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 interventions 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. Against the trend of courts that would declare search results unregulable speech, this article makes a case for an ongoing conversation on search engine regulation.
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Oren Bracha and Frank Pasquale*

“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, but

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. Enthusiasts predicted the network would ameliorate the traditional mass-media bottleneck and render moot the policy and legal debates that surrounded it.

We know better now. As the internet matured, it became evident that accompanying the new possibilities were many of the old difficulties, though often in new guises. In this article we extend Barron’s inquiry to the most influential gatekeepers of information and ideas in the digital age: internet search engines.

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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 the broadcast networks, radio stations, and newspapers. Located at bottlenecks of the information infrastructure, search engines exercise extraordinary control over data flow in a largely decentralized network. Power, as always, is accompanied by opportunities for abuse, and by concerns over its limitation to legitimate and appropriate uses.

Here we are concerned with one aspect of this growing power: search engines’ power to manipulate their results, thereby affecting the ability of internet speakers to reach potential audiences. 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. Moreover, two of these courts found that search results are opinions “entitled to full constitutional protection” under the First Amendment. 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 deserving of similarly laissez-faire treatment.

3 For a fanciful vision of this future, see ROBIN SLOAN AND MATT THOMPSON, EPIC 2014, available at 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.”).


6 Search King, 2003 U.S. Dist. LEXIS 27193, at *12 (“the Court concludes that Google's PageRanks are entitled to full constitutional protection.”); Langdon, 474 F. Supp. 2d at 630 (“the 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.”

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.8

Part I situates search engines in the context of internet-speech scholarship. This scholarship has developed from early sweeping optimism about the speech-possibilities of a decentralized network to a variety of more cautious and sober positions. A key feature of internet communication is the existence of gatekeepers—technological chokepoints whose configuration greatly affects the character of this medium. 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, 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.

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8 One early step in this direction was a proposal for the FTC to regulate paid listings in search engines. See Andrew Sinclair, Regulation of Paid Listings in Internet Search Engines, 10 B.U. J. SCI., L., & TECH. 146 (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.
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 democratic process. The broadcast model that consolidated during the twentieth century was characterized by a sharp dichotomy between broadcasters and consumers.9 The former—an ever-shrinking group of a powerful and wealthy corporate giants—came to control the most influential information media.10 Viewers were largely reduced to the status of passive consumers, free only to choose among the informational commodities offered by the handful of giants.11 Broadcasters functioned in this system as the gatekeepers of society’s information flows. They were the essential

9 See Yochai Benkler, Communications Infrastructure and the Distribution of Control over Content, 22 TELECOMM. POL’Y 183, 187-188 (1998).
10 YOCHAI BENKLER, THE WEALTH OF NETWORKS 190 (2006) (“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 “Television 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, Emily Biuso, and Sarah Goldstein, The National Entertainment State, The Nation, July 3, 2006, available at http://www.thenation.com/doc/20060703/mediachart.
11 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 the process at one point only….that of the consumer. . . .”); Jennifer Chandler, The Autonomy of Technology: Do Courts Control Technology or Do They Just Legitimize its Social Acceptance?, BULL. SCI., TECH. & SOC’Y (forthcoming 2007), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=993169 (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.”).
intermediaries through which anyone who wanted to speak effectively to a significant number of people had to pass.12

There were many problems with this system. Unless one was rich enough to own her own broadcasting entity, or lucky (and rich) enough to produce the kind of content approved by broadcasters, one was simply silenced.13 This, in turn, cultivated a widespread habit of passive, unidirectional information-consumerism.14 Second, even from a Meiklejohnian perspective that is happy to sacrifice the ability of everybody to speak as long as everything worth saying is heard,15 the broadcast system was highly problematic. Concentrated control over the channels of communication translated into concentrated control of its content. The media intermediaries were in a position to highlight preferred content and suppress or ignore unpopular points of view.16 They were also in a position to give preference to content originating in a limited circle of allies and affiliates over that of “outsiders.”17

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.18 This meant, in turn, a bias toward the lowest common-denominator; toward the mainstream and majority preferences.19 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

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16 BENKLER, supra note 10, at 199-204.
17 Netanel, supra note 13, at 1882; C. EDWIN BAKER, ADVERTISING AND A DEMOCRATIC PRESS 50-56 (1994).
18 Benkler, supra note 10, at 165 (“advertiser-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.”)
19 Benkler, supra note 10, at 204-208; Barron, supra note 2, at 1645-46.
consumerist impulses. The net-outcome of this system was hardly an ideal picture of a vital and diverse marketplace of ideas where all voices are heard, or of a robust and antagonistic expressive sphere. Nevertheless, more libertarian scholars questioned whether the situation was indeed so bleak and whether law could improve the situation. The deregulatory impulse of the past few decades has assured their dominance in agencies responsible for media regulation.

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. Unlike traditional mass media’s broadcast model, Internet communication was based on a peer model. 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.

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. 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

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20 Baker, supra note 17, at 62-66. See also NAOMI KLEIN, NO LOGO 39 (2000) (“It is common knowledge that many advertisers rail at controversial content [and] pull their ads when they are criticized even slightly . . . .”); BENJAMIN BARBER, CONSUMED: HOW MARKETS CORRUPT CHILDREN, INFANTILIZE ADULTS, AND SWALLOW CITIZENS WHOLE (2007); AVNER OFFER, THE CHALLENGE OF AFFLUENCE 135-36 (2005) (discussing “freedom from advertising [as] a good” and the feedback loop of commercialized content and consumerist demand for it).

21 See, e.g., Carl Sessions Stepp, Access in a Post-Social Responsibility Age, in DEMOCRACY AND THE MASS MEDIA: A COLLECTION OF ESSAYS 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.”). -

22 For example, “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.” PETER HUBER, MICHAEL KELLOGG, & JOHN THORNE, FEDERAL TELECOMMUNICATIONS LAW 55 (2d ed., 1999) (citing 47 U.S.C. § 160).

dependence on large income generated by mass audiences and hence less commercial pressure to attract a mass audience.24

The network also made possible a variety of peer-production models.25 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 firm. Now they became viable under a decentralized model of cooperation that could be pursued even in the absence of strong market orientation. Most importantly for our context, the peer model of communication seemed to do away with the old intermediaries and the ills that were associated with them.26 “Avoiding the intermediaries” was the catchphrase of the early Internet.

All of this attracted much optimism from various observers. Despite some early cautionary notes,27 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 appearing 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, ungenteel ways. It will contain not innocence, but a sort of naïve 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.28

24 See, e.g., Reno v. ACLU, 521 U.S. 844, 852–853, and 896–897 (1997) (“Any person or organization with a computer connected to the Internet can “publish” information.”).
28 HUBER et al., supra note 22, at 77-78.
Even the Supreme Court was swept up in the enthusiasm, declaring in 1997 that on the Internet “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.”

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. This strong protection was justified on two grounds: the need to shield the new speech utopia from overzealous government regulation that could thwart it; and the claim that Internet communication does not have the characteristics that supported a broader regulatory leeway in the broadcast context. 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 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. The Internet, the argument went, fundamentally changed things. Even if some speech-enhancing regulation was justified under the broadcast system, in the decentralized Internet environment that was already free from the traditional

29 See, e.g., Reno, 521 U.S. at 870.
30 They followed Ithiel de Sola Poole’s approach 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 (2004) (citing ITHIEL DE SOLA POOL, TECHNOLOGIES OF FREEDOM (1983)).
32 ACLU, 521 U.S. at 870.
33 Owen Fiss has 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 FISSL, 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.”).
speech-hierarchy such regulation was both unnecessary and dangerous.\textsuperscript{34} Government, even when good-intentioned, had to be kept out.

The early hegemony of Internet speech-utopianism has been gradually undermined during the last decade or so as the number of more skeptical voices increased. The optimistic narrative has been challenged on various 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.\textsuperscript{35} Users have found themselves surrounded by a “data smog,” bombarded by much more information than they could ever process, much of which was of little or no use to them.\textsuperscript{36} Filtration designed to find relevant, credible and effective information has become the key to communication on the web. For speakers the ultimate goal has become capturing as much attention of as many users as possible.\textsuperscript{37}

The first generation of Internet speech skeptics claimed that, in this new environment, the old media intermediaries or their subsidiaries enjoy significant advantages over all other speakers.\textsuperscript{38} As content producers compete for attention, established and wealthy players possess many superior capacities to attract and capture users’ attention, including: producing expensive content in high-quality formats; advertising, promotion and visibility-enhancement abilities; stealth marketing techniques; and various cooperation and exclusion strategies.\textsuperscript{39} If successful, these strategies gradually reestablish the traditional speech-hierarchy of broadcasting in the Internet environment: small, independent speakers are relegated to an increasingly marginal position while a handful of commercial


\textsuperscript{35} Frank Pasquale, Copyright in an Era of Information Overload, 60 VAND. L. REV. 135, 165 (2007) (“any bit of expression that signals something to one who wants exposure to it may constitute noise to thousands of others.”).

