Search*, 45 COMM. ACM 50, 52 (describing how a personalized search might insert "car" to augment a user's search for "contour" where the user had viewed a series of car-related sites) (2002); Elinor Mills, *Google Automates Personalized Search*, CNET NEWS.COM, June 28, 2005, http://news.com.com/Google+automates+personalized+search/2100-1032_3-5766899.html (illustrating personalized search capabilities by example—automatically distinguishing the fish "bass" from the instrument based on the user's search history). See generally BATTLE, *supra* note 1, at 258–59 (contrasting Google and Yahoo!'s approaches to personalized search).

composition—one dominant firm and a handful of significant players—is likely to persist.

The assumption of users' responsiveness leading to optimal disciplining of search engines is equally problematic. Due to several characteristics of the search market, user response is not likely to be highly attuned to search engines' behavior. Moreover, it is unclear why users' preferences, even if they were free from market failures, should be the ultimate measure for evaluating and responding to many of the normative concerns described above.

One major impediment to users' responsiveness is a systematic information gap. If a user looks for a particular business and no relevant result appears or if a search engine completely corrupts its results by paid listings, users are likely to switch to a competitor. But it is difficult to see how consumers can check less drastic manipulations of results. Search tends to be a "credence good," whose value a consumer will have difficulty evaluating even after consuming it.¹⁸⁷ Often the user will have no idea that results are manipulated in a particular way. Even if we assume that a search engine abides by the FTC's guidance letter,¹⁸⁸ and always strictly separates "editorial content" and paid listings, subtler forms of manipulation could slip into the ranking algorithm. In many, if not most cases, consumers lack both the incentive and the even the ability to detect such manipulation or determine its reasons.¹⁸⁹ Given the lack of transparency of the search algorithms, search consumers simply cannot reverse engineer the hundreds of factors that go into a ranking, and they have little incentive to compare dozens of search results to assess the relative efficacy of different search engines.¹⁹⁰

For example, imagine that after the Google-YouTube merger, Google assigns a higher "authoritativeness" rating to all YouTube videos than those on any competitor sites (such as MySpace, Vimeo, Bolt, and Grouper). Such an assignment might be an entirely "objective" decision; if Google itself happens to have the highest PageRank-

¹⁸⁷ See George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488 (1970) (discussing economic models involving "trust" and uncertain quality); Kenneth J. Arrow, *Uncertainty and the Welfare Economics of Medical Care*, 53 AM. ECON. REV. 941, 947, 965–66 (1963) (discussing behaviors influenced by information inequality in a medical context); Michael R. Darby & Edi Karni, *Free Competition and the Optimal Amount of Fraud*, 16 J.L. & ECON. 67, 68–72 (1973) (exploring credence goods where quality cannot be evaluated through normal use but only at additional cost).

¹⁸⁸ See Letter from Heather Hipsley to Gary Ruskin, *supra* note 123.

¹⁸⁹ Alejandro M. Diaz, *Through the Google Goggles: Sociopolitical Bias in Search Engine Design* 147 (May 23, 2005) (unpublished undergraduate honors thesis, Stanford University) (on file with authors) ("[T]he complexity and opacity of search engine technology makes it almost impossible for users to notice what is 'missing' from their search results.").

¹⁹⁰ Elkin-Koren, *supra* note 83, at 192; Grimmelmann, *supra* note 8, at 22–23; Introna & Nissenbaum, *supra* note 83 at 177.

ing, it may accurately assign that rank to its new subsidiary. But consumers unaware of the deal may simply believe that the YouTube videos served at the top of the rankings pile are there merely because of “disinterested” ranking algorithms and not understand the possibility that some proprietary interest of Google (in advancing its new subsidiary’s visibility) is driving the ranking. Admittedly, an entirely objective ranking mechanism may produce this result. The problem is that, given the emphasis on secrecy in the search engine business model, no one can verify that such rankings have not been manipulated or that subtler biases in favor of search engines’ partners are not being worked into the search algorithm.¹⁹¹

Often search dynamics do not follow the classic economic model under which consumers with predetermined preferences evaluate the extent to which competing goods satisfy these preferences and behave accordingly. The paradigmatic case following this pattern would involve a “navigational” search¹⁹² where a user is searching for a particular known website, or a narrow “informational” search¹⁹³ where a user looks for specific and well-defined information. Yet many searches follow a very different pattern. Users conduct searches with varying degrees of prior expectations, and the sought-after information is defined with differing levels of specificity.¹⁹⁴

Consider a search for the term “net neutrality.” There are some results that would clearly poorly satisfy the preexisting expectations of most searchers for this term. But there are also a large variety of significantly different alternative results that are not irrelevant. Note that in such cases the issue is not just the difficulty of the search engine in “mind reading” the user’s exact wishes.¹⁹⁵ Initially, the user’s preferences are incomplete and not clearly defined, even from the point of view of the user herself.

The implication of such open-ended searches is twofold. First, initial preferences form only a partial yardstick by which a user can evaluate search results and only a weak constraint on search engine’s

¹⁹¹ “Many of the lawsuits Google is facing carry little weight. Yet it has a vested interest in fighting all of them, even those of questionable merit, and seeing that they are resolved quickly. In part, this is because any lawsuit that reaches . . . discovery, the pretrial fact-finding phase, poses the danger of revealing too much about Google’s proprietary technology. Google also has an interest in establishing a solid body of legal interpretation in its favor.” Katie Hafner, *We’re Google. So Sue Us.*, N.Y. TIMES, Oct. 23, 2006, at C1, available at <http://www.nytimes.com/2006/10/23/technology/23google.html?pagewanted=print>.

¹⁹² See generally Andrei Broder, *A Taxonomy of Web Search*, 36 ACM SIGIR F., Fall 2002, available at <http://www.acm.org/sigs/sigir/forum/F2002/broder.pdf> (contrasting navigational searches with informational searches and transactional searches).

¹⁹³ *Id.*

¹⁹⁴ Introna & Nissenbaum, *supra* note 83, at 176–77; see also Broder, *supra* note 192, at 4 (“[O]n the web . . . many informational queries are extremely wide . . . while some are narrow.”).

¹⁹⁵ See Goldman, *supra* note 108, at 521–28.

behavior.¹⁹⁶ Second, in such situations the particular results presented to the user are likely to affect and shape her future views and interests. Search engines, in other words, often function not as mere satisfiers of predetermined preferences, but as shapers of preferences.¹⁹⁷ When one types “net neutrality” into a Google search query screen, the vast majority of “organic” links are connected to pro-net-neutrality organizations.¹⁹⁸ There could be many reasons for this state of affairs. One might think that this is a sign that the vast majority of Internet users favor net neutrality and only a handful of companies oppose it. A more skeptical observer might find her suspicions raised by Google’s own strong support for net neutrality.¹⁹⁹ There could be other explanations, such as the fact that sites whose Top Level Domain Name (TLD) ends in “.edu” are often prioritized above sites with “.com” or “.org” TLDs. How is a searcher likely to assess these results in view of his preferences when he searched for an open-ended term such as “net-neutrality”? For many users it is hard to imagine in such a case a clear process of judgment in view of preexisting preferences.

Even users who engage in relatively open-ended searches without concrete preexisting preferences may have preferences about their preferences or about the procedure in which their preferences are being shaped.²⁰⁰ Yet evaluating the performance of a search engine on the basis of such second-order preferences is likely to prove difficult. In most cases it would require access to information that is not readily available on the surface of the search results. Such information about the way the search results were shaped would, rather, be buried in the black box of the search algorithm and kept away from public view.

Another reason that makes market forces an unreliable means for disciplining search engines is the incomplete overlap between users’ preferences and the social values underlying the concerns about search engine manipulation. This claim can be cast in the economic language of externalities. Certain manipulations of results may have little effect on users or even leave users completely indifferent, yet impose substantial cost on others. C. E. Baker’s famous “catalog” of

¹⁹⁶ For a similar point, see Benkler, *supra* note 17, and Benkler, *supra* note 156, at 69–70.

¹⁹⁷ C. E. Baker made a similar point about traditional media. See C. EDWIN BAKER, MEDIA, MARKETS, AND DEMOCRACY 12–13, 87–95 (2002).

¹⁹⁸ Screenshot of “Net Neutrality” Search (Oct. 23, 2006) (on file with author); see also Screenshot of “Net Neutrality” Search (Apr. 15, 2008) (on file with author).

¹⁹⁹ A Guide to Net Neutrality for Google Users, *supra* note 137 (“In our view, the broadband carriers should not be permitted to use their market power to discriminate against competing applications or content.”).

²⁰⁰ See BAKER, *supra* note 197, at 85–87.

externalities demonstrates the various ways in which this dynamics plays out in the context of traditional media.²⁰¹ At least some of those typical media externalities seem likely to occur in the different context of search engines.

The externalities formulation, however, fails to capture the full extent of the misfit between some of the normative concerns described above and an exclusive reliance on consumer preferences for disciplining search engines. Whether or not one can point at a substantial cost not internalized by users, a lack of significant response by users is not necessarily sufficient to allay concerns about fairness and democratic discourse.²⁰² Think, for example, about an exclusion of a commercial website that enjoys only limited popularity and is easily replaceable from the point of view of most users. The fact that users will be relatively indifferent to such exclusion, simply does not answer the concerns about fairness and the arbitrary exercise of (private) power. Similarly, even if it turns out that users' behavior demonstrates no concern about possible biases in favor of content supplied by the search engine allies, this does not necessarily dispel the concerns about a degrading effect that such behavior may have on the public sphere or public discourse. Satisfying user preference is an important interest that search engines should be able to pursue, but these preferences can not always be counted on to guarantee other social values.

In sum, market discipline imposed by users is certainly not irrelevant. It is likely to have some effect in curbing the more blatant and radical forms of search engine manipulation. Given the combination of a centralized market structure and the severe limitations on users' responsiveness to manipulation, however, it is bound to be an insufficient constraint.