\textsuperscript{36} SHENK, supra note 27, 30 (1997) (describing declining “signal to noise” ratio in contemporary communication).

\textsuperscript{37} 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.”)


giants capture the overwhelming majority of users’ attention and reemerge as the essential gateways for effective speech.⁴⁰

Emerging empirical research on patterns of Internet use has tended to support this claim. The visibility of websites, usually measured through links, turned out to be highly skewed, consisting of a power law distribution of a very small number of highly visible websites and a very “long tail” of almost unnoticed ones.⁴¹ One of the more influential works in this vein 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 the mere handful of the billion documents out there.”⁴² In short, on the Internet, everyone may be formally equal in communicative capacity, but the old giants or similar new giants that managed to establish themselves in dominant positions are more equal than others.

This first wave of skeptics who emphasized the continued dominance of the old-style content intermediaries was countered recently by more refined, sober, and somewhat less utopian versions of Internet speech-optimism. Yochai Benkler, for example, bases his defense of the relative-superiority of Internet-speech (in comparison with old broadcasting and print models) on an analysis of the patterns of information flow and visibility on the network. 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.⁴³ While high-order clusters are characterized by a very small number of highly visible sites and a multitude of nearly invisible ones, the lower-level clusters present a somewhat different picture. On this level too, there is a small number of dominant sites, but visibility and exposure is much more broadly and evenly distributed among the other websites.

⁴¹ Clay Shirky, Power Laws, Weblogs, and Inequality, “Networks, Economics, and Culture” mailing list (Feb. 8, 2003), available at 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.”).
⁴² ALBERT LASZIO BARABASI, LINKED: HOW EVERYTHING IS CONNECTED TO EVERYTHING ELSE AND WHAT IT MEANS FOR BUSINESS, SCIENCE, AND EVERYDAY LIFE (2003).
The result of this structure is a bottom-up filtration system. At the lowest level a large number of speakers receive relatively broad exposure within local communities likely to be composed of individuals with high intensity interest or expertise. Speakers who manage to gain salience at the lower levels may gradually gain recognition in higher-order clusters and eventually reach general visibility. A grass-root, decentralized filtering system of this kind, Benkler argues, is much less susceptible to the degrading effect of mass-consumption commercial models.\(^4^4\)

Jack Balkin offers a somewhat different, but not inconsistent defense of Internet speech-optimism. Balkin acknowledges that despite the fact that in the digital network environment speakers can occasionally “route around” the traditional media intermediaries, these giants are likely to go on occupying a significantly superior position in terms of salience and exposure, both on and off the Internet. The real hope of Balkin’s account seems to come from the cultural practices, augmented by digital technology, he calls “glomming on.” “Glomming on” means the widespread and decentralized use of content from the giant intermediaries as a broadly accessible point of reference, while reinterpreting, manipulating or changing this content as to imbue it with new meaning and create new speech.\(^4^5\) Thus from Balkin’s perspective the promise of the Internet is not the decline of the old intermediaries, but the appearance of an additional,

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\(^{44}\) Benkler, *supra* note 10, at 241-61 ("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."). However, Benkler has conceded that the type of concentration we diagnose here could vitiate these developments. *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.").

\(^{45}\) 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, 10-13 (2004) ("the 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 LAWMEME BLOG, 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 (available at http://www.concurringopinions.com/archives/2007/05/from_rightofrep.html) (observing that many mainstream media sites do not indicate “trackbacks” on articles’ websites).
democratized avenue of expression that coexists in a complex symbiosis with them.

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

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. In the early days of the popularized Internet there existed a strong trend to see it as a libertarian dream-come-true. Whether they celebrated or lamented it, many observers agreed that the ability of the state to effectively regulate human behavior was significantly reduced in the Internet environment. In a highly decentralized network with no easily controllable center, where millions of nodes could transmit and retransmit information instantaneously and cheaply, under conditions of relative-anonymity and across jurisdictional borders, effective regulation seemed all but impossible. 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 been supplanted by perspectives that emphasize the Internet’s “points of control.” There are several components to this perspective.

48 See, e.g., John Perry Barlow, The Economy of Ideas, 2.03 WIRED (Mar. 1994), 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).”).
First, various social actors develop and control the technology that makes up the Internet, including physical communication infrastructure, interconnection standards, and the hardware and software that constitute the nodes connected to the network. 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 a decentralized flow of information. Business and government soon discovered their usefulness in monitoring and shaping human behaviors.

Second, the technological structure of the Internet is not static. Technology is a plastic medium, open to a broad range of reshaping, entailing various patterns and degrees of control. The combination of regulation through technological gatekeepers and the possibility of reshaping technology sometimes makes possible previously unimaginable levels of control and surveillance.

Third, technology and the control opportunities it offers can be shaped by either private forces or public pressures, or by some combination of the two. As numerous works in Science and Technology studies demonstrate, such forces shape both the development and the diffusion of new technologies. Annalise Riles has observed that, far from being a neutral instrument, “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."\(^{54}\) Just as technology influences the development of policy, policy can shape technology.\(^{55}\)

Fourth, the law, in combination with other social factors, plays an important part in shaping technological development.\(^{56}\) It may do so directly by mandating or prohibiting certain technological standards.\(^{57}\) It may work indirectly by shaping the social or market conditions which in turn influence technological development.\(^{58}\)

Much of Internet law scholarship since the late 1990s was preoccupied with some or all of these aspects of the points of control outlook. 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. According to these new arguments, network gatekeepers who exercise control over its technological bottlenecks constitute the new speech intermediaries. Although sometimes cooperating or allying with the old media intermediaries, these new entities derive their crucial position from a communication model different from traditional broadcast, and may exercise power in different ways. Nevertheless, under certain conditions, many of the ills produced by the old intermediaries of the mass-media system may be replicated by the new intermediaries of Internet communication.

Niva Elkin-Koren identified early on search engines as an important class of new intermediaries.\(^{59}\) Search engines play an extremely important role in managing the enormous amount of information available on the Net. They are critical in helping users locate the information most relevant and important to them and in leading an audience (and interlocutors) to content providers. With

\(^{55}\) Winner, \textit{ supra} note 11; Chandler, \textit{ supra} note 11 (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.”).
\(^{56}\) Lessig, \textit{ supra} note 51, at 91-92.
\(^{58}\) Id., at 49 (“After the FCC finally approved commercial cellular telephone systems in 1982, the market grew explosively.”).
this gatekeeping role comes tremendous power. Several traits of the search process and market consolidate this power.

First, there are the extremely high stakes of being indexed and highly-ranked: as Nissenbaum & Introna memorably put it, “to exist [online] is to be indexed by a search engine.” While there are other ways for users to locate relevant information on the Net, search engines are now the dominant platform through which content producers and audiences can reach each other. Moreover, the search process itself is structured as a high-stakes winner takes (almost) all competition. The hierarchical search-results list that ranks the outcomes for a user’s search query may be an effective filter from any given user’s perspective, but rapidly congealing patterns of internet use may lock speakers into a fierce zero-sum competition for recognition. The number of users attracted by a listed website steeply drops in correlation with its rank, beginning with the site ranked as second.

By the time one reaches later pages of

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61 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 Frank Pasquale, Copyright in an Era of Information Overload, 60 VAND. L. REV. 135, 175 (2007) (“Both trademarks and categorizers [like search engines] help ease the burden of choosing between an ever-increasing number of goods and services.”).
62 See Frank Pasquale, Ranking vs. Mapping Knowledge, MADISONIAN WEBLOG, June 25, 2007, available at 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.”).
63 Frank Pasquale, Rankings, Reductionism, and Responsibility, 54 CLEV. ST. L. REV. 115, 130-131 (“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.”).
the search-results list, such a rank is almost as bad as not being indexed at all. In an environment in which attracting users’ attention is highly important to both commercial and non-commercial speakers a high ranking is critical. Add to that the fact that the lion’s share of the search-engine market is dominated by a very small number of significant players. Moreover, the search engine market has inherent structural characteristics that accelerate concentration and erect high barriers to entry.66

The net-result is that very few entities control the critical junction of Internet communication. This situation generates problems similar to those


65 B. J. Jansen & M. Resnick, Examining Searcher Perceptions of and Interactions with Sponsored Results. Paper Presented at the Workshop on Sponsored Search Auctions at ACM Conference on Electronic Commerce (EC’05), June, 2005, Vancouver, BC, Canada, available at http://ist.psu.edu/faculty_pages/jjansen/academic/pubs/jansen_ecommerce_workshop.pdf (citing N. Brooks, The Atlas Rank Report II: How Search Engine Rank Impacts Conversions, Accessed on 15 January 2005 on the World Wide Web at http://www.atlasonepoint.com/pdf/AtlasRankReportPart2.pdf (“the 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.”).

66 Securing copyright permissions for indexed material is but one of many factors tending toward concentration. See Pasquale, supra note 61, at 180 (“In a world in which categorizers need licenses for . . . 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.”). We discuss this and other factors contributing to concentration in Section III.A. below.
diagnosed in broadcasting long ago. 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. Second, the hierarchical ranking system, at least in its current one-size fits all form, has a strong bias toward majority preferences. The majority bias partly overlaps with a dominance of well-financed and commercial speakers. Third, the system is tilted toward consumerist content both because consumption-oriented content-producers are more likely to successfully induce manipulation of content, and, more importantly, because search-engines have an interest in channeling users towards sites with whom they cooperate under various commercial schemes.67

Whether and to what extent such worrisome effects will materialize will depend 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 is only a possibility, whose realization depends, among other things, upon the technological, social and economic environment shaped by the law.68 In the search engines context, the typical strand of arguments based on this assumption to date has focused on minimizing constraints on search-engines. 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. 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

67 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 and Lawrence Page, The Anatomy of a Large-Scale Hypertextual Web Search Engine, Computer Science Department of Stanford University, 2000, available at http://infolab.stanford.edu/~backrub/google.html. See also Grimmelmann, supra note 4, at 17-18. For a recent analysis of revenue flow in the search business, see Ben Elgin and Brian Grow, Click Fraud: The Dark Side of Online Advertising, BUSINESSWEEK, Oct. 2, 2006. 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(3) J. COMPUTER-MEDIATED COMMUNICATION, article 6, 17 (2007).

68 Benkler, supra note 10, at 12 (The “emergence of nonmarket, 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 45, at 9.
law and other doctrines on the ability of search-engines to access and present the
information relevant to their function; and liability under a host of various legal
doctrines based on the content provided by indexed entities. 69 In order to
facilitate a competitive and diverse arena of search engines, scholars have
proposed that limitations on access to information should be reduced70 and search
engines should be shielded from liability arising out of the content of indexed
entities or keyword sales.71

These two guiding principles may be necessary for comprehensive and
authoritative search engines, but do not assure responsible ones.72 Even absent
pressures from content owners leveraging various legal doctrines, a search engine
may have strong incentives to exercise its power in troublesome ways. Therefore,
policymakers should at least consider some 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 we are engaged with here.

2. Search-Engine Bias

Various phenomena that involve the manipulation or shaping of search
engines results are usually referred to under the common rubric of “search engine
bias.” In fact, “search engines bias” is a very broad term. It captures very
different phenomena that merit diverse legal responses—and sometimes none at
all, given regulators’ potential clumsiness in the area. The following is not 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 manipulation by search engines of their results differ from
each other along several dimensions. First, there is the breadth of the

69 Elkin-Koren, The New Intermediaries, supra note 59, at 396.
Niva Elkin-Koren, Let the Crawlers Crawl, supra note 59 at 192-95; Pasquale,
supra note 61, at 141 (2007) (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.).
70 Hannibal Travis, Google Book Search and Fair Use, 61 U. MIAMI L. REV. 87,
91 (2006) (“courts 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”); Pasquale,
supra note 61. (calling for fair use protection for categorizing and indexing services).
71 Eric Goldman, Deregulating Relevancy in Internet Trademark Law, 54 EMORY
L.J. 507, 511 (2005) (arguing that “search providers should have both common
law and statutory safe harbors”).
72 For more on “authoritativeness” and “responsibility” as normative bases of
search law, see Pasquale, supra note 63, at 125 (section entitled “Twin Goals for
Search Law: Responsible and Authoritative Metadata”).
manipulation. A search engine bias may be relatively universal: affecting the indexing of a large number of unspecified websites on the basis of generally applicable criteria. As Eric Goldman points out, every search engine is “biased” in the strong universal sense.73 Despite familiar claims about “neutrality” and “objectivity,” search engines are filtering and ranking tools and as such they must favor some entities and disfavor others. Whether the ranking relies on a completely automated algorithm or includes manual human intervention, it is based on a set of criteria. These criteria will be “biased”: either purposefully or indirectly they will give priority to some speakers and marginalize others. Optimization of these criteria is an inherent and essential part of search engines’ operation.74 Optimization is 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. The distinction is one of degree: there is a broad spectrum that stretches between completely specific manipulations and highly universal biases. We focus on the former set of problems, aware that they may sometimes be exacerbated (or motivated by) by the same pressures that drive the latter.

Second, there are various objectionable or at least controversial effects of search engine manipulation. The most intuitive kind of effect is suppression—situations in which a particular site is excluded or relegated to obscurity.75 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,

73 Goldman, supra note 7, at 195-96 (2006) (“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.’”).
74 Id. Grimmelmann, supra note 4, at 17 (it is “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 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.”).
75 Pasquale, supra note 63, 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.”); Grimmelmann, supra note 4, at 17-18.
contrary to that entity’s wishes or interest. Although not strictly separate from the previous two classes, it is useful to mark a third category of search engine manipulation effects: trademark-related harms. Such harms can involve either unwanted suppression or exposure, or claimed 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 trademark owner create consumer confusion, dilution of marks or other reputational harms.

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. They must also foil attempted manipulation of results by indexed entities (and the “search engine optimizers” they hire to boost their ranking). Site owners employ various tactics to boost their prominence, some legitimate, and some less so. In some cases search engines directly punish such attempts by banning the relevant websites from their results or specifically relegating them to a low rank.

76 Grimmelmann discusses inclusion harms under the headings of “reputation” and “privacy.” Grimmelmann, supra note 4, at 31-34.
77 Grimmelmann, supra note 4, at 26-28. Eric Goldman has argued that courts should limit their “regulation of relevancy” in such search-engine trademark cases and proposed adjustment to trademark law suitable for achieving this purpose. See Goldman, supra note 71.
78 Saul Hansell, Google Keeps Tweaking Its Search Engine, N.Y. TIMES, June 3, 2007, C1 (describing constant changes to algorithm devised by the search quality department at Google).
79 Van Couvering, supra n. 67, at 19 (discussing 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.”); Grimmelmann, supra note 4, at 36-39.
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. 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.

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 due to 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 which 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 which 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 have to find out whether there is a problem. Intuitive objections 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 one has to ask whether market forces, new technology, or 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.

(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 bad, then you may have to listen, at least until a viable competitor to Google steps up to the plate.”).

82 See, e.g., Google, Advertise Your Business with Google Adwords, available at https://adwords.google.com/select/Login (last visited June 24, 2007). 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 Hippsley, supra note 80.

83 See Pasquale, supra note 63, at 121.
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. 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 free as possible from public coercion and private power. 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, examined and debated. The other rationale is the importance of an open and relatively equal chance to all members of society for

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84 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 208 (1945). See generally HABERMAS AND THE PUBLIC SPHERE (Craig Calhoun ed., 1992); AFTER HABERMAS: NEW PERSPECTIVES ON THE PUBLIC SPHERE (Nick Crossley & John Michael Roberts eds. 2004); ALAN MCKEE, THE PUBLIC SPHERE: AN INTRODUCTION (2004). For application to the media context, see Nicholas Garnham, The Media and the Public Sphere, in COMMUNICATING POLITIC: MASS COMMUNICATION AND THE POLITICAL PROCESS (Peter Golding et al. eds. 1986).

85 JURGEN HABERMAS, THE STRUCTURAL TRANSFORMATION OF THE PUBLIC SPHERE: AN INQUIRY INTO A CATEGORY OF BOURGEOIS SOCIETY (1989) (anticipating regulative ideal of an “ideal speech situation” designed to give primacy to the “unforced force of the better argument.”).

86 See Niva Elkin-Koren, Cyberlaw and Social Change: A Democratic Approach to Copyright Law in Cyberspace, 14 CARDOZO ARTS & ENT L. J. 215, 219-224 (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).
participating 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.87

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.88 Local, targeted manipulations may seem less
significant by comparison.

However, this priority of concerns may be reversed 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 which are highly visible
or popular.89 However, if Benkler’s defense of Internet-speech is correct, the fear
of visibility which is skewed toward the preferences of a few popular, dominant
and usually wealthy websites loses much of its force.90

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 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), 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 which assigns them a high
weight, are, to a large extent, a product of a bottom-up “democratic” filtering
system.

87 See Balkin, supra note 45, at 33-45.
88 Introna & Nissenbaum, supra note 60, at 175 (“Search engines constitute a
powerful source of access and accessibility within the Web.”).
89 AMY N. LANGVILLE AND CARL D. MEYER, GOOGLE’S PAGE RANK AND
BEYOND: THE SCIENCE OF SEARCH ENGINE RANKINGS 28 (2006) (predicting that
“there will be even more personalization for web users in the future”).
(“PageRank’s thesis is that a webpage is important if it is pointed to by other
important pages.”).
90 See supra text accompanying notes 62-66.
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 from above its own preferences or the preferences of those who are powerful enough to induce it to act.91 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 and ability to manipulate it may reduce economic efficiency by stifling competition. The centrality of information to efficient markets is well known.92 Market participants need information about products and services to make informed economic decisions.93 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 differently, attaining visibility and access to users is critical to competition and cooperation online. Centralized control or

92 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; it is simultaneously a product and a necessary component of an informed purchase of products).
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).94

Manipulation of this kind is likely to result in high barriers to entry that depresses competition. Entrenched and well-established entities are more likely to have the resources necessary to induce search engines to manipulate results so as to preserve their market dominance. New entrants and smaller competitors may find themselves excluded or unable to reach public consciousness.95 As the

94 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 Frischmann & Barbara von Schewick, Network Neutrality and The Economics of an Information Superhighway, JURIMETRICS (forthcoming 2007); Tim Wu, Why Have a Telecommunications Law?, 5 J. TELECOM. & HIGH TECH 15 (2006); Mark A. Lemley & Lawrence Lessig, The End of End to End: Preserving the Architecture of the Internet in the Broadband Era, 48 U.C.L.A. L. REV. 925 (2001). 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 which 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, available at http://www.google.com/help/netneutrality.html; Richard Whitt, What Do We Mean by Net Neutrality, GOOGLE PUBLIC POLICY BLOG, June 16, 2007, available at 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.”).