B. The Technological Fix: Personalized Search

Recently, the belief that market discipline would solve the problems associated with search engine manipulation was supplemented by claims that technological developments would take care of any remaining concerns. Eric Goldman, for example, argues that the eventual personalization of search promises another bulwark against search engine bias and manipulation.²⁰³ Personalized search, which is predicted to be the future of search engines, will produce search results that are custom-tailored to each searcher's attributes and inter-

²⁰¹ C. Edwin Baker, *Giving The Audience What It Wants*, 58 OHIO ST. L.J. 311, 350–66 (1997).

²⁰² For a similar argument, see Introna & Nissenbaum, *supra* note 83, at 177–78.

²⁰³ See Goldman, *supra* note 11, at 198–99.

ests.²⁰⁴ Because personalized search will no longer be limited to one-size-fits-all results, there would be multiple rankings and multiple winners per query. Indexed entities would no longer be locked into a zero-sum game, and searchers with minority interests will no longer suffer from suboptimal results.²⁰⁵

Will technology fill up the gaps left by the market and solve the problems of search engine manipulation? In one respect, Goldman is right. The rise of personalized search might be considered the “bright side” of a search engine’s untrammelled ability to manipulate rankings. Such innovations are likely to increase the accuracy of search and its value for users. Moreover, personalized search may also alleviate problems of universal structural bias against minority interests that are inherent in a one-size fits all system. Thus Goldman predicts that “[t]echnological innovation will moot search engine bias.”²⁰⁶

In regard to targeted manipulation of search results, however, the picture is very different. In that context, personalized search, far from solving the problem, seems to increase the stakes of manipulation and the temptation to engage in it. The logic of this prediction is simple. Personalized search targeted at the specific characteristics of users makes possible more finely tuned manipulation and increases the potential value of each intervention in the search results. The prospects created by customized search are analogous to those of targeted advertising based on profiling and categorization of the target audience.²⁰⁷ Instead of crude manipulations pointed at the entire group

²⁰⁴ See generally LANGVILLE & MEYER, *supra* note 132, at 142 (predicting that “there will be even more personalization for web users in the future”); Mills, *supra* note 186; Pitkow et al., *supra* note 186;

²⁰⁵ Of course, the information asymmetries that result from personalized search create new types of problems. See Posting of Frank Pasquale to Concurring Opinions, *Could Personalized Search Ruin Your Life?*, http://www.concurringopinions.com/archives/2008/02/personalized_se.html (“Imagine you’re applying for a job and want to be sure to give the right impression. A diligent self-googler, you think you know everything there is out there on the web about you. Nothing sticks out in the first 15 or so pages of results. But there is someone with a name identical to yours who’s got a terrible reputation [W]hen HR does its background check on you, that’s the first result it sees. You’re never given a reason for being turned down for the job—just a brief form letter. [You’ve never seen these results—but the corporate HR department’s website is ‘personalized’ to display all the worst material connected to a given name.]”)

“This scenario may result from what is otherwise one of the most promising trends on the web—personalized search. As you use a search engine more and more, it tends to translate your behavior into a database of usual intentions. That can make searches a lot more efficient for you as a searcher—but creates lots of uncertainty once you are the searched. [Personalized search means that a searcher may never know what image(s) of herself the search engine presents to the rest of the world.]”).

²⁰⁶ See Goldman, *supra* note 11, at 198.

²⁰⁷ See, e.g., ERIK LARSON, *THE NAKED CONSUMER: HOW OUR PRIVATE LIVES BECOME PUBLIC COMMODITIES* (1992); DANIEL J. SOLOVE, *THE DIGITAL PERSON: TECHNOLOGY AND PRIVACY IN THE INFORMATION AGE* 17–21 (2004); Tal Z. Zarsky, “*Mine Your Own Business!*”:

of users, search results for the same keyword could be shaped differently based on the profile of the user. This would increase the effectiveness and the potential value of each manipulation. Just as the sponsored link is likely to be more cost-effective when targeted at a relevant segment of users, so is the manipulation of the search results. Instead of one zero-sum game, indexed entities would be locked into a long series of zero-sum games, as numerous as the profiling and categorization schemes employed by the search engine. The search engine would possess a more finely tuned and more valuable power to shape the results visible to various users, and as a consequence would be subject to stronger internal temptations and external inducements or pressures to use this power. Add to this the limitations on users' ability to identify, understand, and check instances of manipulation, described in the previous section, and the likely result is more cases of troubling targeted intervention by search engines in their results. It is hard to see how the technological fix is any more likely to remedy the problem than market discipline.

IV

POTENTIAL OBSTACLES TO SEARCH ENGINE REGULATION

A. Will the First Amendment Bar Effective Regulation?

Faced with the prospect of legal regulation, search engines are likely to claim First Amendment protection. Recently two district courts accepted such claims and immunized Google from liability on the grounds that search engine rankings are constitutionally protected speech.²⁰⁸ In *Langdon v. Google*, a district court relied on *Miami Herald Publishing Co. v. Tornillo*²⁰⁹ to find that plaintiff's insistence that several search engines must carry his ads and "honestly" rank his websites would be prohibited compelled speech.²¹⁰ The *Search King* court held that Google's rankings are "opinions of the significance of particular web sites as they correspond to a search query" and that they are therefore "entitled to 'full constitutional protection.'"²¹¹ Rather than relying on a compelled speech rationale, the court based its decision on *Milkovich v. Lorain Journal Co.*, in which the United States Supreme

Making the Case for the Implications of the Data Mining of Personal Information in the Forum of Public Opinion, 5 YALE J.L. & TECH. 1, 4, 6–18 (2003).

²⁰⁸ *Langdon v. Google, Inc.*, 474 F. Supp. 2d 622, 629–30 (D. Del. 2007); *Search King, Inc. v. Google Tech., Inc.*, No. CIV-02-1457-M, 2003 U.S. Dist. LEXIS 27193, at *6–12 (W.D. Okla. May 27, 2003).

²⁰⁹ *Miami Herald Publ'g Co. v. Tornillo*, 418 U.S. 241 (1974) (forcing newspapers to print candidates' replies to editorials is an impermissible burden on editorial control and judgment).

²¹⁰ *Langdon*, 474 F. Supp. 2d at 629–30.

²¹¹ *Search King*, 2003 U.S. Dist. LEXIS 27193, at *11–12 (quoting *Jefferson County Sch. Dist. No. R-1 v. Moody's Investor's Servs., Inc.*, 175 F.3d 848, 852 (10th Cir. 1999)).

Court immunized from defamation liability a “statement of opinion relating to matters of public concern which does not contain a provably false factual connotation.”²¹² Citing a Tenth Circuit decision that extended *Milkovich* to protect as an opinion an unfavorable review of the value of a school district’s bonds by a financial rating service,²¹³ the court took an additional step. It found that the same rule protected under the First Amendment as an opinion Google’s rankings and barred liability for tortious interference with contractual relations.²¹⁴

The judges deciding these early cases seemed eager to treat search results as constitutionally protected speech. They summarily found any attempt to regulate search engines’ absolute control over these results to constitute either censorship of an opinion or compelled speech.²¹⁵ Will the First Amendment prove to be an insurmountable impediment to any attempt to regulate search engine manipulation? Both search engines’ claims for protection of their “speech” and the courts’ use of such claims as an impenetrable shield against regulation stand on shaky ground. The extant decisions extend First Amendment protection to new domains on the basis of vague or enigmatic rationales. In what follows, we attempt to clarify crucial questions, so far neglected by the courts, by analyzing the issue in terms of two analytic dimensions: the relevant speech and the distinction between First Amendment coverage and the protection due once it is found.

The first dimension involves an important preliminary question: When search engines assert First Amendment rights, what exactly is the expression for which they claim protection? The *Search King* decision is relatively clear on this issue. It treats as the relevant speech Google’s ranking algorithm or the rankings it produces in response to a user’s query.²¹⁶ The *Langdon* opinion is more ambiguous. It does not clarify what the speech being forced on the search engine is.²¹⁷ One possibility, similar to the assumption in *Search King*, is that the speech that is seen as forced on the search engine is the speech that is

²¹² *Milkovich v. Lorain Journal Co.*, 497 U.S. 1, 20 (1990).

²¹³ *Jefferson County*, 175 F.3d at 852.

²¹⁴ *Search King*, 2003 U.S. Dist. LEXIS 27193, at *11–13.

²¹⁵ *See Browne v. Avvo, Inc.*, 525 F. Supp. 2d 1249 (W.D. Wash. 2007) (holding that lawyer rating and ranking website was constitutionally protected opinion because it “contains numerous reminders that the . . . rating system is subjective. The ratings are described as an ‘assessment’ or ‘judgment,’ two words that imply some sort of evaluative process.”).

²¹⁶ The court, somewhat ambiguously, refers to “PageRanks,” which seems to stand for the specific results produced by Google’s algorithm—“PageRank.” *Search King*, 2003 U.S. Dist. LEXIS 27193, at *11–12. This ambiguity is itself disturbing, given the extant hostility to the idea of software as speech and the unresolved issues on whether an automated system can even count as a speaker.

²¹⁷ *See Langdon v. Google, Inc.*, 474 F. Supp. 2d 622, 629–30 (D. Del 2007).

embodied in the rankings. The more plausible possibility, strongly implied but never explicitly endorsed in *Langdon*, is that the relevant speech is the content of the indexed website.²¹⁸ Under this logic, the search engine is forced to “speak” specific speech embodied in indexed websites by virtue of it being seen as the publisher or the carrier of this content, or, at a minimum, as exercising editorial judgment in regard to that content.²¹⁹

The second dimension involves the basic distinction in First Amendment jurisprudence between coverage and protection.²²⁰ Questions of coverage ask whether a particular case, act or fact is one to which the First Amendment applies at all.²²¹ Questions of the degree of protection due come into play once it is established that a case is covered by the First Amendment.²²² They inquire whether the First Amendment mandates that under the particular circumstances the behavior or act involved should receive protection and be shielded from attempts to regulate it. Depending on the relevant speech underlying the analysis, search engines’ First Amendment claims falter on either the coverage or protection front.