95 Jon Kleinberg and Steve Lawrence, The Structure of the Web, 294 SCIENCE 1849 (2001) (“New or niche sites with few links to them may have difficulty competing with highly prominent sites for attention. By favoring more highly
Internet becomes a central site for both market transactions and the information 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 of those affected by a process they can neither fully comprehend nor effectively respond to. Given the tremendous power commanded by the major players in the field, each targeted intervention is likely to result in someone losing a substantial part of his audience or business on the basis of an arbitrary 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. 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, at least within some basic criminal and civil rules of the game.

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. 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. When, for example, in the nineteenth century railroads came to exercise vast near-exclusive power over the ability of individuals to ship their goods and linked sites, search tools may increase this effect.”); see also A. Mowshowitz & A. Kawaguchi, Measuring search engine bias, INFORMATION PROCESSING & MANAGEMENT, 41 (5), 1193-1205 (2005).

96 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 BATTELLE, supra note 1, at 157. Moncrief attempted to contact Google several times, but "never got a response." Id.

97 ALBERT O. HIRSCHMAN, Exit and Voice: An Expanding Sphere of Influence, in RIVAL VIEWS OF MARKET SOCIETY AND OTHER RECENT ESSAYS 55 (1986) (describing “exit” and “voice” as two classic options of reform or protest).

engaged in practices that were deemed unfair or discriminatory, the result was administrative and legal regulation of such practices.\textsuperscript{99} Later as the field of regulation developed, various schemes that enforce fairness norms (\textit{inter alia}) were applied to other private industries whose structure entailed similar exclusive power of private entities over the lives of individuals.\textsuperscript{100} We will return to this parallel between search engines and other historically regulated industries later.\textsuperscript{101} 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.

\textit{Deception and Autonomy}

The wrong caused by manipulation of results, from the point of view of search engine users, is sometimes described as deception.\textsuperscript{102} To date, the only governmental action signaling any intention of limiting search engine manipulation of results was based on a consumer deception theory: a letter sent by the FTC to various search engine firms recommended they clearly and conspicuously distinguish paid placements from other results.\textsuperscript{103} The letter was


\textsuperscript{101} See infra text accompanying notes 223 ff. Critics of Google’s advocacy of net neutrality have also drawn this connection. (“[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 Web sites 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.”). Holman Jenkins, Sort of Evil, Wall. St. J., A11, July 18, 2007.

\textsuperscript{102} Grimmelmann, supra note 4, at 19 (describing search engine bias as potentially being misleading business practices); Gasser, supra note 4, at 219.

sent in response to a complaint by the organization Commercial Alert that requested FTC investigation of whether paid placements practices of several search engines constituted unlawful deceptive advertising. The deception argument as applied to search engines is a variant of the more general criticism of stealth marketing in the media. Users, the argument goes, are mislead to believe that “search results are based on relevancy alone,” when in fact they are based on other grounds.

Deception concerns, while relevant to some search engine manipulation practices, may be limited in applicability. Deception is contingent upon users’ expectations. In some cases involving manipulation, users are not likely to be deceived or may be indifferent to the misrepresented fact. 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 are less likely to be deceived.

A neighboring but more fundamental problem than deception is the effect of search engine manipulation on the autonomy of users. Meaningful autonomy requires more than simple absence of external constraint once an individual makes a choice and sets out to act upon it. At a minimum, autonomy requires a meaningful variety of choices, information of the relevant state of the world and of these alternatives, the capacity to evaluate this information and the ability to make a choice. If A controls the window through which B sees the world—if he systematically exercises power over the relevant information about the world and available alternatives and options that reaches B—then the autonomy of B is diminished. To control one’s informational flows in ways that shape and constrain her choice is to limit her autonomy, whether that person is deceived or not. Search engine manipulation of results that can highlight or suppress critical information does just that.

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106 See Goodman, supra note 74, at 108-112.

107 Consumer Alert Letter, supra note 104, at 5.

108 See Goodman, supra note 74, at 111-112.


How significant is the infringement of individual autonomy by search engine manipulation? Two factors play a role in answering such questions: the transparency of the intervention to users and the ability of users to avoid the power of the manipulating entity. Neither factor bodes well in the case of search engine manipulation. Due to the “black box” nature of the search algorithm and the secrecy surrounding search engine practices, manipulation is highly opaque from the point of view of users. All users see is the supposedly objective final results, not the intervention by the gatekeeper. Missing results are an “unknown unknown:” users for whom certain information is suppressed do not even know that they do not know the information. As for the ability to avoid the search engine’s power, the relevant market, while not completely monopolistic, is dominated by a very small number of players. As we explain below, competition in such a market, while not impossible, is not likely to undermine manipulation, and may even promote it. Moreover, users’ defections are not likely to be correlated with manipulation in the absence of a highly publicized instance of it—and search engines’ notorious secrecy make such an incident almost unlikely.

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112 BENKLER, supra note 10, at 156
113 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 THEORY, Sept. 21, 2006, available at http://madisonian.net/archives/2006/09/21/battling-black-boxes/.
114 See Hansell, supra note 78. (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.”); DAVID A. VISE & MARK MALSEED, THE GOOGLE STORY: INSIDE THE HOTTEST BUSINESS, MEDIA, AND TECHNOLOGY SUCCESS OF OUR TIME 256 (describing Google’s refusal to “provide more details about how its business really made money”).
115 Though made famous by Donald Rumsfeld, the term “unknown unknown” was coined by Nassim Taleb. NASSIM TALEB, THE BLACK SWAN (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 which the German government forbids them to provide links to.
116 See infra text accompanying notes *.
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 has some mitigating effect by supplying some opportunities for avoiding (and perhaps detecting) a manipulative search engine. Nevertheless, search engines are likely to remain in the near future a dominant source which 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 or that legal intervention is required. The rarity of known instances of search engine manipulation, the unsympathetic nature of current claimants, and some good old fashioned market as well as techno optimism have combined to produce an extraordinary level of skepticism about search engine regulation in the academy. Skeptics are confident that either the market, new technology, or some combination of the two will “punish” the “misbehaving” search engines sufficiently to deter manipulation of search results. There are, however, good reasons to doubt that either markets or technology will provide a satisfactory solution in the near future.

A. Market Discipline

Defenders of laissez-faire in the search area often argue that legal intervention is unnecessary because market discipline already keeps search engine abuse in check and does so much more effectively than any regulatory regime. If a search engine tries to manipulate its results in ways that are prejudicial to or unacceptable to users, the argument goes, users will simply migrate to a competing search engine. Fearful of losing users and market-share to competitors, search engines would avoid abusing their power.\(^\text{117}\) Thus search engines like Overture that systematically prioritized paid listings failed in the late 1990s and early 2000s and were overtaken by superior competition.\(^\text{118}\)

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 search as an inherently unstable and dynamic industry, constantly at risk of Schumpeterian “creative destruction.” In 2000, one

\(^{117}\) See Goldman, supra note 7 at 196-7.

\(^{118}\) VISE & MALSEED, supra note 114, at 88, 114-116 (discussing Google’s overtaking of Overture and attributing its popularity to a commitment “to make it clear they wouldn’t bias the search results” in the course of selling ads.).
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." 119 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, other small search services may soon nip at Google’s heels.120

While present and future competition certainly exists, the search engine market actually has inherent features that make robust and dynamic competition unlikely.121 It is unclear whether search engines fall under the strict definition of a natural monopoly, 122 but they exhibit very similar characteristics. Search engines have very high fixed costs and a relatively low marginal cost. This, in turn, results in substantial economies of scale, entailing a declining average cost per unit, and in 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 for its success is its search algorithm. Effective algorithms are protected by a veil of secrecy and by various intellectual property rights. New entrants cannot easily appropriate existing algorithms. Moreover, many algorithms are trade secrets. Unlike patents, which both must be disclosed and expire, these trade secrets may never fall into the public domain. If they are crucial to effective searching, search algorithms may

119 Vise & Malseed, supra note 114 at 90.
121 Empirical data on this question is incomplete and inconclusive. The few existing works in this vein tend to use relatively old data and reach different conclusions. Compare Neil Gandal, The Dynamics of Competition in the Internet Search Engine Market, 19 INT’L J. OF INDUS. ORG. 1103 (2001) (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 (2001) (barriers to entry in the search engine market seem high).
122 A natural monopoly is usually defined as a market in which the average cost of a good declines throughout the relevant range of demand. JOSEPH E. STIGLITZ, ECONOMICS OF THE PUBLIC SECTOR 158 (1986); SANFORD V. BREG & JOHN TSCHIRHART, NATURAL MONOPOLY REGULATION: PRINCIPLES AND PRACTICE 21-24 (1988). While a natural monopoly often leads to the survival of only one firm, it does not entail that the relevant market be an actual monopoly at any given moment.
be analogous to the high-cost infrastructure required from entrants in the utility or railroad markets.

2) **Network Effects in Improving Search Responsiveness.** The more searches an engine gets, the more likely it can use studies of extant behavior in response to results to sharpen and perfect its algorithm.123 The result is that each additional user decreases the cost of a better quality service to all users. 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 cost of obtaining and displaying this data may be substantially increased by various legal rights that enable others to exclude search engines from such activities.124 Exclusion rights, entail licensing (or legal advice) fees, which in the aggregate may raise fixed cost substantially. Google’s notable fight for favorable fair use treatment of an index of books,125 for example, obscures its (and other search engines’) licensing deals with audiovisual content providers. To what extent exclusion power and need for licensing is the norm in the industry is still to be determined in a host of legal battles taking place in various fronts. If such licenses become the industry practice, however, only the wealthiest players will be able to afford to develop a comprehensive database of searchable material.

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123 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 and put that 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 gets more personalized, we should then expect its 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 119, at 215.


4) **Consumer Habit.** Many searchers are used 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.\(^{126}\) Google did manage to displace Yahoo!, but only after developing much better technology. Thus to switch a substantial number of users a new entrant has to supply a significant leap in quality, again steeply raising fixed cost.\(^{127}\) Another factor that may raise switching costs is the trend toward personalized search.\(^{128}\) The correlation between quality of search and the length of use in personalized search is likely to add another cause for locking users in with an existing provider.

The net result of these structural features of the search market is substantial advantages to large incumbents and very high barriers to entry. It suggests that the current pattern of a handful of significant players and an overwhelming dominance of one firm is not incidental and that it is likely to persist.

\(^{126}\) On this issue too empirical research is incomplete and offers conflicting conclusions. *Compare* Rahul Telang, Tridas Mukhopadhyay & Ronald T. Wilcox, *An Empirical Analysis of Internet Search Engine Choice* (Darden Sch. of Bus., Working Paper No. 03-05, 2003) (effect of loyalty is small when users use engines primarily for search purposes but large when personalized features are used); to Sheu & Carley (search engines characterized by a high switching cost).

\(^{127}\) See, e.g., Randall Stross, *The Human Touch that May Loosen Google’s Grip*, N.Y. TIMES, C3, June 24, 2007 (describing how South Korean search engine Naver and the American competitor Mahalo are developing new and sometimes costly competitive strategies). Though Stross speculates that many new entrants will try to build niches in the search market, our discussion demonstrates the difficulty any entrant will face if it tries to compete with Google directly for the lion’s share of searches.

\(^{128}\) With personalized search, a search engine can use artificial intelligence and other methods to gradually “learn” what a user is most likely to want given certain search terms. 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 “Cake”). Such a sensitive “learning” search engine would save the user from having to type in longer terms like “cake food” or “cake cooking.” See James E. Pitkow et al., *Personalized search*, 45 COMM. OF THE ACM 50 (2002); Elinor Mills, *Google Automates Personalized Search*, CNET NEWS, June 28, 2005 available at http://news.com.com/Google+automates+personalized+search/2100-1032_3-5766899.html). *See also* Battelle, *supra* note 1, at 258-59.
The assumption of users’ responsiveness leading to optimal disciplining of search engines is just as problematic. Due to several characteristics of the search market, users’ 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. 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, 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. 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 have little incentive to compare dozens of search results to assess the relative efficacy of different search engines.

For example, imagine after the Google-YouTube merger, Google assigns a higher “authoritativeness” rating to all YouTube videos than those on any competitor sites (such as MySpace, Vheo, Bolt, and Grouper). Such an assignment might be an entirely “objective” decision; if Google itself happens to have the highest PageRanking, it may only be fair to 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

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130 See Hippsley, *supra* note 103.

131 ALEJANDRO M. DIAZ, THROUGH THE GOOGLE GOGGLES: SOCIO POLITICAL BIAS IN SEARCH ENGINE DESIGN 147 (2005) (copy on file with authors) (“The complexity and opacity of search technology makes it almost impossible for users to notice what is ‘missing’ from their search results.”).

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.133

Exacerbating this problem is the fact that the search dynamics often does 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 search”134 where a user is searching for a particular known website, or a narrow “informational search”135 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 on different levels of specificity.136

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.137 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 behavior.138 Second, in

133 “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 the 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, available at http://www.nytimes.com/2006/10/23/technology/23google.html?pagewanted=print. 134 See Andrei Broder, A Taxonomy of Web Search, 36 ACM SIGIR Forum, no. 2 (2002). Available at http://www.acm.org/sigs/sigir/forum/F2002/broder.pdf. Broder contrasts navigational searches with informational searches and transactional searches. 135 Id. 136 Introna & Nissenbaum, supra note 60 at 176-7; Broder, supra note (“on the web… many informational queries are extremely wide… while some are narrow”). 137 See Goldman, supra note 71, at 521-528. 138 For a similar point see Benkler, supra note 9; Benkler, supra note 111, at 69-70.
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. When one actually types “net neutrality” into a Google search query screen, as of Oct. 22, 2006, the vast majority of “organic” links are connected to pro-net-neutrality organizations. 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. There could be other explanations such as the fact that sites whose Top Level Domain Name ends in “.edu” are usually 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. 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 externalities demonstrates the various ways in which this dynamics plays out in the context of traditional media. At least some of those typical media externalities seem likely to occur in the different context of search engines.

139 C. E. Baker made a similar point about traditional media. See C. EDWIN BAKER, MEDIA MARKETS, AND DEMOCRACY 12-13, 87-95 (2002).
141 A Guide to Net Neutrality for Google Users, http://www.google.com/help/netneutrality.html (last visited Mar. 30, 2007) (“In our view, the broadband carriers should not be permitted to use their market power to discriminate against competing applications or content.”).
142 Baker, supra note 139, at 85-87.
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.\(^\text{144}\) 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 users’ 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, 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.\(^\text{145}\) 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 interests.\(^\text{146}\) 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.

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 untrammeled ability to manipulate rankings. Such innovations are

\(^{144}\) For a similar argument see Introna & Nissenbaum, *supra* note 60 at 177-178.

\(^{145}\) See Goldman *supra* note 7 at 198-99

\(^{146}\) See Pitkow et al., *supra* note 128.; Mills, *supra* note 128.; LANGVILLE & MEYER, *supra*, note 89 at 142 (predicting that “there will be even more personalization for web users in the future”).
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 “technological innovation will moot search engine bias.”

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. Instead of crude manipulations pointed at the entire group 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 user’s 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

See Goldman, supra note 7 at 198.

rankings are constitutionally protected speech. In *Langdon v. Google*, a district court relied on *Miami Herald Publishing Co. v. Tornillo* to find that plaintiff’s insistence that several search engines “must carry” his ads and “honestly” rank his websites would be prohibited compelled speech. 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” entitled to “full constitutional protection.” Rather than relying on a compelled speech rationale, the court based its decision on *Milkovich v. Lorain Journal Co.*, in which the Supreme Court immunized from defamation liability a “statement of opinion relating to matters of public concern which does not contain a provably false factual connotation.” Citing a Tenth Circuit decision that extended *Milkovich* to protect as an opinion an unfavorable review of the value of a school district bonds by a financial rating service, 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.

Courts seem eager to treat search results as constitutionally protected speech and summarily find any attempt to regulate search engines’ absolute control over these results to constitute either censorship of an opinion or compelled speech. Will the first amendment prove to be an insurmountable impediment to any attempt to regulate search engine manipulation? A closer look at the application of the first amendment in this context reveals that both search engines’ claims for protection of their “speech” and the courts’ use of such claims as an impenetrable shield against regulation stand on a somewhat shaky ground. The two existing decisions have a frustrating quality: they extend first amendment protection to new domains on the basis of a summary analysis that often remains vague or enigmatic. In what follows we attempt to clarify crucial questions, neglected by the two courts, by analyzing the issue using 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: what exactly is the relevant speech in relation to which search engines assert first amendment rights? The *Search King* decision is relatively clear on this issue. It treats as the relevant speech Google’s ranking algorithm or the rankings

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154 *Jefferson County Sch.Dist. No R-1 v. Moody’s Investor’s Services, Inc.*, 175 F.3d 848, 852 (10th Cir. 1999).
produced by it in response to a user’s query.\textsuperscript{155} The \textit{Langdon} opinion is more ambiguous. It does not clarify what the speech being forced on the search engine is. One possibility is that, similar to the assumption in \textit{Search King}, the speech that is seen as forced on the search engine is that embodied in the rankings. The other more plausible possibility, strongly implied but never explicitly endorsed in \textit{Langdon}, is that the relevant speech is the content of the indexed website.\textsuperscript{156} Under this logic the search engine is forced to “speak” specific speech embodied in indexed websites by virtue of being seen as the publisher or the carrier of this content, or at a minimum as exercising editorial judgment in regard to that content.\textsuperscript{157}

The second dimension involves the basic distinction in first amendment jurisprudence between coverage and protection.\textsuperscript{158} Questions of coverage inquire whether a particular case, act or fact is one to which the first amendment applies at all.\textsuperscript{159} Questions of the degree of protection due come into play once it is established that a case is covered by the first amendment.\textsuperscript{160} They inquire whether the first amendment mandates that under the particular circumstances the behavior or act involved receive protection and be shielded from attempts to regulate it. Depending on the relevant speech underlying the analysis, search engines’ first amendment claim 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

\textsuperscript{155} The court, somewhat ambiguously, refers to “PageRanks,” which seems to stand for the specific results produced by Goggle’s algorithm—“PageRank.” \textit{Search King}, 2003 U.S. Dist. LEXIS 27193, at *11-12. This ambiguity in itself is disturbing, given extant hostility to the idea of software as speech and unresolved issues on whether an automated system can even count as a speaker.