Assume first that the relevant speech for purposes of First Amendment analysis in our context is the content of the indexed websites. From this perspective, search engines can claim that they are associated with the speech embodied in the content of the listed websites, or, at least, that they are exercising editorial control vis-à-vis that content. To the extent that the content of listed websites is the relevant frame of reference, search engines’ claims are unlikely to succeed as a matter of protection. As Jennifer Chandler has shown, the protection afforded to the speech of content “selection intermediaries” is not absolute.²²³ Legal attempts to circumscribe search engine manipulation are likely to have many characteristics that usually induce

²¹⁸ The *Langdon* court simply cites several compelled speech precedents and adopts Google’s argument that the sought after “relief would compel it to speak in a manner deemed appropriate by Plaintiff and would prevent Google from speaking in ways that Plaintiff dislikes.” *Langdon*, 474 F. Supp. 2d at 629.

²¹⁹ For a description of search engines as media outlets or editors of the indexed content, see Goldman, *supra* note 11, at 192 (“[S]earch engines make editorial judgments just like any other media company.”).

²²⁰ See FREDERICK SCHAUER, *FREE SPEECH: A PHILOSOPHICAL ENQUIRY* 89–92 (1982); Julie E. Cohen, *Examined Lives: Informational Privacy and the Subject as Object*, 52 STAN. L. REV. 1373, 1409 (2000); Robert Post, *Encryption Source Code and the First Amendment*, 15 BERKLEY TECH. L.J. 713, 714 (2000) [hereinafter Post, *Encryption*]; Robert Post, *Recuperating First Amendment Doctrine*, 47 STAN. L. REV. 1249, 1250 (1995) [hereinafter Post, *Recuperating*]; Fredrick Schauer, *The Boundaries of the First Amendment: A Preliminary Exploration of Constitutional Salience*, 117 HARV. L. REV. 1765, 1769 (2004). For a critique of the distinction, see Pierre J. Schlag, *An Attack on Categorical Approaches to Freedom of Speech*, 30 UCLA L. REV. 671 (1983).

²²¹ See Schauer, *supra* note 220, at 1789.

²²² See *id.*

²²³ Chandler, *supra* note 157, at 1126–29.

courts to uphold the constitutionality of regulation applying to such intermediaries. Most importantly, such regulation is content-neutral with respect to the relevant speech,²²⁴ and users are very unlikely to see search engines as endorsing the content of indexed websites or as associated with them.²²⁵

Moreover, our analysis of search engines as gatekeepers that exercise substantial and concentrated control over Internet communication suggests the application of the Supreme Court's observation in *Turner Broadcasting* that the First Amendment "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."²²⁶ In *Reno v. ACLU*, the Court famously distinguished the Internet from broadcast media, concluding that, in the Internet context, where communication is uninhibited by spectrum limitations and the control of a handful of broadcasters, the critical pathway rationale for greater leeway for government regulation does not apply.²²⁷ However, as Tim Wu has argued, treating "the Internet" as the relevant unit of analysis is an oversimplification.²²⁸ The fact that Internet communication involves a multiplicity of technological architectures that create very different environments suggests that any normative analysis should be application-centered or context-based. In some contexts, the experience of Internet speakers and the function of speech conduits and platforms (such as blogs or discussion fora) may be very different from broadcast media. At the same time, the critical role now (and for the foreseeable future) played by search engines as part of the Internet communication infrastructure necessarily implicates control over a "critical pathway of communication." The problems entailed by such control are very similar to those the Court relies on when it grants the government latitude to regulate in the broadcast context.²²⁹

²²⁴ See *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 655 (1994); *Pac. Gas & Elec. Co. v. Pub. Utils. Comm'n*, 475 U.S. 1, 12–13 (1986); *Pruneyard Shopping Ctr. v. Robins*, 447 U.S. 74, 86 (1980).

²²⁵ *Rumsfeld v. Forum for Academic & Institutional Rights, Inc.*, 547 U.S. 47 (2006); *Turner Broad. Sys.*, 512 U.S. at 655; *Pruneyard Shopping Ctr.*, 447 U.S. at 86.

²²⁶ *Turner Broad. Sys.*, 512 U.S. at 657 (1994).

²²⁷ 521 U.S. 844, 870 (1997).

²²⁸ Wu, *supra* note 56, at 1165.

²²⁹ See Frank Pasquale, *Asterisk Revisited: Debating a Right of Reply on Search Results*, 3 J. BUS. & TECH. L. 61, 72 (2008) ("Search engines' self-characterization as merely the 'pipes' or 'infrastructure' arranging information casts doubt on the possibility that they should be protected to the extent that traditional content providers are protected. The relevant precedent for Langdon is *Turner Broadcasting Systems, Inc. v. FCC*, *not* *Tornillo*. . . . In *Langdon*, the real reason to dismiss the case was the lack of any such must-carry requirement in North Carolina or federal law—not the unconstitutionality of any hypothetical requirement.").

Thus, while the content of websites is covered by the First Amendment, solicitude toward indexing entities' rights is no reason to insulate search engines against reasonable regulation of manipulation. Search engines' own self-characterization vindicates this conclusion. Dogged by complaints related to the content of listed websites, search engines respond by portraying themselves as passive conduits. Far from the image of speakers or media outlets asserted in our context, for the purposes of copyright and tort actions, search engines claim merely to be the infrastructure or platform that delivers content.²³⁰ Such characterization is essential for enjoying the immunity afforded under the Digital Millenium Copyright Act (DMCA) (with respect to copyright claims)²³¹ and the Communications Decency Act (CDA) (with respect to tort claims).²³²

²³⁰ See, e.g., Richard Siklos, *A Struggle over Dominance and Definition*, N.Y. TIMES, NOV. 12, 2006, § 3, at 5. James Eun, Vice President for Content Partnership of Google, was quoted as insisting that Google is not a content producer, but rather, a communications company or technical platform—akin more to an ISP or cable carrier than to the content producers who express themselves in the media that travels through these “pipes.” *Id.* (“[W]hen I spoke to David Eun, Google’s vice president for content partnerships, he took umbrage with the media designation. He noted that Google did not create or own content—in his mind, part of the definition of a media company. Rather, he said, Google is a technology company: ‘I would say we’re a conduit connecting our users with content and advertisers.’”).

²³¹ 17 U.S.C. § 512(d) (2000). In *Field v. Google Inc.*, 412 F. Supp. 2d 1106 (D. Nev. 2006), an author brought a copyright infringement action against the operator of an Internet search engine, seeking statutory damages and injunctive relief and alleging that the operator violated his exclusive rights to reproduce and distribute copies of his works by allowing Internet users to access copies stored in the search engine’s online repository. *Id.* The court held that the search engine fell within protection of safe harbor provision of the DMCA. *Id.* But see *Corbis Corp. v. Amazon.com, Inc.*, 351 F. Supp. 2d 1090 (W.D. Wash. 2004) (noting that Amazon did not meet the requirements to be considered a “service provider,” as defined by Section 512(c)).

²³² 47 U.S.C. § 230(c)(1) (2000); *Parker v. Google, Inc.*, 422 F. Supp. 2d 492 (E.D. Pa. 2006) (noting that an Internet search engine operator was immune, under the Communications Decency Act, from any defamation, invasion of privacy, or negligence liability arising from its archiving of, caching of, or providing access to allegedly defamatory, unauthorized, or threatening usenet postings, and that the operator could not be held liable as a publisher or speaker of third-party content under the Communications Act of 1934 § 230(c)&(e), as codified in 47 U.S.C.A. § 230(c)&(e)). But see *800-JR Cigar, Inc. v. GoTo.com, Inc.*, 437 F. Supp. 2d 273 (D.N.J. 2006) (holding that a pay-for-priority Internet search engine that used a cigar retailer’s famous marks as search terms and sold search result priority to direct competitors of the cigar retailer was not immune under the Communications Decency Act from the retailer’s claims of fraud and abuse arising from its pay-for-priority advertising business, rather than from the actions of third parties). For critical commentary, see Michael L. Rustad and Thomas H. Koenig, *Rebooting Cybertort Law*, 80 WASH. L. REV. 335, 371 (2005) (“Too much tort liability propagates widespread online censorship, which would greatly impede freedom of expression on the Internet. An activist judiciary, however, has radically expanded § 230 by conferring immunity on distributors. Section 230(c)(1) has been interpreted to preclude all tort lawsuits against ISPs, websites, and search engines. Courts have extended the meaning of ‘interactive computer services,’ haphazardly lumping together web hosts, websites, search engines, and content creators into this amorphous category.”).

Thus, search engines try to have it both ways—characterizing themselves as passive conduits when liability is concerned and claiming to be active speakers or discretionary editors when seeking the shelter of the First Amendment. However, these two claims can be reconciled if each is understood to refer to a particular type of speech. Search engines can plausibly claim to be passive conduits in relation to the content of websites to which they refer users. By contrast, search engines can plausibly claim to be active speakers of a different and distinct speech: the expressions and opinions embodied in the search results or rankings themselves. This claim posits as the relevant speech the expression embodied in the search results, not the content of indexed websites.