\textsuperscript{156} The \textit{Langdon} court simply cites several compelled speech precedents and adopts Google’s argument that the sought “relief would compel it to speak in a manner deemed appropriate by Plaintiff and would prevent Google from speaking in ways that Plaintiff dislikes.” \textit{Langdon}, 474 F. Supp. 2d at 629.

\textsuperscript{157} For a description of search engines as media outlets or editors of the indexed content see Goldman, \textit{supra} note 7, at 192 (“search engines make editorial judgments just like any other media company”).


\textsuperscript{159} Schauer, \textit{supra} note 158, at 1789.

\textsuperscript{160} \textit{Id.}
perspective search engines would be claiming that they are associated with the speech embodied in the content of the listed websites, or at least that they are seen as exercising editorial control vis-à-vis that content. To the extent that the content of listed websites is the relevant frame of reference, search engine’s claims are unlikely to succeed as a matter of protection. As shown by Jennifer Chandler, the protection afforded to the speech of content “selection intermediaries” is not absolute. Legal attempts to circumscribe search engine manipulation are likely to have many characteristics that usually induce courts to uphold the constitutionality of regulation applying to such intermediaries. Most importantly, such regulation is content-neutral in respect to the relevant speech, and search engines are very unlikely to be seen by users as endorsing the content of indexed websites or as associated with it.

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 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.” In ACLU v. Reno 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. As argued by Tim Wu, however, treating “the Internet” as the relevant unit of analysis is an oversimplification. 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.” Those problems are very similar to those relied on by the court for granting government latitude to regulate in the broadcast context.

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166 Wu, supra note 40, at 1165.
Thus, while the content of websites is covered by the first amendment, solicititude toward their rights is no reason to insulate indexing entities 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 "We're not a media company--we're just a conduit. Don't come to us if we highly rank a site you find objectionable--we're just the infrastructure. Go to the source."167 Such characterization is essential for enjoying the immunity afforded under the DMCA (with respect to copyright claims)168 and the CDA (with respect to tort claims).169

167 See, e.g., Richard Siklos, A Struggle Over Dominance and Definition, N.Y. TIMES, Nov. 12, 2006, at E3. In this piece, James Eun, Vice President of Content Partnership for 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.” (“[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.’

168 17 U.S.C. §512(d) (2006); Field v. Google, Inc., 412 F.Supp.2d 1106 (D. Nev. 2006) (Author brought copyright infringement action against operator of Internet search engine, seeking statutory damages and injunctive relief and alleging that operator violated his exclusive rights to reproduce and distribute copies of his works by allowing Internet users to access copies stored in online repository. Search engine fell within protection of safe harbor provision of Digital Millennium Copyright Act (DMCA).); but see Corbis Corp. v. Amazon, Inc., 351 F.Supp.2d 1090 (W.D. Wash. 2004) (Amazon did not meet the requirements of a "service provider" as defined by 512(c)).

169 47 U.S.C. § 230(c)(1) (2006); Parker v. Google, 422 F.Supp.2d 492 (E.D. Pa. 2004) (Internet search engine operator was immune, under 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; operator could not be held liable as 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, 437 F.Supp.2d 273 (D.N.J. 2004) (Pay-for-priority Internet search engine, which used retailer's famous marks as search terms and sold search results to direct competitors of cigar retailer, was not immune under Communications Decency Act from retailer's claims of fraud and abuse arising from its pay-for-priority advertising business, rather than from the actions of third parties. Communications Act of 1934, § 230). For critical
Thus search engines try to have it both ways—appearing 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, they can reconcile the two claims 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 not the content of indexed websites, but the expression embodied in search results.

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.” 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 by 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

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.”).

170 See Hansell, supra note 78, at E5. (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. Google rarely allows outsiders to visit the unit, and it has been cautious about allowing [the department’s head to] speak with the news media about the magical, mathematical brew inside the millions of black boxes that power its search engine.”).

171 Again, with the qualification related to “machine speech” in note * above. Note that this claim posits, then, as the relevant speech not the content of indexed websites, but the expression embodied in search results.

172 Search King, 2003 U.S. Dist. LEXIS 27193, at *9 ("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.”).
is performative rather than propositional. 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. When, as in the case of search engine rankings, the expressive element is overwhelmingly minor and incidental the tendency to exclude the relevant speech from first amendment coverage, is even stronger.

In this respect search engines’ speech through their results seems similar to the uncovered speech in an aircraft navigational chart. To use the terminology of Robert Post, the speech of search engines as embodied in rankings is not a form of social interaction that realizes first amendment values. The specific social practice involved as understood in context, though

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173 J.L. AUSTIN, HOW TO DO THINGS WITH WORDS 4-7 (J.O. Urmson & M. Sbisa eds., 2nd ed. 1975).
175 Schauer, supra note 158, at 1784.
176 See Post, supra note 158, at 1254. See, e.g., Brocklesby v. United States, 767 F. 2d 1288, 194-95 (9th Cir. 1985); Saloomey v. Jeppesen & Co., 707 F.2d. 671, 676-77 (9th Cir. 1981); Aetna Casualty & Sur. v. Jeppesen & Co., 642 F.2d 339, 342-43. 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.
177 Post, Recapturing, supra note 158, at 1255 ; Post, Encryption Code, supra note 158, at 716. 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 158, at 1802; see also Post, Recuperating, supra note 158, at 1255 (“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.”). 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 62. 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 WEBLOG, Feb. 27, 2007, available at
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.

Search engine rankings also fare poorly in relation to extant efforts to delineate the boundaries of the First Amendment. For example, Kent Greenawalt has offered the following dichotomies as central to the coverage (or noncoverage) by the First Amendment 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.178

Commercial search results clearly relate to a “specific transaction” and are motivated by the search engine’s effort to maximize profit. They are presented as information about the Internet, a “map” of what is and is not relevant to a given search query. The remaining variable in Greenawalt’s categories, publicity vs. privacy, may weigh in favor of search engines now, but that is changing in a world of personalized search.

Normative theories of the first amendment are too numerous and diverse to systematically survey here. Moreover, none of the leading theories is able to account satisfactorily for the entire existing pattern of first amendment coverage and exclusion.179 In our case, however, one would be hard pressed to find any common normative account of the first amendment that strongly supports recognizing search engine rankings as covered speech. To name but a few, autonomy- or individual liberty-based theories of freedom of speech are unlikely to deem communication by corporate entities which is completely incidental to carrying out a functional service as facilitative of individual autonomy or self-

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.

179 Schauer, supra n. 158, at 1784-87.
Democratic governance and public sphere accounts of the first amendment would probably have little interest in the limited form of speech embodied in search engine rankings. It does not appear that such speech has any intrinsic value for creating a deliberative public sphere, contributing to a public debate or crystallizing an informed and active citizenry. Truth seeking justifications seem equally unavailing for justifying 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 could be extended, but the point seems obvious: search results as such, despite their limited and incidental communicative element, are hard to justify in terms of any of the common normative accounts of freedom of speech.

The recent decisions that recognized search engine rankings as speech covered by the first amendment are equally problematic on the doctrinal level. Although these decisions relied on established lines of precedents, they extended the relevant rules into markedly new domains, an extension that seems unwarranted in view of the precarious normative basis for coverage of the relevant speech. In finding that interference with search results is unconstitutional compelled speech the Langdon court relied on a line of cases, beginning with Tornillo all of which dealt with attempts to interfere with the content of newspapers. The case of search engine rankings as speech, however, is fundamentally different from regulation of the content of print


181 ALEXANDER MEIKLEJOHN, FREE SPEECH AND ITS RELATION TO SELF-GOVERNMENT (1948); CASS R. SUNSTEIN, DEMOCRACY AND THE PROBLEM OF FREE SPEECH (1993); ROBERT C. POST, CONSTITUTIONAL DOMAINS: DEMOCRACY, COMMUNITY, MANAGEMENT 119-78 (1995). 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 97.