At least one extant “search engine speech” decision implicitly acknowledges this distinction by analogizing rankings to bond ratings already protected under the First Amendment as non-actionable “opinion.”²³³ When, however, the frame of reference is the supposed speech embodied in rankings, the claim that regulation of search results violates the First Amendment becomes highly precarious. It is highly questionable that search results constitute the kind of speech recognized to be within the ambit of the First Amendment according to either existing doctrine or any of the common normative theories in the field. While having an undeniable expressive element, the prevailing character of such speech is performative rather than propositional.²³⁴ Its dominant function is not to express meaning but rather to “do things in the world”; namely, channel users to websites. Vast domains of much more expressive speech, such as those regulated by securities regulation, antitrust law, labor law and criminal law, are excluded from First Amendment coverage.²³⁵ When, as in the case of the search engine rankings at issue in *Langdon* and *SearchKing*, the expressive element is overwhelmingly minor and incidental, the tendency to exclude the relevant speech from First Amendment coverage is even stronger.²³⁶

²³³ *Search King, Inc. v. Google Tech., Inc.*, No. CIV-02-1457-M, 2003 U.S. Dist. LEXIS 27193, at *9 (W.D. Okla. May 27, 2003) (“Two questions remain. First, are PageRanks constitutionally protected opinions? Second, if PageRanks fall within the scope of protection afforded by the *First Amendment*, is the publication of PageRanks *per se* lawful under Oklahoma law, thereby precluding tort liability premised on the intentional and even malicious manipulation of PageRanks by Google? The Court answers both questions in the affirmative.”).

²³⁴ See J.L. Austin, Lecture Delivered at Harvard University (1955), in *How to Do Things with Words* 1, 4–7 (J.O. Urmson & Marina Sbisa eds., 2d ed. 1975).

²³⁵ See BOYLE, *supra* note 135, at 91–96; Kent Greenawalt, *Criminal Coercion and Freedom of Speech*, 78 Nw. L. REV. 1081, 1089 (1983); Post, *Encryption*, *supra* note 220, at 715; Post, *Recuperating*, *supra* note 220, at 1252; Fredrick Schauer, *The Aim and the Target in Free Speech Methodology*, 83 Nw. L. REV. 562 (1989); Schauer, *supra* note 220, at 1777–84.

²³⁶ Schauer, *supra* note 220, at 1784. We do not argue that speech with a substantial performative element is never protected by the First Amendment nor do we argue that

In these cases, the speech manifest in rankings seems more similar to the uncovered speech in an aircraft navigational chart than to the paradigmatic expression protected in cases involving newspapers.²³⁷ To use the terminology of Robert Post, the speech of search engines in these cases is not a form of social interaction that realizes First Amendment values.²³⁸ The specific social practice involved as understood in context, though having a communicative element, seems irrelevant to the constitutional values underlying the First Amendment. Accordingly, as in the case of many other forms of speech, First Amendment protection simply does not extend to cover this practice.²³⁹

there is always a bright line distinction between expressive and performative speech. Our argument is that a low degree of expressiveness is a common characteristic of speech excluded from First Amendment coverage and that the search engines' rankings discussed in the text are even less expressive than many of the categories of such excluded speech.

²³⁷ See Post, *Recuperating*, *supra* note 220, at 1254; see, e.g., *Brocklesby v. United States*, 767 F.2d 1288, 1294–95 (9th Cir. 1985); *Saloomy v. Jeppesen & Co.*, 707 F.2d 671, 676–77 (2d Cir. 1983); *Aetna Cas. & Sur. Co. v. Jeppesen & Co.*, 642 F.2d 339, 342–43 (9th Cir. 1981). It is possible to distinguish the navigational chart from search results by claiming that the former is subject to objective factual evaluation and refutation while the latter is completely subjective. As we explain below, however, the subjective character of search results does not necessarily make them speech recognized by the First Amendment. See *infra* text accompanying notes 260–262.

²³⁸ Post, *Encryption*, *supra* note 220, at 716; Post, *Recuperating*, *supra* note 220, at 1255. As Schauer notes, “Liability for misleading instructions, maps, and formulas, for example, is generally (and silently) understood not to raise First Amendment issues.” Schauer, *supra* note 220, at 1802; see also Post, *Recuperating*, *supra* note 220, at 1254 (“Navigation charts for airplanes, for instance, are clearly media in which speakers successfully communicate particularized messages. And yet when inaccurate charts cause accidents, courts do not conceptualize suits against the charts’ authors as raising First Amendment questions. They instead regard the charts as “products” for the purpose of products liability law.” (quoting *Winter v. G.P. Putnam’s Sons*, 938 F.2d 1033, 1035 (9th Cir. 1991))). Search engines may be thought to provide a “map” of the web, a guide to the sights that are most and least relevant to a searcher’s query. See Pasquale, *supra* note 93. Search engines’ indexing function also bring to mind the function of a phone book. See Frank Pasquale, *Is Google Like a Newspaper? Cable Network? Phonebook?*, CONCURRING OPINIONS, Feb. 27, 2007, http://www.concurringopinions.com/archives/2007/02/are_big_search.html (arguing that “the First Amendment should not prevent some future legislature from requiring search engines to disclose if they’ve deliberately deleted a website from their index.”). It is hard to conceive of a phone book as embodying any constitutionally protected message.

²³⁹ We do not make here a sweeping statement about the applicability of the First Amendment to Internet information location tools *in general* or to speech embodied in or generated by computer code. Rather, we make the narrower claim that the First Amendment does not cover the kind of search engine rankings at issue in *Search King* and *Langdon*—rankings produced by a comprehensive and automated search engine whose results are presented and experienced as “objective.” There are many different types of information location tools, and the First Amendment has varying levels of applicability to each. See Pasquale, *supra* note 229, at 75–76 (“When compared to something like Mahalo, or alternative search engines or directories driven by human editors, Google is much closer to a data provider than, say, a newspaper. The latter actually expresses a point of view on what the news is; the former merely aggregates information. This difference has consequences for the legal treatment of search results.”).

Search engine rankings also fare poorly in relation to other extant efforts to delineate the boundaries of the First Amendment. For example, Kent Greenawalt has offered the following dichotomies as central to the First Amendment's coverage (or noncoverage) of speech in criminal cases:

when the defendant's speech is public rather than face-to-face, when it is inspired by the speaker's desire for social change rather than for private gain, when it relates to something general rather than to a specific transaction, and when it is normative rather than informational in content, the First Amendment plainly appears to be implicated. Conversely, therefore, when speech is face-to-face, informational, particular, and for private gain, the implication would be that the First Amendment is irrelevant.²⁴⁰

Though Greenawalt's observations were raised in the context of criminalization of speech, his comments are also relevant to First Amendment coverage in commercial contexts.²⁴¹ Commercial search results clearly relate to a "specific transaction" and are motivated by the search engine's effort to maximize profit. These search results are presented as information about the Internet: a "map" of what is and is not relevant to a given search query. Greenawalt's remaining variable, publicity versus privacy,²⁴² may currently weigh in favor of search engines; but the weight of this variable is changing in the world of personalized searches in which results are tailored to a specific user.

Normative theories of the First Amendment are too numerous and diverse to systematically survey here. Moreover, none of the leading theories are able to account satisfactorily for the entire existing pattern of First Amendment coverage and exclusion.²⁴³ In our case, however, one would be hard pressed to find *any* common normative account of the First Amendment that strongly supports recognizing that automated search engine rankings are protected speech. For example, autonomy-based theories of freedom of speech are unlikely to consider corporate communication, which is incidental to carrying out its service, as speech that facilitates individual autonomy or self-realization.²⁴⁴ Additionally, democratic governance and public

²⁴⁰ Schauer, *supra* note 220, at 1801 (citing Kent Greenawalt, *Speech and Crime*, 1980 AM. B. FOUND. RES. J. 645, 676, 742–56 [hereinafter Greenawalt, *Speech and Crime*]); see also Kent Greenawalt, *Criminal Coercion and Freedom of Speech*, 78 NW. U. L. REV. 1081, 1089–90 (1983) [hereinafter Greenawalt, *Coercion*].

²⁴¹ Indeed, as a preliminary matter, if criminalization of some speech is not permitted by the First Amendment under certain circumstances, *a fortiori*, the regulation of speech by civil means may not be covered under similar circumstances.

²⁴² Cf. Greenawalt, *Speech and Crime*, *supra* note 240, at 676; Greenawalt, *Coercion*, *supra* note 240, at 1103–04, Schauer, *supra* note 220, at 1801.

²⁴³ See Schauer, *supra* note 220, at 1784–87.

²⁴⁴ See generally C. EDWIN BAKER, HUMAN LIBERTY AND FREEDOM OF SPEECH 92–122 (1989) (arguing that society should protect individual freedom of speech in order to aug-

sphere theories of the First Amendment are unlikely to encompass the limited form of speech embodied in search engine rankings.²⁴⁵ Such speech does not appear to have any intrinsic value that would encourage a deliberative public sphere, or contribute to a public debate, or crystallize knowledge for an informed and active citizenry.²⁴⁶ Truth seeking justifications²⁴⁷ seem equally unavailing to justify coverage of a form of communication that does not seem to have a truth value or to directly offer any verifiable view, argument or claim. The list of inapplicable First Amendment theories could be extended, but the point seems obvious: automated search results, despite their limited and incidental communicative element, are hard to justify as a type of covered speech in terms of any of the common normative accounts of freedom of speech.

Recent decisions recognizing that search engine rankings are speech that is covered by the First Amendment are equally problematic on the doctrinal level.²⁴⁸ Although these decisions relied on established lines of precedents, the cases extended the relevant rules into markedly new domains.²⁴⁹ This extension is unwarranted in view of the precarious normative basis for coverage of the relevant speech. The *Langdon* court, in finding that interference with search results²⁵⁰ is unconstitutionally compelled speech, relied on a line of cases, beginning with *Tornillo*, that all deal with an attempt to interfere with the

ment progressive democratic change); Richard H. Fallon, Jr., *Two Senses of Autonomy*, 46 STAN. L. REV. 875, 879–93 (1994) (describing autonomy theories as premised upon a conception of either negative liberty or positive liberty); Joseph Raz, *Free Expression and Personal Identification*, 11 OXFORD J. LEGAL STUD. 303, 306 (1991) (asserting that “freedom of expression is a public good”).

²⁴⁵ See generally ALEXANDER MEIKLEJOHN, *The Rulers and the Ruled*, in MEIKLEJOHN, *supra* note 24, at 8, 8–28; ALEXANDER MEIKLEJOHN, *Clear and Present Danger*, in MEIKLEJOHN, *supra* note 24, at 29, 29–50; ALEXANDER MEIKLEJOHN, *American Individualism and the Constitution*, in MEIKLEJOHN, *supra* note 24, at 51, 51–77; ALEXANDER MEIKLEJOHN, *Reflections*, in MEIKLEJOHN, *supra* note 24, at 78, 78–89; CASS R. SUNSTEIN, *DEMOCRACY AND THE PROBLEM OF FREE SPEECH* 241–52 (1993) (arguing that the purpose of the First Amendment is to promote diversity of opinion and discussion because a deliberative democracy is a “creative and productive force”); ROBERT C. POST, *CONSTITUTIONAL DOMAINS: DEMOCRACY, COMMUNITY, MANAGEMENT* 119–78 (1995) (discussing why the First Amendment protects public discourse and what types of speech are protected simply because they are part of the public discourse). Indeed, given the trend of political “google-bombing,” regulation of manipulation may emerge as a crucial adjunct to existing methods of assuring disclosure of the origins of political advocacy. See Pasquale, *supra* note 138.

²⁴⁶ The instrumental value of and application of the First Amendment to search engines are discussed later. See *infra* notes 265–67 and accompanying text.

²⁴⁷ See William P. Marshall, *In Defense of the Search for Truth as a First Amendment Justification*, 30 GA. L. REV. 1, 1 (1995) (arguing that “speech is valuable because it leads to the discovery of truth”).

²⁴⁸ See *supra* notes 206–11 and accompanying text.

²⁴⁹ See *supra* notes 206–11 and accompanying text.

²⁵⁰ The court’s discussion does not distinguish between search results and user ads that appear on the search engine. See *Langdon v. Google, Inc.*, 474 F. Supp. 2d 622, 629–33 (D. Del. 2007). This discussion is limited to search results.

content of newspapers.²⁵¹ A decision that search engine rankings are speech, however, is fundamentally different from regulation of the content of print media. By their own admission, search engines do not function as publishers or editors of the content to which they channel users.²⁵²

Admittedly, courts have extended the compelled speech prohibition well beyond newspapers to cover other communicative media such as billing statements,²⁵³ license plates,²⁵⁴ and parades.²⁵⁵ However, the crucial feature that distinguishes search engine rankings from all of these cases is that search engines lack any association between the supposedly compelled speaker and any speech that is significant to the First Amendment. In all of the compelled speech cases, the parties made at least a plausible claim that one would see the parties as making, endorsing, or acquiescing to substantial content: the specific content of an ad, a particular message or character in a parade, or a patriotic declaration on a license plate.²⁵⁶ By contrast, search engines, self-described as passive conduits, are unlikely to be perceived as carriers of the content of ranked websites. As a result, search engines are unlikely to be associated with the content either as speakers or as exercisers of editorial judgment. Just as Internet users do not associate the content of specific websites with the Internet Service Provider that enabled access, users also do not associate website content with the search engine that guided the user.

The relevant speech of the search engine then is the thin and limited form of speech embodied in the search results themselves: implied “observations” of relevance manifested as a specific ranking of websites that results from a user’s search query.²⁵⁷ Such limited “speech” is so pervasive in various social domains that subjecting it to a compelled speech prohibition might cause the doctrine to spin out of control. For example, a seller that offers for sale three alternative products in response to a buyer’s inquiry makes the same incidental observation about relevance as the search engine that refers users to websites. Should regulation of the quality of products offered for sale or a complete ban on offering for sale some products be disqualified

²⁵¹ See *id.* at 629–30 (citing *Miami Herald Publ’g Co. v. Tornillo*, 418 U.S. 241 (1974); *Sinn v. Daily Nebraskan*, 829 F.2d 662 (8th Cir. 1987); *Assocs. & Aldrich Co. v. Times Mirror Co.*, 440 F.2d 133 (9th Cir. 1971)).

²⁵² See *Siklos*, *supra* note 230 (reporting Google executive Eun’s characterization of his company).

²⁵³ See *Pac. Gas & Elec. Co. v. Pub. Utils. Comm’n*, 475 U.S. 1, 20–21 (1986).

²⁵⁴ See *Wooley v. Maynard*, 430 U.S. 705, 714–17 (1977).

²⁵⁵ See *Hurley v. Irish-Am. Gay, Lesbian and Bisexual Group of Boston, Inc.*, 515 U.S. 557, 559 (1995).

²⁵⁶ See *supra* notes 251–53 and accompanying text.

²⁵⁷ See *Search King, Inc. v. Google Tech., Inc.*, No. CIV-02-1457-M, 2003 U.S. Dist. LEXIS 27193, at *11–12 (W.D. Okla. May 27, 2003).

due to its effect on the seller's "speech"? In short, extending the compelled speech rule to cover mere observations of relevance that search engine rankings imply takes the doctrine to domains where it was never meant to go.

A similar analysis applies to the *Search King* Court's conclusion that rankings are protected as opinions.²⁵⁸ The Court's conclusion largely depends upon characterizing search rankings as "subjective" rather than "objective."²⁵⁹ That is, the premise that search rankings can not be evaluated under an objective metric of validity or veracity.²⁶⁰ The leap from non-objectivity, however, to the conclusion that the speech is protected by the First Amendment as an opinion is unwarranted. Unlike, say, film reviews, users do not treat search results as an evaluation of the indexed websites. Moreover, users do not view search results as an observation (whether "subjective" or "objective") that a user may appreciate, find contemptuous, find agreeable or disagreeable, or find convincing or unconvincing. Rankings are functional rather than dialogical expressions.²⁶¹ Search result rankings differ from, for example, an online list of recommended websites or even web portals of a certain configuration. On a continuum between mere functionality and an utterance that forms, at least potentially, a dialogical relationship with users or listeners, rankings are very close to the former end. Search engine rankings can be distinguished, therefore, from the *Jefferson County* case relied on by the *Search King* court.²⁶² In *Jefferson County*, the court found that evaluation of the value of bonds was an "opinion."²⁶³ Although bond evaluation is certainly not the strongest case of an expression subject to a dialogical relationship, the bond evaluation is still potentially dialogical. Listen-

²⁵⁸ *Id.*

²⁵⁹ *See id.* at *9–11.

²⁶⁰ *See id.* The Court's emphasis on the subjectivity of search engine rankings originated mainly from the doctrinal context. The *Milkovich* rule requires that the relevant opinion is not subject to factual proof or refutation. *See Milkovich v. Lorain Journal Co.*, 497 U.S. 1, 19–20 ("[A] statement on matters of public concern must be provable as false before there can be liability under state defamation law, at least in situations, like the present, where a media defendant is involved").

²⁶¹ One may distinguish between dialogical and other forms of expressions. *See* Robert Post, *The Constitutional Status of Commercial Speech*, 48 UCLA L. REV. 1, 12 (2000) (asserting that one does not characterize people engaged in commercial speech as "inviting reciprocal dialogue or discussion").

²⁶² "*Jefferson County* is analogous to the case at bar. Like the review in *Jefferson County*, the Court finds that PageRanks relate to matters of public concern In addition, the Court finds that PageRanks do not contain provably false connotations. PageRanks are opinions—opinions of the significance of particular web sites as they correspond to a search query. Other search engines express different opinions, as each search engine's method of determining relative significance is unique." *Search King*, 2003 U.S. Dist. LEXIS 27193, at *11–12.

²⁶³ *See Jefferson County Sch. Dist. No. R-1 v. Moody's Investor's Servs., Inc.*, 175 F.3d 848, 850 (10th Cir. 1999).

ers can agree or disagree with the evaluation, criticize or support it, and make arguments for or against it. Search engine rankings, by contrast, are not perceived by users as an expression with which users can interact in ways characteristic of an “opinion.” Though a normal user may be satisfied or disappointed by search results, he cannot criticize or relate with the search results in anything like a dialogic fashion.

Similar to the compelled speech rule, recognizing the incidental and limited form of “opinions” implicit in search result rankings might also cause the First Amendment doctrine to spin out of control. Think again of a seller who offers several items for sale in response to a buyer’s query. The seller’s action contains implicit “opinions” about relevance similar to those “opinions” identified by the *Search King* court that are embodied in search results.²⁶⁴ Does it make sense to extend the First Amendment to govern regulation of sales on the basis of its effect on such implicit opinions? In other words, implicit observations about relevance are ever-present in our society. If First Amendment coverage is triggered by such implicit observations, a vast domain of social interaction would be protected as opinions but without a conceivable rationale.

We conclude that the two variants of First Amendment arguments based on search engine speech are likely to fail; we observe, however, that that this exclusion from First Amendment protection does not mean that any attempt to regulate search engines will be categorically immune from First Amendment review. Although the speech embodied in rankings does not have any *intrinsic* value relevant to the First Amendment, search engine rankings play a central *instrumental* role in facilitating effective speech by others. Any regulation aimed at adversely affecting or abusing this facilitative role may very well trigger the First Amendment.²⁶⁵ If, for example, the government banned the manufacture and sale of paper, film projectors, or televisions, the First Amendment would be triggered by the effect of such regulation on related spheres of speech.²⁶⁶ Similarly, if the government banned all search engines or mandated filtering of certain

²⁶⁴ See *Search King*, 2003 U.S. Dist. LEXIS 27193, at *9–11.