182 On the instrumental value of search engines and its first amendment application see infra text accompanying notes 0-0.


184 The court bundled together indistinguishably the discussion of the search results and of the ads presented to users of the search engine. The discussion above is limited to the search results.

185 The court cited: Miami Herald, 418 U.S. 241 (1974); Sinn v. The Daily Nebraskan, 829 F.2d 662 (8th Cir. 1987); and Associates & Aldrich Co. v. Times Mirror Co., 440 F.2d 133 (9th Cir. 1971).
media. By their own admission, search engines do not function as publishers or editors of the content to which they channel users.186

Admittedly, the compelled speech prohibition was extended in the case-law well beyond newspapers to cover such communicative media as billing statements,187 license plates188 and parades.189 However, the crucial feature that distinguishes search engine rankings from all of these cases is the complete lack of association between the supposedly compelled-speaker and any first amendment significant speech. In all of the compelled speech cases there was at least a plausible claim that the compelled speaker would be seen as making, endorsing or acquiescing in some substantial content: a specific content of an ad, a particular message or character of the parade, or a patriotic declaration on the license plate. By contrast, search engines, self-described as passive conduits, are unlikely to be perceived as “carriers” of the content of ranked websites and as a result they are unlikely to be associated with it 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 their access to it, they do not make that association in relation to the search engine which referred them to it.

What we are left with as the speech forced on the search engine, then, is again the thin and limited form of speech embodied in the search results themselves: implied “observations” of relevance of a specific ranking of websites to a user’s search query.190 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. To take just one example, a seller who offers for sale three alternative products in response to a buyer’s inquiry is making 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 due to its effect on the seller’s “speech?” In short, extending the compelled speech rule to cover the mere observations on relevance implied in search engine rankings seems to take 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. In reaching this conclusion the court imputed great importance to the fact that search rankings are “subjective” rather than “objective.” That is, search rankings are not subject to evaluation under an

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186 See Siklos, supra n. 167, at E5 (reporting Google executive Eun’s characterization of his company).
objective metric of validity or veracity. The leap from non-objectivity, however, to concluding that something is an opinion protected under the first amendment is unwarranted. Unlike, say, film reviews, users do not treat search results as someone’s evaluations of the indexed websites, as an observation (whether “subjective” or “objective”) that they could appreciate or be contemptuous of, agree or disagree with, be convinced or unconvinced by. Rankings are functional rather than dialogical expressions. They differ from, say, an online list of recommended websites or even web-portals of 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. Thus search engine rankings can be distinguished from the Jefferson County case relied on by the Search King court. The evaluation of the value of bonds which was found to be an “opinion” in that case, while not the strongest case of an expression subject to a dialogical relationship, still has some potentially-dialogical features. Listeners 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 they can interact in ways characteristic of what we usually refer to as an “opinion.” Though a user may be satisfied or

191 Search King, 2003 U.S. Dist. LEXIS 27193, at *9-11. It seems that 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 being factually provable or refutable. Milkovich, 497 U.S. 1, 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.”). Post would likely draw a distinction between “media defendants” generally and a service like a bond rating agency. Post, Recapturing, supra note 158, at 1253 (“The ‘ideas’ prized by First Amendment jurisprudence are often as much a product of First Amendment media as they are independent ‘entities’ transparently conveyed by such media.”).


193 Search King, 2003 U.S. Dist. LEXIS 27193, at *11 (“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.”); Jefferson Cty. Sch. Dist. R-1 v. Moody’s Investor’s Servs., 175 F.3d 848 (10th Cir. 1999).
disappointed by search results, one does not agree, criticize or endorse them. Indeed, the opacity of the search algorithm makes it nearly impossible to do so.

As in the case of the compelled-speech rule, recognizing the incidental and limited form of “opinions” implicit in search results—i.e. opinions about relevance to users—might cause the doctrine to spin out of control. Think again of a seller who offers for sale several items in response to a buyer’s query. The seller’s action contains implicit “opinions” about relevance similar to those identified by the Search King court as embodied in search results. 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 to others are ever-present in our society. Were first amendment coverage to be triggered by such implicit observations a vast domain of social interaction would be protected as opinions, with no conceivable rationale.

Having concluded that the two variants of first amendment arguments based on search engine speech are likely to fail, we observe that it does not follow that any attempt to regulate search engines will be categorically immune from first amendment review. While speech embodied in rankings does not seem to 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. If the government were to ban the manufacture and sale of paper, film projectors or TVs, the first amendment would be triggered by the effect of such regulation on related spheres of speech. Similarly, if the government were to ban all search engines or mandate filtering of certain content by search engines, the effect on other spheres of

194 Jack Balkin, Two Ideas for Access to Knowledge— The Infrastructure of Free Expression and Margins of Appreciation, BALKINIZATION, Apr. 30, 2007, available at http://balkin.blogspot.com/2007/04/two-ideas-for-access-to-knowledge.html (“Freedom of speech . . . depends on an infrastructure of free expression [which] 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.”).


speech is likely to entail first amendment coverage. 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. In the case of TVs and paper regulation the first-amendment-relevant speech is that of those who use TVs and paper in order to speak rather than that of TV and paper manufacturers or sellers. By the same token, it is the effect on the ability to speak of entities indexed by search engines that entails first amendment coverage, not the effect on the search engine’s “speech.” Thus arguments based on the effect of search engine regulation on the speech of indexed entities are likely to clear the coverage hurdle. The analysis under this framework, however, will be very different than that of courts that relied on search engine speech as the frame of reference. 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 it 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 be prohibited by the first amendment.

In sum, existing cases that construed the first amendment to be an absolute impediment to any regulation of the complete discretion of search engines to manipulate their results seem to be instances of what Fredrick Schauer recently called “free speech opportunism.”¹⁹⁷ Litigants and courts dealing with search engine manipulation cases were attracted to the justificatory power of the first amendment and enlisted it to support their preferred conclusions. The first amendment was used as an easy and absolute way to terminate discussion or debate over the complex and vexing subject of regulating search engine bias before it even began. This strategy, however, hardly seems sound or desirable. Simply asserting that search engine rankings constitute protected speech and mechanically applying existing doctrines to them results in an extension of those doctrines to radically new domains with little support in either their rationales or any normative theory of freedom of speech.

**B. Balancing Secrecy and Transparency**

Probably a greater normative challenge in the search engine context than free speech concerns is the proper balance between secrecy and transparency. Search engines have claimed (and occasionally enforced) a right to limit public knowledge (or even governmental knowledge) of their algorithms, number of

¹⁹⁷ Schauer, supra note 158, at 1796.
search queries, and the nature of these queries. 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 outsiders figure out the page-ranking algorithms, they can game the rankings with skillfully devised strategies like “link farms” and “splogs” (spam blogs). This prospect is particularly troubling because of the growth of the Search Engine Optimization (SEO) industry and the obscure and shifting line between “black hat” and “white hat” SEO tactics. The result of substantial transparency could be degradation of the quality of search and its usefulness to users. 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, there is a strong social interest in transparency and accountability. There is a growing awareness, in a variety of contexts, of the troubling aspects of a “black box society” in which private firms are empowered to lock away information even in the face of strong public interest in disclosure. In many cases, it is essential that someone has the power to “look under the hood.” For example, Dan Burk and Julie Cohen have suggested (in the copyright context) that a governmental agency should have the right to review private entities’ digital rights management (“DRM”) systems and unlock the underlying expression under appropriate circumstances. David Levine’s recent

198 See Grimmelmann, supra note 4, at 39-40 (“ranking and indexing algorithms are closely guarded, and the need to protect that secrecy is routinely invoked in litigation”). The most notable instance of this secrecy occurred last summer, when Google refused to disclose to the government a great deal of information—not only users’ individual search records, but also aggregate data on topics like its total number of searches. A settlement was eventually reached that greatly limited the scope of the government’s discovery requests, but Google clearly drew a line in the sand: it would vigorously resist even the Department of Justice in order to avoid disclosure of information it considered critical to its business model. Gonzales v. Google, Inc., No. CV 06-8006MISC JW (Mar. 17, 2006), at 17 (“As trade secret or confidential business information, Google’s production of a list of URL’s to the Government shall be protected by protective order.”).

199 See Grimmelmann, supra note 4, at 36.

200 See Gasser, supra note 4, at 232-4.

201 See generally Tarleton Gillespie, Wired Shut: Copyright and the Shape of Digital Culture (2007).

202 Responding to DMCA anti-circumvention provisions, Burk & Cohen worried that legitimate fair uses of copyrighted work might be impossible if a copyrightholder used DRM to prevent unauthorized access to the work. They proposed that some public entity hold, in escrow, a “key” to the DRM on copyrighted works so it could decide whether to permit a user to “break” the DRM and thereby gain access to the work. Dan Burk & Julie Cohen, Fair Use Infrastructure for Digital Rights Management, 15 HARV. J. L. & TECH. 385 (1995).
work on trade secrets in infrastructure builds on Burk & Cohen’s work by giving many compelling reasons for permitting the government to review the operations of processes that are deemed trade secrets by their owners.\textsuperscript{203}

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, such an alternative may need public funding.\textsuperscript{204} A publicly funded alternative may better reflect the values we have mentioned above, in a more transparent fashion than commercial competitors.\textsuperscript{205} It should prove permeable to requests to inspect its indexing and ranking processes and it could also implement diversity-promoting norms to ameliorate the problems discussed above.