²⁶⁵ Posting of Jack Balkin to Balkinization, <http://balkin.blogspot.com/2007/04/two-ideas-for-access-to-knowledge.html> (Apr. 30, 2007, 21:59 EST). “Freedom of speech . . . depends on an infrastructure of free expression.” *Id.* This infrastructure “includes government policies that promote the creation and delivery of information and knowledge. It concerns government policies that promote transparency and sharing of government created knowledge and data. It involves government and private sector investments in information provision and technology, including telephones, telegraphs, libraries, and Internet access. It includes policies like subsidies for postal delivery, education, and even the building of schools.” *Id.*

²⁶⁶ See Post, *Encryption*, *supra* note 220, at 717–18, 721–22.

content by search engines,²⁶⁷ the effect on other spheres of speech would likely entail First Amendment coverage as well. The touchstone for triggering the First Amendment and the frame of reference for analysis would be the regulation's *effect on the speech in regard to which search engines play an instrumental role*, not on the types of functional arrangements of information that some automated search engines now try to mischaracterize as protected speech.²⁶⁸ In the case of televisions and paper regulation, the relevant First Amendment speech is that of those who use televisions and paper in order to speak rather than the speech of television and paper manufacturers or sellers.²⁶⁹ By the same token, regulation of an automated search engine that affects the ability of indexed entities to speak entails First Amendment coverage, not a regulation's effect on an automated search engine's "speech." Thus, arguments based on the regulatory effect on the speech of indexed entities are likely to clear the coverage hurdle. The analysis under this framework, however, will be very different than courts' analyses that relied on search engine speech as the frame of reference.²⁷⁰ Regulation of the kind discussed in this Article, which is aimed at the biases and discriminatory practices of search engines, is covered by the First Amendment to the extent that such regulation influences the speech of listed websites. Yet unlike blatant attempts to use search engines as agents of censorship schemes, this kind of regulation, if properly circumscribed, is unlikely to contravene the First Amendment.

In sum, existing cases that construe the First Amendment as an absolute bar to any regulation of search engines' complete discretion to manipulate their results are instances of what Fredrick Schauer recently called "First Amendment opportunism."²⁷¹ Litigants and courts dealing with search engine manipulation cases were attracted to the

²⁶⁷ State governments have already tried parallel strategies using ISPs as agents for content-based filtering schemes that are legislatively mandated. See *Ctr. for Democracy & Tech. v. Pappert*, 337 F. Supp. 2d 606, 611 (E.D. Pa. 2004) (striking down as unconstitutional Pennsylvania legislation that mandated ISP filtering of websites blacklisted by state authorities); Complaint at 2–6, *King's English, Inc. v. Shurtleff*, No. 2:05CV00485 TS (D. UTAH, June 9, 2005), available at <http://www.cdt.org/SPEECH/utahwebblock/20050609hb260complaint.pdf> (challenging a UTAH statute imposing an obligation on ISPs to block material); Stipulated Order at 1–3, *King's English, Inc. v. Shurtleff*, No. 2:05CV00485 DB (D. Utah Aug. 25, 2006), available at <http://cdt.org/SPEECH/20060829utah.pdf> (granting a stipulated preliminary injunction against the enforcement of the contested Utah statute). See generally Seth F. Kreimer, *Censorship by Proxy: The First Amendment, Internet Intermediaries, and the Problem of the Weakest Link*, 155 U. PA. L. REV. 11 (2006) (arguing that the government's efforts to regulate the Internet via private proxy intermediaries endanger free speech).

²⁶⁸ See *supra* notes 246–55 and accompanying text.

²⁶⁹ See *supra* note 247 and accompanying text.

²⁷⁰ See, e.g., *Search King, Inc. v. Google Tech., Inc.*, No. CIV-02-1457-M, 2003 U.S. Dist. LEXIS 27193, at *11–12 (W.D. Okla. May 27, 2003).

²⁷¹ Schauer, *supra* note 220, at 1796.

justificatory power of the First Amendment and enlisted the First Amendment to support their preferred conclusions.²⁷² The parties and courts used the First Amendment because it is an easy and absolute way to terminate discussion about the complex and vexing subject of regulating search engine bias before the debate even begins in earnest.²⁷³ This strategy is, however, hardly sound or desirable. Simply asserting that search engine rankings constitute protected speech and then mechanically applying existing doctrine is a radical extension of those doctrines that finds little principled or normative support. If facile First Amendment arguments immunize automated search engine results from all forms of regulation, the legal system will only increase the power and lack of accountability of automated search engines. An entity that can claim immunities under both the CDA and DMCA as a *conduit* and claim immunities under the First Amendment as a *speaker* is in an extraordinarily good position to exercise arbitrary power.

B. Balancing Secrecy and Transparency

The proper balance between secrecy and transparency is a greater normative challenge in the search engine context. Search engines have claimed and occasionally enforced a right to limit public, or even governmental, knowledge of their algorithms, number of search queries, and the nature of these queries.²⁷⁴ Some degree of secrecy is both a legitimate interest of search engines and serves the public interest in high quality search results. To the extent that outsiders figure out the page-ranking algorithms, outsiders can game the rankings with skillfully devised strategies like “link farms” and “splogs” (spam blogs).²⁷⁵ This prospect is particularly troubling because of the growth of the Search Engine Optimization (SEO) industry and the obscure and shifting line between so-called “black hat” and “white

²⁷² See *Search King*, 2003 U.S. Dist. LEXIS 27193, at *11–12.

²⁷³ See Schauer, *supra* note 220, at 1796.

²⁷⁴ See Grimmelmann, *supra* note 8, at 48 (stating that search engines “closely guard their ranking and indexing algorithms and routinely invoke the need to protect this secrecy in litigation”). The most notable assertion of this need for secrecy occurred last summer, when Google refused to disclose to the government a great deal of information. Google refused to disclose not only users’ individual search records but also aggregate data on various topics such as Google’s total number of searches. The parties eventually reached a settlement that greatly limited the scope of the government’s discovery requests, but Google clearly drew a line in the sand. Google would vigorously resist even the Department of Justice in order to avoid disclosure of information that Google considered critical to its business model. See *Gonzales v. Google, Inc.*, 234 F.R.D. 674, 686 (N.D. Cal. 2006) (order granting in part and denying in part the plaintiff’s motion to compel compliance with subpoena *duces tecum*) (“As trade secret or confidential business information, Google’s production of a list of URLs to the Government shall be protected by protective order.”).

²⁷⁵ See Grimmelmann, *supra* note 8, at 13–14.

hat” SEO tactics.²⁷⁶ The result of substantial transparency could be degradation of the quality and usefulness of searching. Moreover, widespread and effective gaming tactics may exacerbate the structural biases of search engines in favor of commercial and well-financed players.

On the other hand, society has a strong interest in transparency and accountability.²⁷⁷ In various contexts people are becoming aware of the troubling aspects of a “black box society” in which private firms are empowered to lock away information in the face of a strong public interest in disclosure.²⁷⁸ In many cases, *someone* should have the power to “look under the hood.” For example, Dan Burk and Julie Cohen have suggested in the copyright context that, given the appropriate circumstances, a governmental agency should have the right to review private entities’ digital rights management (DRM) systems and to unlock the underlying copyrighted expression.²⁷⁹ David Levine’s recent work on trade secrets in infrastructure extends Burk and Cohen’s ideas into the realm of trade secrecy.²⁸⁰ His article provides compelling reasons for permitting the government to review the operations of processes even when the processes’ owners believe they should be given absolute protection from scrutiny.²⁸¹

How should these conflicting interests be balanced? First, we note briefly the uncertain prospects of an open source search engine. If such a search engine developed, with transparent algorithms, and attracted a sizable customer and advertising base, many of our concerns would be addressed. Given the barriers to entry mentioned above,²⁸² such an alternative may need public funding.²⁸³ A publicly

²⁷⁶ See generally *id.* (describing “black hat” and “white hat” SEO tactics).

²⁷⁷ See Gasser, *supra* note 8, at 231–34.

²⁷⁸ See generally TARLETON GILLESPIE, WIRED SHUT: COPYRIGHT AND THE SHAPE OF DIGITAL CULTURE 9 (2007) (arguing that digital copyright laws should be understood in a broader context, as “elements of an increasingly cohesive regulatory strategy, sometimes called the ‘trusted system’”).

²⁷⁹ Dan L. Burk & Julie E. Cohen, *Fair Use Infrastructure for Rights Management Systems*, 15 HARV. J.L. & TECH. 41, 54–70 (2001). Responding to DMCA anti-circumvention provisions, Burk & Cohen worried that legitimate fair uses of copyrighted work might be impossible if a copyright holder used DRM to prevent unauthorized access to the work. They proposed that some public entity hold a “key” to the DRM on copyrighted works in escrow so that the public entity could decide whether to permit a user to “break” the DRM and thereby gain access to the work. *Id.*

²⁸⁰ David S. Levine, *Secrecy and Unaccountability: Trade Secrets in our Public Infrastructure*, 59 FLA. L. REV. 135, 157–62 (2007).

²⁸¹ *Id.*; see also *Edelman v. N2H2, Inc.*, 263 F. Supp. 2d 137, 138–39 (D. Mass. 2003) (dismissing as premature an action by a computer researcher seeking immunity from liability under the First Amendment for reverse engineering and publishing lists of websites blocked by commercial filtering software).

²⁸² See, e.g., *supra* note 97 and accompanying text.

²⁸³ See, e.g., Ellen P. Goodman, *Media Policy Out of the Box: Content Abundance, Attention Scarcity, and the Failures of Digital Markets*, 19 BERKELEY TECH. L.J. 1389 (2004) (“[S]ubsidies

funded alternative may better reflect the values we have mentioned above,²⁸⁴ in a more transparent fashion than commercial competitors.²⁸⁵ It should prove permeable to requests to inspect its indexing and ranking processes, and it could implement diversity-promoting norms to ameliorate the problems discussed above.

Unfortunately, it is hard to predict whether this is a viable option.²⁸⁶ Skeptics would expect an open source search engine to be highly vulnerable to spammers and outside manipulation.²⁸⁷ Moreover, to be effective, a search engine must actually be used, and no guarantee exists that a publicly supported search engine will not be marginalized. Thus, it remains to be seen whether a publicly supported, transparent search engine is a feasible alternative.

Even if such an open-source search engine incorporating public values materialized, there would still be a role for either regulators or courts to define and detect troubling patterns of manipulation in dominant commercial search engines. Looking into the “black box” of dominant search engines’ inner workings in some contested situa-

for a robust public service media are the proper channel for media policy in the digital era from both a First Amendment and a practical perspective.”); FISS, *supra* note 49, at 56 (“The principal instrument of reform in the allocative sphere was Congress’s decision in the mid-1960s, following the recommendation of the Carnegie Commission, to establish and fund the Corporation for Public Broadcasting.”).

²⁸⁴ See *supra* Part II.

²⁸⁵ See, e.g., JEAN-NOËL JEANNENEY, *GOOGLE AND THE MYTH OF UNIVERSAL KNOWLEDGE* 82 (Teresa Lavender Fagan trans., 2007) (calling for a European search engine that will “have the power to be on equal terms with Google Book Search (and with other search engines that may appear, in the U.S. or elsewhere), and to negotiate, if necessary, our presence among them in a way that responds to criteria favorable to the influence of Europe, today and for the long term.”).

²⁸⁶ For example, Quaero, Europe’s largest initiative to date to develop a search engine to compete with Google, has failed so far. The Quaero project would include significant public funding but has been sidetracked indefinitely by Germany’s quitting the project. See Kevin J. O’Brien & Thomas Crampton, *Berlin Quits Search Engine Project*, INT’L HERALD TRIB., Jan. 3, 2007, at 1 (“‘When you look at the offerings of search engines out there on the market already, one has to question the wisdom of spending a lot of money to construct yet another search machine and try to compete with Google,’ said Ulrich Trabert, a software analyst in Frankfurt at Bankhaus Metzler, a private bank.”).

²⁸⁷ See Thomas Claburn, *Law Professor Predicts Wikipedia’s Demise*, INFO. WK., Dec. 5, 2006, <http://www.informationweek.com/internet/showArticle.jhtml?articleID=196601766>. One of the few search engine-like information aggregation sites that currently practices this type of transparency is Wikipedia. Precisely on this account, Eric Goldman has predicted its eventual demise. *Id.* (paraphrasing Goldman, “Wikipedia will fail in four years, crushed under the weight of an automated assault by marketers and others seeking online traffic.”). According to Goldman, “Wikipedia will enter a death spiral where the rate of junkiness will increase rapidly until the site becomes a wasteland Alternatively, to prevent this death spiral, Wikipedia will change its core open-access architecture, increasing the database’s vitality by changing its mission somewhat.” *Id.* Perhaps one way to avoid these possibilities would be for an open source search engine to make public *both* its ranking algorithms and the penalties that would apply to anyone who manipulated the algorithms. Thanks to Henry Lien of the Stanford Center for Internet and Society for this point.

tions is an essential part of this process.²⁸⁸ Yet legitimate private and public interests in secrecy need not be sacrificed altogether. Both judicial and administrative institutions can balance secrecy and disclosure via extant or new methods. Courts could use well-known methods such as submission under seal to facilitate some scrutiny of relevant information, while minimizing the harm of public disclosure.²⁸⁹ On the administrative side, an institution modeled on the courts instated by the Foreign Intelligence Surveillance Act (FISA) might be helpful.²⁹⁰ The reviewing body could, like the FISA court, examine potential cases of manipulation and independently verify whether the results had been manipulated in a given case.²⁹¹ Claimants would then be free to pursue other claims if manipulation was indicated, but the case might come to a quick end if none is apparent.

Lest a formidable—if embattled²⁹²—fixture of our national security apparatus seem an excessive precedent for our purposes, we need only look to proposals for intellectual property security already worked out by commentators.²⁹³ For example, Burk and Cohen propose to give “rights management keys” to trusted third parties who can determine when applicants who want to make fair use of a copy-

²⁸⁸ See *supra* notes 157–60, 274–78, and accompanying text.

²⁸⁹ For example, Search King requested that the federal District Court for the Western District of Oklahoma force Google to turn over its source code for discovery purposes. See Motion for Preliminary Injunction at 1, *Search King, Inc. v. Google Tech., Inc.*, No. CIV-02-1457-M, 2003 U.S. Dist. LEXIS 27193 (W.D. Okla. Oct. 17, 2002). As James Grimmelman notes, “SearchKing [sic] was reaching especially far in asking for this disclosure as part of the *injunction*. The more typical procedure would be to let SearchKing’s [sic] lawyers see the source code as part of the pre-trial discovery of evidence, under a suitable protective order which would prevent further disclosure.” James Grimmelman, *Google Replies to SearchKing Lawsuit*, YALE LAWMEMO, Jan. 9, 2006.

²⁹⁰ The Foreign Intelligence Surveillance Court (FISC or FISA Court) is a secret court that consists of eleven district court judges, at least three of whom must live within twenty miles of the District of Columbia. See 50 U.S.C. § 1803(a) (Supp. IV 2004). The Court has jurisdiction to hear petitions from the U.S. Attorney General seeking authorization to conduct electronic surveillance and physical searches for foreign intelligence purposes. *Id.* The Court reviews the petitions, which are presented by the Department of Justice in secret, ex parte proceedings. See Daniel J. Malooly, *Physical Searches Under FISA: A Constitutional Analysis*, 35 AM. CRIM. L. REV. 411, 413–14 (1998). If the Court denies a petition for surveillance, the Attorney General may appeal the decision to the Foreign Intelligence Court of Review (Court of Review). See 50 U.S.C. § 1803(b) (2000). This appellate court is composed of three judges, designated by the Chief Justice of the United States from the district courts and circuit courts, who have jurisdiction to review the denial of any petition made under FISA. See *id.* All FISA applications, procedural records, and decisions are kept under lock and key in accordance with measures established by the Chief Justice, Attorney General, and Director of National Intelligence. See 50 U.S.C. § 1803(c) (Supp. IV 2004). For a discussion of the background and constitutional implications of the Foreign Intelligence Surveillance Act, see generally Malooly, *supra*.

²⁹¹ Cf. 50 U.S.C. § 1803(a).

²⁹² The Bush Administration’s National Security Agency has been accused of circumventing the FISC recently. See, e.g., Jason Leopold, *Bush-NSA Spying in Defiance of Congress, Court*, TRUTHOUT, Dec. 29, 2005, http://www.truthout.org/docs_2005/122905I.shtml.

²⁹³ See, e.g., Burk & Cohen, *supra* note 279.

righted work should be permitted to access the work by circumventing security measures implemented by the copyright-holder.²⁹⁴ Disclosure of these keys could be made to users applying for access to make fair use—a decision akin to a declaratory judgment for non-infringement on a patent.²⁹⁵ Burk and Cohen note that the trusted third party will be “subject to regulatory oversight for compliance with its escrow and privacy obligations.”²⁹⁶

Stalwarts of deregulation may well complain that such procedures would still create a risk of compromising the secrecy essential for search engines’ operation and place an undue burden on their legal departments.²⁹⁷ Google, however, has already complied with a government request for information and a judge has ruled that a protective order in that dispute adequately protected its trade secrecy interests.²⁹⁸ Such limitations on secrecy are in order. If search engines are to be accountable at all, if their interest is to be balanced against those of the various other claimants involved in search-related disputes,²⁹⁹ and if social values are to be given any weight, some governmental agent should be able to peer into the black box of search

²⁹⁴ *Id.* at 63.

²⁹⁵ *Id.* at 55.

²⁹⁶ *Id.* at 63.

²⁹⁷ However, creative dispute resolution techniques can lighten this burden. For example, Google is now cooperating in the “Stop Badware” initiative with Harvard’s Berkman Center, which identifies websites that infect computers with bad code. When a website identified as containing badware complains about being blacklisted, informal means can help it regain its prior, unmarked status. See Jonathan Zittrain, *Protecting the Internet Without Wrecking It*, BOSTON REVIEW (Mar./Apr. 2008), <http://bostonreview.net/BR33.2/zittrain.php> (“Even search engines can help create a community process that has impact. In 2006, in cooperation with the Harvard and Oxford StopBadware initiative, Google began automatically identifying Web sites that had malicious code hidden in them, ready to infect browsers. Some of these sites were set up for the purpose of spreading viruses, but many more were otherwise-legitimate Web sites that had been hacked. For example, visitors to chuckroast.com can browse fleece jackets and other offerings and place and pay for orders. However, Google found that hackers had subtly changed the chuckroast.com code: the basic functionalities were untouched, but code injected on the home page would infect many visitors’ browsers. Google tagged the problem, and appended to the Google search result: ‘Warning: This site may harm your computer.’ Those who clicked on the results link anyway would get an additional warning from Google and the suggestion to visit StopBadware or pick another page.”)

“The site’s traffic plummeted, and the owner (along with the thousands of others whose sites were listed) was understandably anxious to fix it. But cleaning a hacked site takes more than an amateur Web designer. Requests for specialist review inundated StopBadware researchers. Until StopBadware could check each site and verify it had been cleaned of bad code, the warning pages stayed up. Prior to the Google/StopBadware project, no one took responsibility for this kind of security. Ad hoc alerts to the hacked sites’ webmasters—and their ISPs—garnered little reaction. The sites were fulfilling their intended purposes even as they were spreading viruses to visitors. With Google/StopBadware, Web site owners have experienced a major shift in incentives for keeping their sites clean.”)

²⁹⁸ See *Gonzales v. Google, Inc.*, 234 F.R.D. 674 (N.D. Cal. 2006); *supra* note 267.

²⁹⁹ See Grimmelmann, *supra* note 8, at 11–14.

and determine whether or not illegitimate manipulation has occurred.

V

CONCLUSION: TOWARD REGULATION OF SEARCH ENGINE BIAS

General-purpose search engines pose an important challenge to extant models of communications regulation. We have argued that general-purpose search engines are better characterized as common carriers than as media outlets. However, the normative principles undergirding Barron's work on the mass media should still animate search engine regulation. Indeed, they should apply, *a fortiori*, since dominant search engines serve as a dominant platform for the organization and dissemination of essential sources of information. Angered by commentators who claim that Google should be as protected as a newspaper from government regulation, one of the first generation of Google litigants makes Barron's point:

The analogy between Internet search engines and the newspapers is bogus. There are thousands of newspapers, [but] only three[] main Internet search engines. Half of all Internet searches are done on Google. Furthermore, no newspaper, TV station, or radio station will allow me to advertise my website, www.ncjusticefraud.com, in [North Carolina]. They won't even report my story, although my website has been in existence for 16 months, without objection from N.C. Att. Gen. Roy Cooper, the site's "target."³⁰⁰

Langdon may not be a sympathetic plaintiff, but his virtual silencing by both mainstream media and large search engines demonstrates the vacuity of a speech-utopianism that assured us that all voices would be heard in the Internet age.