Unfortunately, it is hard to predict whether this is a viable option.\textsuperscript{206} Skeptics would expect an open source search engine to be highly vulnerable to


\textsuperscript{204} See, e.g., Ellen Goodman, \textit{Media Policy Out of the Box: Content Abundance, Attention Scarcity, and the Failures of Digital Markets}, 19 BERKELEY TECH. L. J. (2004) (“subsidies for a robust public service media are the proper channel for media policy in the digital era from both a First Amendment and practical perspective.”); Fiss, \textit{supra} note 33, 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.”).

\textsuperscript{205} See, e.g., JEAN-NOEL JEANNENY, \textit{GOOGLE AND THE MYTH OF UNIVERSAL KNOWLEDGE} 82 (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.).

\textsuperscript{206} For example, Europe’s largest initiative to date to develop a search engine to compete with Google, Quaero, 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 O’Brien and Thomas Crampton, \textit{Germany Quits Search Engine Project}, INT’L HERALD TRIBUNE, Jan. 2, 2007 (“‘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.’”).
spammers and outside manipulation. Moreover, to be effective, a search engine must actually be used, and there is no guarantee 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.

If such an open-source search engine incorporating public values failed to materialize, there may be a role for either regulators or courts to define and detect troubling patterns of manipulation. Looking into the “black box” of dominant search engines’ inner workings in some contested situations is an essential part of this process. 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. On the administrative side an institution modeled on the courts instated by the Foreign Intelligence Surveillance Act might be helpful. The

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207 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. Thomas Claburn, Law Professor Predicts Wikipedia's Demise, INFORMATION WEEK, Dec. 5, 2006, available at http://www.informationweek.com/internet/showArticle.jhtml?articleID=196601766 (Goldman says “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.

208 For example, SearchKing requested the court in the Western District of Oklahoma to force Google to turn over its source code for discovery purposes. As James Grimmelman notes, “SearchKing was reaching especially far in asking for this disclosure as part of the injunction. The more typical procedure would be to let SearchKing’s 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, LAWMEME, Jan. 9, 2006.

209 The Foreign Intelligence Surveillance Court (“FISC” or “FISA Court”) is a secret court that consists of eleven district court judges, three of whom must live within twenty miles of the District of Columbia. The judges are given the task of hearing petitions from the United States Attorney General for authorization to conduct electronic surveillance and physical searches for foreign intelligence purposes. Each petition is reviewed by the FISA court in a secret, ex-parte
reviewing body could, like the FISA court, examine potential cases of manipulation and independently verify that results had—or had not—been manipulated in a given case. Claimants would then be free to pursue other claims if manipulation were indicated, but the case might come to a quick end if none is apparent. Such a centralized solution might be even more desirable to search engines than the piecemeal dissection of rankings algorithms by scattered courts deciding disputes.

Lest a formidable (if embattled) 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. 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 copyrighted work should be permitted to access the work by circumventing security measures implemented by the copyright holder. Disclosure of these keys could be released to users applying for access to make fair use, a decision akin to a declaratory judgment for non-infringement on a patent. Burk and Cohen note that the trusted third party will be “subject to regulatory oversight for compliance with its escrow and privacy obligations.”

Stalwarts of deregulation may well complain that such procedures would still create a risk of compromising the secrecy essential for search engines’ operation and put an undue burden on their legal departments. However, Google 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 proceeding, and a member of the Department of Justice (“DOJ”) presents the petition to the FISA court. If a petition for surveillance is denied by the FISA court, the Attorney General may appeal the decision to the Foreign Intelligence Court of Review (“Court of Review”). The Court of Review is comprised of three judges, designated by the Chief Justice from the district courts and circuit courts, who have jurisdiction to review the denial of any petition made under FISA. 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. 50 U.S.C. § 1803(a) (2006). Daniel J. Maloofy, Physical Searches Under FISA: A Constitutional Analysis, 35 AM. CRIM. L. REV. 411, 413-414 (1998).


211 Burk and Cohen, supra note 202.

212 Id., at 55.

213 Id., at 63.
interests. 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, and if social values are to be given any weight, some governmental agent should be able to peer into the black box of search 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, 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."

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 which assured us “all voices would be heard” in the internet age.

214 Gonzales., No. CV 06-8006MISC JW (Mar. 17, 2006), at 17 (“As trade secret or confidential business information, Google’s production of a list of URL’s to the Government shall be protected by protective order.”).
215 See Grimmelmann, supra note 4, at 11-14.
216 Chris Langdon, comment on blog posting by Frank Pasquale at Concurring Opinions Weblog, March 1, 2007, available at http://www.concurringopinions.com/archives/2007/02/are_big_search.html. Langdon asserts that the type of malfeasance engaged in by “Duke Lacrosse prosecutor” Mike Nifong is common North Carolina. Langdon also was rebuffed when he attempted to buy ads critical of the Chinese government on search engines.
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.\textsuperscript{217} Others call for the development of a publicly financed and controlled search engine.\textsuperscript{218} These solutions, however, are likely to be partial and a substantial degree of search engine manipulation may persist. There seems to be a need for direct regulation to limit search engines’ ability to manipulate their results 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.\textsuperscript{219} The second tries to bring instances of manipulation within the ambit of a diverse host of existing doctrines ranging from tortious interference with prospective economic advantage to state unfair competition law.\textsuperscript{220} 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.\textsuperscript{221} The fact that there are possible ways to extend the reach of the first amendment and avoid state action limitations\textsuperscript{222} notwithstanding, such arguments are likely to meet heavy resistance from courts. Trying to fit search engine manipulation into the Procrustean bed of various business torts doctrines is likely to be a Sisyphean task. 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

\textsuperscript{217} Niva Elkin-Koren, Let the Crawlers Crawl, supra note 59, at 192-195 Niva Elkin-Koren, The New Intermediaries, supra note 59 at 396.
\textsuperscript{218} Intraon & Nissenbaum, supra note 60, at 181.
\textsuperscript{219} See Kinderstart, 2006 U.S. Dist. LEXIS 82481, at *6-11, (where plaintiff argued that both the first amendment and the California constitution created affirmative duties to the defendant search engine as a de facto public forum); Langdon, 474 F. Supp. 2d at 627 (where the court rejected a free speech claim under the First Amendment and under the Delaware constitution).
\textsuperscript{221} See Kinderstart, 2006 U.S. Dist. LEXIS 82481, at *6-11.
\textsuperscript{222} See, e.g., Marsh v. Alabama, 326 U.S. 501 (1946) (“company town” required to afford basic free speech rights to inhabitants); Intel Corp. v. Hamidi, 30 Cal. 4th 1342 (Cal. 2003).
host of public utility companies of various kinds. Much like search engines in the information society, these firms came to hold control over essential bottlenecks of the emerging industrial society. 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 was about “discrimination,” meaning inequitable and unequal treatment of some individuals or a complete refusal to serve.

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. They developed it into a comprehensive normative framework to govern the new entities produced by corporate industrialism. 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.

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223 See generally Haar & Fessler, supra note 99; Rossi, supra note 100, at 1242-1250; Hovenkamp, supra note 99; 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 139-144 (Werner Sichel & Thomas G. Gies eds., 1981).


227 Haar & Fessler, supra note 99, at 141-193 Rossi, supra note 100, at 1250-1260. The regulatory model that consolidated at the turn of the century has undergone a fundamental transformation during the recent decades of “deregulation.” Despite the title however, in most industries these changes meant a new paradigm of regulation rather than no regulation at all. See Kearney & Merill, supra note 224.
Both of these directions—application and adaptation of common law duties to public utilities\textsuperscript{228} or the creation of a regulatory framework— are worth considering with respect to the new “businesses affected with the public interest”\textsuperscript{229} of the information age, namely search engines. Proposals of any direct regulation of search engines are likely to raise vigorous resistance\textsuperscript{230} 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.\textsuperscript{231} While some of these concerns may be dismissed as residues of the naïve anti-statist bias of early internet utopianism,\textsuperscript{232} 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.

\textsuperscript{228} 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. The 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. \textit{Langdon}, 474 F. Supp. 2d at 634.

\textsuperscript{229} The term is taken from a seventeenth century English treatise by Lord Matthew Hale that was later appropriated by nineteenth century American courts which developed the category of private businesses subject to special public duties and regulation. The classic American case is the decision of Chief Justice Waite in \textit{Munn v. Illinois}, 94 U.S. 113 (1876).

\textsuperscript{230} \textit{See} Goldman, \textit{supra} note 7, at 197-198.


\textsuperscript{232} For a critique of this position \textit{see} Boyle, \textit{supra} note 52.