Current proposals for countering the problems of search engine bias focus on the broad structural level. Some commentators emphasize the need to shape the legal environment as to increase competition and lower barriers to entry in the search engine field.³⁰¹ Others call for the development of a publicly financed and controlled search engine.³⁰² These solutions, however, are likely to be partial and a substantial degree of search engine manipulation may persist. Direct regulation would limit search engines' ability to manipulate their results

³⁰⁰ Posting of Chris Langdon to Concurring Opinions, http://www.concurringopinions.com/archives/2007/02/are_big_search.html (Mar. 1, 2007, 11:58 AM). Langdon asserts that the type of malfeasance that Mike Nifong engaged in during the Duke Lacrosse case is common in North Carolina. *See id.* Langdon also was rebuffed when he attempted to buy ads critical of the Chinese government on search engines. *See* Posting of Chris Langdon to Concurring Opinions, http://www.concurringopinions.com/archives/2007/02/are_big_search.html (Mar. 1, 2007, 11:49 AM).

³⁰¹ *See* Elkin-Koren, *supra* note 83, at 192–95; Elkin-Koren, *supra* note 87, at 396.

³⁰² Intronas & Nissenbaum, *supra* note 83, at 181.

and to offer some relief to the victims of illegitimate manipulation. What should be the form of such regulation?

Litigants have tried, without success, two different legal strategies for imposing duties on search engines. The first attempts to derive from the First Amendment constitutional limitations directly applicable to search engines.³⁰³ The second tries to bring instances of manipulation within the ambit of diverse existing doctrines, including tortious interference with prospective economic advantage and state unfair competition law.³⁰⁴ Neither of these strategies seems promising. The state action doctrine will almost certainly undermine any attempts to subject private search engines to First Amendment duties under a “public forum” theory.³⁰⁵ The fact that possible ways exist to extend the reach of the First Amendment and avoid state action limitations³⁰⁶ notwithstanding, such arguments are likely to meet heavy resistance from courts. The other strategy of trying to fit search engine manipulation into the Procrustean bed of various business torts doctrines is likely to be a difficult, and perhaps counterproductive, effort. Many of these doctrines contain elements that make them hard to apply to manipulation cases or limit their coverage to only a subset of those cases.

Are there any other options? The rise of search engines is not the first time that certain private businesses ascended to dominant positions where they command previously unknown levels of power over economic and social life. In the second half of the nineteenth century, the rapidly developing United States experienced a similar transformation of the economic landscape. The challenge was posed first by the new transportation giants—the railroads—and then by a host of public utility companies of various kinds.³⁰⁷ Much like search engines in the information society, these firms controlled essential bot-

³⁰³ See *Kinderstart.com LLC v. Google, Inc.*, No. C 06-2057 JF (RS), 2006 U.S. Dist. LEXIS 82481, at *10–21 (N.D. Cal. July 13, 2006) (order granting motion to dismiss with leave to amend) (finding unpersuasive plaintiff’s arguments that both the First Amendment and the California Constitution created affirmative duties of the defendant search engine as a *de facto* public forum); *Langdon v. Google, Inc.*, 474 F. Supp. 2d 622, 627 (D. Del. 2007) (rejecting a free speech claim under the First Amendment and Delaware Constitution).

³⁰⁴ See, e.g., *Langdon*, 474 F. Supp. 2d at 623–28; *Kinderstart*, 2006 U.S. Dist. LEXIS 82481, at *33–45; *Search King, Inc. v. Google Tech., Inc.*, No. Civ-02-1457-M, 2003 U.S. Dist. LEXIS 27193, at *5–6 (W.D. Okla. May 27, 2003).

³⁰⁵ See *Kinderstart*, 2006 U.S. Dist. LEXIS 82481, at *12–14, *17–19.

³⁰⁶ See, e.g., *Marsh v. Alabama*, 326 U.S. 501, 508–10 (1946) (requiring a company-owned town to afford basic free speech rights to inhabitants); *Intel Corp. v. Hamidi*, 71 P.3d 296, 311 (Cal. 2003).

³⁰⁷ See generally HAAR & FESSLER, *supra* note 144, at 109–40; Rossi, *supra* note 145, at 1242–50; Hovenkamp, *supra* note 144; Sallyanne Payton, *The Duty of a Public Utility to Serve in the Presence of New Competition*, in APPLICATIONS OF ECONOMIC PRINCIPLES IN PUBLIC UTILITY INDUSTRIES 121, 139–44 (Werner Sichel & Thomas G. Gies eds., 1981).

tlenecks of an emerging economic order. These were private businesses, but the important public implications of the resources they controlled, the effect on broad segments of the public, and often inherent centralized patterns of the relevant markets placed in their hands power similar to that of a public authority. Social, political, and legal conflicts arose around the exercise of this power, and demands to restrain it mounted. The most common and important grievances against public service companies were about “discrimination,” meaning inequitable and unequal treatment of some individuals or a complete refusal to serve.³⁰⁸

The response in the late nineteenth century to the challenges posed by the new public service corporations is well known. In the first stage, litigants and courts turned to an ancient part of the common law—the law of public callings that governed innkeepers and other common carriers.³⁰⁹ They developed it into a comprehensive normative framework to govern the new entities produced by corporate industrialism.³¹⁰ In the second stage, when court-based supervision alone proved insufficient, a statutory and administrative framework for regulation was gradually created and became the foundation of the modern regulatory system.³¹¹

Both of these directions—application and adaptation of common law duties to public utilities,³¹² or the creation of a regulatory framework—are worth considering with respect to the new “businesses affected with the public interest”³¹³ of the information age, namely

³⁰⁸ Hovenkamp, *supra* note 144, at 1044–54; Joseph D. Kearney & Thomas W. Merrill, *The Great Transformation of Regulated Industries Law*, 98 COLUM. L. REV. 1323, 1331–33 (1998); Payton, *supra* note 307, at 142. See generally Joseph William Singer, *No Right to Exclude: Public Accommodations and Private Property*, 90 NW. U. L. REV. 1283 (1996).

³⁰⁹ On the historical origins of the law of common callings, see generally HAAR & FESSLER, *supra* note 144, at 55–108; David S. Bogen, *The Innkeeper’s Tale: The Legal Development of a Public Calling*, 1996 UTAH L. REV. 51; Charles K. Burdick, *The Origin of the Peculiar Duties of Public Service Companies* (pt. 1), 11 COLUM. L. REV. 514 (1911).

³¹⁰ See generally HAAR & FESSLER, *supra* note 144, at 109–40; Gustavus H. Robinson, *The Public Utility Concept in American Law*, 41 HARV. L. REV. 277 (1928); Rossi, *supra* note 145, at 1244–50.

³¹¹ See generally HAAR & FESSLER, *supra* note 144, at 141–93; Rossi, *supra* note 145, at 1250–60. The regulatory model that consolidated at the turn of the century has undergone a fundamental transformation during the recent decades of “deregulation.” See Kearney & Merrill, *supra* note 308, at 1323. Despite this title, however, in most industries these changes meant a new paradigm of regulation rather than no regulation at all. See *id.* at 1323–30.

³¹² Recently, a federal district court summarily dismissed as “frivolous” a claim that a search engine had a duty not to discriminate under the law of public callings. See *Langdon v. Google, Inc.*, 474 F. Supp. 2d 622, 627 (D. Del. 2007). That court, with no discussion or explanation, narrowly construed the definition of a person engaged in public calling to cases where there exists an innkeeper–guest relationship. See *id.* at 634.

³¹³ The term is taken from Lord Matthew Hale’s seventeenth-century English treatise. See generally Breck P. McAllister, *Lord Hale and Business Affected with a Public Interest*, 43 HARV. L. REV. 759, 759 (1930). The phrase was later appropriated by nineteenth-century Ameri-

search engines. Proposals of any direct regulation of search engines are likely to raise vigorous resistance³¹⁴ and various concerns, including the fear that regulation may do more harm than good; the possibility of regulatory capture; the specter of paternalistic governmental interference with content; and, insufficient information by the regulator of a dynamic and unpredictable environment.³¹⁵ While some of these concerns may be dismissed as residues of the naïve anti-statist bias of early Internet utopianism,³¹⁶ others go to serious issues such as the ability to regulate effectively, the effect on the quality of searches and other legitimate interests of the regulated, the users and the public in general. The question, then, is whether a regulatory framework, either by statute or under the common law, could be crafted as to minimize these risks while preventing improper behavior by search engines.

Admittedly, to achieve these goals the institutional arrangements will have to be nuanced and somewhat complex. It does not follow, however, that doing nothing is the preferable option. Search engines, in whatever form they might assume, will continue to be a major part of our informational environment in the foreseeable future. The normative concerns associated with their unique position of power are here to stay. A properly designed regulatory approach may do much to ameliorate these concerns. Courts should not end the debate over the contours of such an approach before it begins.

can courts, which developed the category of private businesses subject to special public duties and regulation. See *Munn v. Illinois*, 94 U.S. 113 (1876).

³¹⁴ See *Goldman*, *supra* note 11, at 197–98.

³¹⁵ See generally Susan P. Crawford, *Shortness of Vision: Regulatory Ambition in the Digital Age*, 74 *FORDHAM L. REV.* 695, 696 (2005) (“[I]f the proponents of centralized control are allowed to proceed, they will waste an enormous amount of energy working towards failure.”).

³¹⁶ For a critique of this position, see generally Boyle, *supra* note 75.

